

Applicant **Queensland Resource and
Recovery Pty Ltd**

Reference **M2301**

Date **October 2025**

Change Application (Other)

Proposed
Developm
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**Change Application
(Other) to Development
Permit M33/03 for a
Material Change of Use
(Waste Disposal and
Recycling Facility) and
Environmental Authority
P-EA-100698838 (ERA60
only)**

Property
Details

**Lot 1 on RP735647
42386 Bruce Highway,
Bluewater**



DOCUMENT CONTROL

Applicant	Queensland Resource and Recovery Pty Ltd
Approved Development	Change Application (Other) to Development Permit M33/03 for a Material Change of Use (Waste Disposal and Recycling Facility) and Environmental Authority P-EA-100698838 (ERA60 only)
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Quality Assurance

Date 31.10.25 Version 1 Issue Final Template CA-MIN-3	 Sarah Jones SENIOR TOWN PLANNER	 George Milford DIRECTOR
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1.0 INTRODUCTION

1.1 Purpose

The purpose of this development application is to seek approval for a Change (Other) to Development Permit M33/03 for a Material Change of Use (Waste Disposal and Recycling Facility) and Environmental Authority P-EA-100698838 (ERA60 only) (the proposed change) under the provisions of the *Planning Act 2016* (the Act).

The purpose of this report is to provide information about the site on which the change is proposed, detail of the change and an assessment of the change against the relevant assessment benchmarks. The assessment detailed in this report has been undertaken in accordance with the provisions and subordinate planning controls under the Act.

1.2 Structure

This report provides the following information with respect to the assessment of the proposed development:

- overview of the site and surrounding area;
- description of the proposed development;
- overview of the relevant assessment framework;
- assessment of the proposed development against the relevant assessment benchmarks;
- other relevant matters; and
- conclusion and recommendation.

The change application (other) is made in accordance with s 78 of the *Planning Act 2016* (the Act) and contains the mandatory supporting information specified in the applicable DA forms. **Appendix 1** comprises DA forms 1 and 5 and the accompanying Land Owner's Consent.

The subject property is located within the Townsville City Council's local government area and the applicable planning scheme for use by the Assessment Manager is the *City Plan 2014* (the planning scheme). This original application was subject to **impact assessment** in accordance with the provisions of the planning scheme and the Act applicable at the time. The proposed changes do not alter the level of assessment or public notification requirements, as such, formal public notification of this application will be required.



2.0 APPROVED DEVELOPMENT

2.1 Detail of Approved Development

The following parameters are applicable to the approved development subject to this change application.

Approval Type	Development Permit
Development Type	Material Change of Use
Definition or General Description	Waste Management and Recycling Facility
Assessment Manager	Townsville City Council
DA Reference	M33/03
Planning Instrument	<i>Townsville City Plan 2014</i> (the planning scheme)
Category of Assessment	Impact
Referral Agencies	State Assessment Referral Agency
Approval Date	3 February 2004
Currency Period Ends	The approval will not lapse as the use has commenced.



3.0 SUBJECT SITE

3.1 Site Parameters

The following parameters are applicable to the site of the proposed development (the subject site).

Property Owner	A.C.N 677 037 099 PTY LTD
Street Address	42386 Bruce Highway, Bluewater
Formal Description	Lot 1 on RP735647
Site Area	54.44 ha (refer Appendix 2)
Easements	The land is not burdened by any easements.
Street Frontage	Approximately 765 m frontage to the Bruce Highway
Topography	The site has generally even in topography, with some undulations and elevated area that correlates with the working area.
Existing Use	Waste Disposal and Recycling Facility
Existing Infrastructure	The site is serviced by the following infrastructure: ▪ reticulated site water (Council network); ▪ on site sewer (private); ▪ electricity (Ergon); and ▪ telecommunications (NBN).
Local Heritage Register	The site is not listed on the Local Heritage Register.
Contaminated Land	The land is not known to be included on the State Environmental Management Register or Contaminated Land Register.
Relevant State Interests	The following State interests are relevant to the proposed development as detailed in the State Assessment Referral Agency (SARA) mapping (refer Appendix 3): ▪ Coastal Area – erosion prone area; ▪ Coastal Area – medium and high storm tide inundation area ▪ Regulated vegetation management map (Category A and B extract); and ▪ State transport infrastructure – site located within 25 m of a State-railway corridor

3.2 Surrounding Area

North	Rural land uses and disused seafood farm
East	Rural zoned land and uses
South	Rural zoned land and uses



WestRural zoned land and uses

3.3 Approval Background

The facility was formerly used as a brickworks and was sold to a separate company before it was purchased by the previous owner in 2003. The previous owner utilised the site as a waste disposal and recycling facility (the facility) under Development Permit (M33/03) for Material Change of Use (Waste Management/Recycling Facility), which was issued by the former Thuringowa City Council (refer **Appendix 4**). The previous owner also held the relevant Environmental Authorities for the Environmentally Relevant Activities associated with the facility.

When the Applicant acquired the subject site, the existing Environmental Authorities for ERA60 (2c) – Waste Disposal, ERA62(1) Resource Recovery and Transfer Facility Operation, ERA54 - Mechanical Waste Reprocessing and ERA57 – Regulated Waste Transport were transferred to Applicant under EA P-EA100698838 (refer **Appendix 4**). ERA60(2(c)) of EA P-EA100698838, currently allows the facility to receive greater than 5,000 but not more than 10,000 tonnes in a year.

3.4 Land Owner's Consent

Access to the facility is via the Bruce Highway and includes crossing the Great Northern Railway Line. The railway corridor is owned by the Department of Transport and Main Roads (DTMR), as such, land owner's consent from DTMR is included in the application (refer to **Appendix 1**).



4.0 PROPOSED CHANGE

4.1 Description of Proposed Change

The proposed development involves a change (other) to Development Permit M33/03 for a Material Change of Use (Waste Disposal and Recycling Facility) and Environmental Authority (EA) P-EA-100698838 (ERA60 (only) (the proposed change). Specific detail of the proposed development is provided below.

Purpose of Change

The purpose of the proposed change to the existing approval is to increase the volume of waste Bluewater Waste Disposal Facility (the facility) can receive and dispose of. Based on the existing permit M33/03 and EA P-EA100698838 the facility can receive not more than 10,000 tonnes of waste per annum. The Applicant is seeking to increase the threshold of waste the facility can receive and dispose of to not more than 50,000 tonnes per annum. The proposed increase requires the following applications to be lodged separately:

- a Change Application (other) to Development Permit Development Permit M33/03 for a Material Change of Use (Waste Disposal and Recycling Facility) and change to Concurrence Environmental Authority (EA) P-EA-100698838 (ERA60 only), with Council as the Assessment Manager and SARA as a Referral Agency; and
- a Major Amendment EA Application to EA P-EA100698838 (amendment to ERA60(2(e)) only), with the Department of Environment, Technology, Science and Innovation (DETSI) as the Assessment Manager.

Design Overview

As mentioned above, the Applicant is seeking to change the current approval to simply increase the volume of waste the facility can receive and dispose of in a year to not more than 50,000 tonnes. The layout of the site will generally remain as per the historic approval (refer **Appendix 5**), in terms of the following:

- four cells arrangement for the landfill;
- resource recovery area;
- concrete storage;
- green waste;
- stockpiling;
- concrete crushing and screening;
- batteries, oils and paint waste;
- tyre storage;
- sediment basins and leachate pond;
- site office, amenities and parking; and
- access tracks.

Since acquiring the facility, the Applicant has undertaken a review of how the previous owner had been operating and managing the facility. The findings of this review have identified opportunities to rationalise day-to-day activities, processes and operations associated with the facility and realise additional capacity at the facility. As a consequence of this additional capacity, the Applicant is seeking to change D33/03 and Environmental authority P-EA-100698838 to allow the facility to receive and dispose of not more than 50,000 tonnes of waste per annum. Despite seeking an increase in the volume of waste that the facility can receive and dispose of, the historic approved landfill layout, cell alignment and configuration will be retained.

Further to the above, one of the stormwater basins that was required as part of the historic approval has not been constructed. Langtree Consulting Engineers have reviewed and assessed the stormwater management measures for the facility and recommend that the outstanding approved stormwater basin be constructed in a slightly different location, with a slightly larger capacity. A laydown area is also proposed within a precleared area of the site.



Figure 1: General Site Layout (Source: Site Plan prepared by Milford Planning, refer to Appendix 5)

Operational Overview

The facility has been operational for more than 20 years. The facility is inclusive of a resource recovery area (RRA) approved under the provisions of the *Waste Reduction and Recycling Act*



2011. As noted, the necessary EA is in place to manage wastes received within the landfill (ERA60). The necessary EA (for ERA 62) is in place for the activities undertaken in the RRA for regulated waste.

The majority of general waste that is received at the facility is disposed of directly in the landfill (i.e. domestic clean-up waste and construction and demolition waste). Some general waste types are stored and/or recycled in the RRA. The Waste Acceptance Policy (WAP) prepared by the Applicant (refer to **Appendix 6**) outlines the types of waste accepted at the facility, nominates the accepted wastes for the RRA and provides an overview of disposal and processing method for different categories of waste.

The following section of the report outlines the types of waste the facility accepts and will continue to accept.

Disposable Waste

EA for ERA60 prescribes the types of waste that can be landfilled on site. General condition P1G1 specifies the following:

1. For the landfilling activities:

a) Only the following waste streams can be received at the site:

- i. Construction and demolition waste; and*
- ii. Domestic clean-up waste; and*
- iii. Inert commercial and industrial waste; and*
- iv. The only regulated waste that can be disposed of at the site is asbestos-containing construction and demolition waste, including disposal items used for the removal of asbestos, if packaged in accordance with all relevant work health and safety legislation requirements; and*
- v. The quantity of regulated waste must not exceed 10% of the total amount of waste received at the facility in a year.*

b) In addition to 1(a) above, the following waste streams must not be permitted to be placed at the landfill facility at any time:

- i. Liquid or semiliquid waste, other than:*
 - Liquid or semi-liquid waste that has been produced in the carrying out of the activity;*
 - Liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams.*
- ii. Hot ash*
- iii. Material that is smouldering or a flame;*



- iv. *Material containing a substance which is ignitable, corrosive, reactive, or toxic material (other than materials containing a toxic substance from domestic premises);*
- v. *All radioactive wastes, unless otherwise approved under the Radiation Safety Act 1999 or approved contaminated soil;*
- vi. *An explosive;*
- vii. *Ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction.*

C&D waste is defined in the existing EA as:

- a) *Waste generated from carrying out building work within the meaning of the Building Act 1975, section 5; and*
- b) *Without limiting paragraph (a), includes waste generated by building, repairing, altering or demolishing infrastructure for roads, bridges, tunnels, sewerage, water, electricity, telecommunications, airports, docks or rail.*

The following C&D waste is commonly accepted and will continue to be accepted at the facility:

- concrete in the form of plain, reinforced and un-reinforced concrete;
- masonry – both brick and concrete, reinforced and un-reinforced;
- cellulose-cement materials used as exterior sheeting or pipes;
- cement-bonded materials used as exterior sheeting or pipes;
- glass, in the form of glass used in buildings;
- fibreglass insulation;
- plastic materials used as electrical fittings;
- plastic, ceramic and vitreous china materials used as plumbing and drainage fittings;
- excavated materials including clays, silts, and rock;
- polystyrene Foam Pods used in waffle pod footing systems;
- plasterboard products;
- untreated timber; and
- friable and non-friable asbestos including but not limited to:
 - o asbestos wall and roof sheeting;
 - o plumbing pipe work;
 - o thermal lagging used on steampipes, boilers etc as fire protection
 - o ceiling insulation; and
 - o asbestos-contaminated soil

The above is not an exhaustive list of acceptable wastes but provides examples of the common types of C&D waste accepted for disposal at the facility. Other wastes similar in nature to the wastes listed may be accepted for disposal.



Recyclable and Reusable Waste

Waste items that are accepted onto site in the Resource Recovery Area (RRA), and recycled or disposed of lawfully in the Leivable Waste Disposal Area (LWDA) at the facility include:

- concrete;
- sheet roofing material, generally in the form of galvanised steel, aluminium or zinc pre-formed;
- sheeting, together with flashings;
- wrought and cast iron;
- steel in the form of reinforcing rods, tendon and bar used for the pre-stressing of concrete, structural steel sections, pipe and tube;
- galvanised steel; and
- structural timber members suitable for reuse.

The above is not an exhaustive list of recyclable wastes, but broadly identifies the types of wastes that are recovered. As opportunities arise, other wastes may be identified as suitable for recycling or reusing at the facility.

Recording and Unloading Waste

All incoming loads of waste into the facility are weighed at the weighbridge, and the source of the load and type of waste is determined. The following details are recorded for each load:

- date and time at arrival;
- vehicle registration and carrier (waste transporter);
- name of supplier (waste generator);
- origin of waste (physical location); and
- weight of the load.

Waste is taken to the tipping area inspection. Recyclable waste is sorted by placing into designated stockpiles within the RRA. Disposable waste must be weighed, as the weight gets recorded for the purpose of paying the waste levy, and finally disposed of to the LWDA.

If unacceptable waste is detected, then it gets separated and is appropriately managed and disposed of lawfully.

Once the trucks or skip bins are unloaded, they pass back over the weighbridge for weighing before exiting the facility.

Asbestos Waste

Asbestos waste that is C&D waste is accepted at the facility in a range of forms, from lower risk non- friable (bonded) asbestos such as wall or roof sheeting in good condition and properly sealed, to friable asbestos. All asbestos waste must still be handled very carefully to avoid loose asbestos fibres at elevated levels and the risk of these being breathed in.



Waste asbestos is a regulated waste and in accordance with the EA, asbestos disposal into the landfill at BWL cannot exceed 10% of the total volume of waste disposed in a year. The landfill is licensed under the EA to dispose of up to 10,000 tonnes of C&I waste in year, therefore the maximum quantity of waste asbestos that can be received and disposed of into the landfill in a year is 1,000 tonnes.

Asbestos waste is also a trackable waste under the *Environmental Protection Regulation 2019*. This requires that waste tracking documentation is completed by the following:

1. Waste generator.
2. Waste transporter.
3. Waste receiver.

The trackable waste code that must be shown on waste tracking documentation is N220. The facility refuses to accept asbestos waste if it not satisfied that all obligations in terms of packaging and transport have been met by the waste generator and waste transporter.

The facility is licensed to receive and dispose of asbestos. Before accepting such waste, the facility needs to ensure the waste transporter holds an EA for ERA 57 – Regulated waste transport. Unloading and recording operations for this waste are similar to those outlined above, but in terms of its disposal, P-EA-100698838 includes specific conditions that step out the requirements around disposal, which include:

- disposed as a special burial of waste; or
- disposed and confined to a designated asbestos landfill cell where no excavation takes place following the initial disposal of asbestos waste within that designated asbestos landfill cell.

C&D Waste

At the facility, C&D waste is regularly covered to prevent the following:

- windblown litter potentially leaving site and reaching sensitive uses.
- spread of fire in the unlikely event that fire starts within the LWDA.
- establishment of birds and other animals seeking refuge or nesting within deposited waste.
- ingress of rainwater.
- landfill being non trafficable.
- visual appearance of the LWDA does not adversely impact the amenity of the area.

C&D waste includes a range of wastes, some of which are extremely light in weight and to contain these waste items daily compaction will occur along with the daily cover C&D waste with clean fill deposited into the LWDA. Clean earth is routinely used as daily cover once C&D waste has been deposited and compacted in the LWDA.



Clean earth also mixes well with deposited waste when applied prior to compaction. Then, when present among deposited waste, assists in the compaction of the waste when track rolled. This contributes to a much more stable surface over which to deposit additional C&D waste.

The facility also has the relevant EA to accept Category 2 regulated waste including batteries, paint waste and oils. Historically these waste types were stored within the existing building located in the RRA and are managed through the existing EA that applies to the land. Tyres are also stored within the RRA.

Historically screening and crushing activities for concrete have occurred within the RRA. Generally, the crushed concrete is re-used as road base within the site under the existing exemption certificate (190068OSOP) but it may also be sold externally from time to time.

The key operational changes include:

- increase the volume of waste the facility can receive from 10,000 tonnes to up to 50,000 tonnes per year, whilst maintaining the footprint of the existing working area, including cell layout, location and configuration;
- introduction of three x two axle rigid body trucks, as opposed to just skip bins, which is consistent with Applicant's existing approved operations in Rockhampton and elsewhere;
- employee numbers to increase by two, so a total of four employees;
- hours of operation will remain Mon-Sat 6.30 am – 7.00 pm;
- number of truck movements to and from the facility will be between 30 to 50 per day (historically it was 36 per day) and largest design vehicle will be a 2-axle rigid body truck;
- types of waste to be managed will remain consistent with the current EA's;
- the layout of the facility will generally align with the current approved layout, with some minor changes to turning areas and tracks to landfill cells made for improved access and manoeuvring;
- waste will be stored and handled in accordance with EA's; and
- the facility will not be open to the public.

The operation of the facility is generally depicted on the site plan (refer to **Appendix 5**). Despite the increase in the capacity of the facility, the rationalised day to day operations at the facility will continue to occur as per the existing approval and approved plans under the EA and existing development permit.

The landfill operates in accordance with the existing EA that applies to the site. The landfill receives domestic clean-up waste, construction and demolition waste, and asbestos.



Scale and Intensity

Based on the existing permit M33/03 and EA P-EA100698838, the existing facility can receive maximum of 10,000 tonnes of waste per annum. The Applicant is seeking to increase the threshold of waste the facility can receive, sort and dispose of up to 50,000 tonnes of waste per annum. The proposed increase will result in the following changes to the scale and intensity of the existing operations:

- receipt of disposal of not more than 50,000 tonnes per year, whilst maintaining the footprint of the existing facility, including cell layout, RRA and the like;
- employee number to increase by two, so a total of four employees;
- hours of operation will remain Mon-Sat 6.30 am – 7.00 pm;
- number of truck movements to and from the facility will be between 30 to 50 per day (historically it was 36 per day) or worse case 60-70 per day, with the largest design vehicle being a 2-axle rigid body truck; and
- types of waste to be managed will remain consistent with the current EA's.

As previously outlined, the layout of the working area will remain as per the historic approval.

Access, Traffic Movements and Parking

Langtree Consulting Engineers have prepared a Traffic Impact Assessment (TIA) (refer to **Appendix 7**), which confirms that the existing access arrangement is suitable for the proposed increased waste threshold.

Access

Access to the site is via the Bruce Highway and across the existing Great Northern Railway line. The current intersection is a channelised short right turn (CHR(s) arrangement whilst the left is a simple left (SL). Waste received at the facility primarily comes from Townsville and an existing right turn lane is provided for vehicles accessing the facility. Vehicles that attend the facility are primarily skip bin loader vehicles although some larger semi-trailer vehicles also deliver waste to the facility. No changes are proposed or required to the existing access arrangement to the facility.

Traffic Movements

Since the original development approval, the Applicant has acquired the site and is seeking to increase the allowable rate of waste disposal from no more than 10,000 tonnes to no more than 50,000 tonnes in a year. As part of the historic approval associated with the facility, the anticipated traffic was up to 50 vehicles per day, which appears to cover the vehicles per day movements of a 50,000 tonnes waste facility.

As outlined in the TIA, *'The site does not allow general public access, and this is not proposed to change. Based on standard loadings, the payload for a 2-axle rigid truck is 6.5 tonnes. Assuming*



the development will operate 48 weeks per annum, 5.5 days a week, this would equate to 30 loaded vehicles per day or 60 trips per day. Assuming not all vehicles would be fully loaded, development traffic is anticipated to be 60 to 70 vehicles per day in a worst-case scenario. The current maximum traffic anticipated in the current approval is 30 to 50 vehicles trips per day. Development peak hour traffic is assumed to be 12.5% of the daily traffic with a 30%/70% split north and south respectively'.

Vehicle Fleet

Through the rationalisation of operations, the vehicle fleet for the facility consists of three (3) 2-axle rigid body trucks. Vehicles operate under standard mass limits.

Intersection Turn Warrant

The TIA includes an assessment of turn treatments based on 2025 and 2035 weekday volumes. The results of this assessment determine that a basic right (BAR) and basic left (BAL) arrangement for both the base year (2025) and horizon year (2035) are deemed warranted. Given the current intersection type arrangement is a BAL/ CHR(s), it is a better arrangement than that warranted by the turn treatment warrant. As such, the existing intersection does not need to be changed or upgraded.

Further to the above, the Safe Intersection Sight Distance (SISD) has been assessed and sight distance at the intersection is greater than the minimum SISD for cars and trucks. As such there is sufficient sight distance for vehicles on the through road to observe exiting vehicles, react and stop. Refer to Appendix B of the TIA for SISD sight lines.

Car Parking

There are only four employees associated with the facility and the historic approval includes a condition requiring four car parking spaces to be provided for the facility.

Railway Crossing

The railway crossing currently has a passive stop control crossing. The TIA adopts the following assumptions:

- *Train speed = 160 km/h;*
- *Table D1, Vehicle type = Level 1 (Semi trailer);*
- *Normal driving behaviour; and*
- *Flat grade.*

Adopting the above assumptions, the TIA concludes that the minimum sight distance (S3) at which an approaching train from either direction must be seen, in order for the design vehicle to start off and clear the crossing by the safety margin, is 440 m.



As noted in the TIA , *'From a desktop assessment, the current rail crossing has sufficient sight distance for a stopped vehicle at the crossing to start-up and clear the crossing safely before the arrival of any previously unseen train. A sensitivity checks against QR MD-23-67, Table 3 has also been undertaken. A sight distance of 710 m is stipulated for a maximum train speed of 160km/h. The existing at grade crossing has more than 710 m of available sight distance in the horizontal plane. Refer to Appendix B for available sight distance and AS1742.7 passive crossing stop and start up sight distance calculation'.*

Swept Path

Appendix C of the TIA includes a swept path analysis of the existing intersection. This analysis has determined that the current intersection arrangement is able to accommodate the largest proposed design vehicle, which is a 2-axle rigid body (12.5 m) truck.

Safety Assessment

In accordance with the GTIA, Table 9.3.3(a) and Table 9.3.3(b), the road environment safety rating matrix (level of risk), the Bruce Highway has a "Medium" risk rating and the type of assessment required is a road safety assessment. Refer to Table 9 and Table 10 in the TIA.

Railway Short Stacking

As noted above, the design vehicle for the facility is now a 12.5 m rigid vehicle. The available distance between the intersection give way line and railway crossing is in the order of 55 m, therefore there is more than sufficient distance to accommodate the design vehicle and short stacking of the railway line is not anticipated to be an issue.

Water and Sewer Services

The site is connected to Council's reticulated waste services, being the Mount Spec pipeline. No connection is provided to Council's reticulated sewer network, and an on-site wastewater treatment system is provided at the site office.

Stormwater

To support this change application (other), Langtree Consulting Engineers have reviewed and assessed the current stormwater management measures that have been implemented at the facility and have prepared a Stormwater Manager Plan (SMP) (refer to **Appendix 8**). In the main, stormwater will continue to be managed as per the current arrangements, but with the construction of the fourth basin, which forms part of the original approval D33/03. The waste cells included in the landfill area include a clay liner that ensures there is minimal percolation of water into the groundwater and stormwater networks. Stormwater that filters through the waste cells of the landfill is collected in a detention area adjacent to the landfill sites, where it is then pumped into a designated leachate pond situated to the north-west of the landfill area. There are three freshwater ponds located on the periphery of the landfill area.



As outlined in the SMP Stormwater at the site is considered to be categorised as follows:

- *Clean stormwater – stormwater runoff from undisturbed or rehabilitated areas are considered to produce clean stormwater runoff which is safe to discharge to the environment.*
- *Sediment laden stormwater – stormwater runoff from non-rehabilitated areas of the site typically has poor ground cover which results in transportation of sediments during rainfall events.*
- *Leachate – rainfall that has come into contact with the active face of the land fill or green waste stockpiles are considered as leachate and is managed in accordance with the Leachate Management Plan and EA Permit.*

Management of onsite stormwater is based on the following principles:

- *Diversion of clean water from entering working areas to minimise volume of stormwater required to be treated.*
- *Capture of stormwater from operating areas for storage and treatment in the leachate pond or sediment ponds as required.*

Stormwater Management and Collection

The SMP sets out that landfill area management will typically involve the following practices:

- *Revegetation of any permanent surface (with final capping).*
- *Revegetation or mulching of any surfaces to be left unused for more than one month.*
- *Trapping of sediments in sediment basins.*
- *Re-use of the water from sediment basins for on-site purposes such as dust suppression.*
- *Stormwater that has come into contact with waste is considered leachate and shall not be sent to sediment ponds.*

Existing Stormwater Regime

Four watercourses exist near the subject site as follows:

- Christmas Creek (Stream order 3) to the northwest;
- Unnamed watercourse (Stream order 1) to the north;
- Unnamed watercourse (Stream order 1) to the northeast; and
- Sleeper Log Creek (Stream order 4) to the east.

Contours indicate that stormwater from the site discharges as overland sheet flow, via natural streams to Christmas Creek or Sleeper Log Creek.

From historic reporting associated with the facility, there are a series of stormwater catchment areas and associated ponds that have been constructed. Ponds 1, 2 and 4 are freshwater ponds, whilst pond 3 is a leachate pond. There are a series of existing swale drains which discharge stormwater into the ponds.

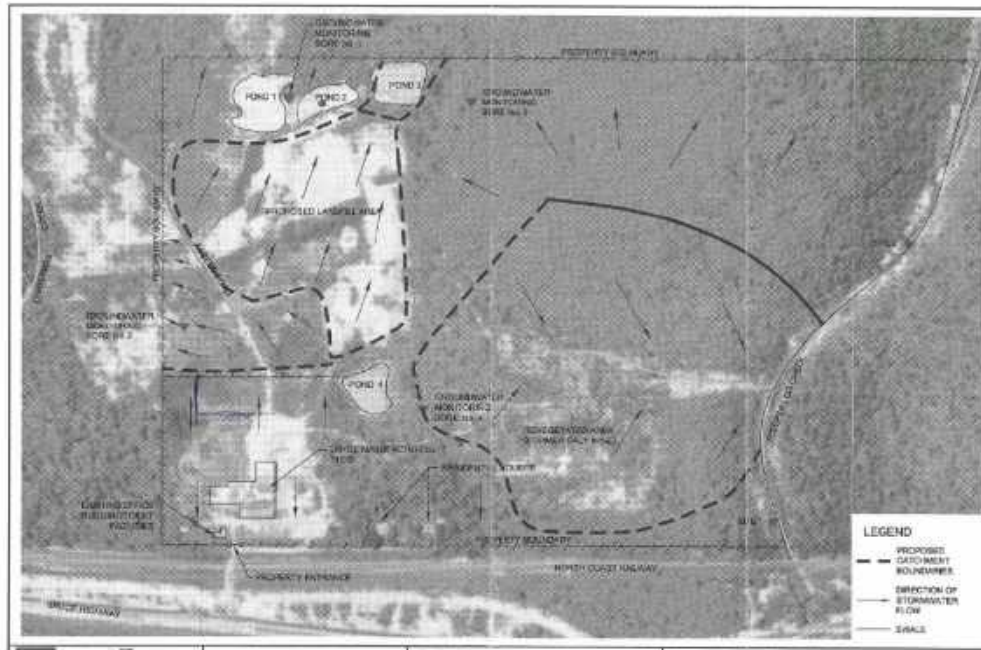


Figure 2: Stormwater Ponds and Swales (Source: SMP prepared by Langtree Consulting Engineers, refer to Appendix 8)

From the final landform layout approved under D33/03, refer to Figure 6 in the SMP, it is noted that a sediment basin was proposed along the north western boundary, but this pond has not been constructed.

The water levels in the leachate pond are managed through re-use on the landfill site (via a water truck and pumping) and via evaporation to ensure that the leachate does not overtop the banks of the pond.

Stormwater within the RRA generally clears quickly and no specific stormwater measures are implemented. Generally, the stormwater clears quickly and percolates into the ground. There are no adverse impacts to groundwater quality as a result of stormwater run-off from the RAA. The general waste that is exposed to stormwater run-off does not pose a significant risk to surrounding environmental values, noting that concrete contains clay/ limestone which does not adversely impact on the water or land quality of the receiving environment.

Existing Catchments

From available Lidar of the site, concentrated stormwater from the working areas of the site discharge from the site at different locations as follows:

- Pond 1 and 2 (88,953 m²) – northern boundary to Christmas Creek via unnamed order 1 Stream; and
- Pond 4 (157,116 m²) – eastern boundary to Sleeper Log Creek.



There are currently four existing ponds on at the facility. Ponds 1 and 2 capture runoff from the landfill area, which has not come into contact with waste material (i.e. from capped fill and road areas). Pond 3 acts as a leachate pond, whilst Pond 4 collects runoff from the road and battery storage area near the site access. The battery storage area is roofed and stormwater does not come into contact with any waste in the area.

Proposed Site Drainage And Catchments

The working area of the facility will remain generally the same as the current approved footprint. For the purposes of stormwater, catchments for the working area will be treated by a series of sediment basins before leaving the site. Existing Pond 1 will become Sediment Basin 1 to treat the landfill area, a new sediment basin (Sediment Basin 2) will be constructed to treat the processing area located in the south western region of the facility and Pond 4 will become Sediment Basin 3. Sediment Basin 2 is effectively the fourth fresh pond approved under D33/03. The location of Sediment Basin 2 has changes slightly to that approved under D33/03, in order to accommodate the size of the basin required and take advantage of a natural depression area on the site. All release points shall be monitoring points to ensure any stormwater release complies with water quality objectives.

Based on the Sediment Basin calculations in the SMP, existing ponds 1 and 4, which will become Sediment Basins 1 and 3, will require little to no amendment with regards to volume capacity. All basins shall be provided with a 1:6 vehicle access for clean out and a rock lined spillway for discharge. Due to shape of existing ponds, the SMP recommends that internal baffles are utilised to increase the effective length to width ratio.

A stockpile area exists to the east of the landfill area. Stormwater from this area generally travels north as overland flow for 150 m before departing the site property boundary and does not enter a watercourse for over 400 m. Clean water is diverted around the stockpile area and dirty water from the stockpile area is primarily treated through woven sediment fence and or mulch bund.

Development Stormwater Quantity

The working area of the facility will remain generally the same as the current approved footprint associated with D33/03, as such, there will be no increase in stormwater run-off from the subject site. As previously outlined, the site discharges to Christmas Creek and Sleeper Log Creek via existing streams and no changes are proposed to discharge locations.

Site Stormwater Management

The SMP prepared by Langtree Consulting Engineers has been designed to minimise the disturbance area outside of the active working area of the facility, divert clean water around the site and dirty water to sediment basins. Sediment laden water from the operational area will be treated by sediment traps in the form of sediment basins, before being discharged from the site.



The SMP outlines that stormwater run-off at the site will be managed by:

- *Retain existing release points from the site, with catchments to the discharge locations remaining similar to pre-development conditions. No additional or relocated discharge points are proposed;*
- *Stormwater management systems so that little to no run-off from outside the working areas enters the areas and no run-off is released from the area prior to treatment;*
- *Maintaining a stormwater management system that is suited to the ongoing development of the site;*
- *Constructing and maintenance of all the required structures to capture and treat the onsite stormwater (e.g. diversion channels, catch drains, sediment basins and spillways);*
- *Minimising disturbed areas that contain materials prone to erosion;*
- *Installing sediment and erosion structures that will control the movement of sediment in areas prone to erosion;*
- *Regular maintenance inspections of all the associated structures;*
- *Using the stormwater captured in the sediment basins for dust suppression;*
- *Recycling the water from the sediment basins in the composting process; and*
- *Retaining spill kits on site and training of all staff in the use of the kits.*

Stormwater Management System Design

Any upstream stormwater from disturbed areas will be directed to the proposed sediment basins via diversions channels and bunds. The sediment basins will act as a sediment trap for all runoff and will be allowed to settle before releasing the treated water through the spillways and into the downstream Hutchinson Creek. Sediment will be allowed to settle in the sediment basins before being removed and de-watered.

The design of the stormwater management system includes one sediment basin to capture the runoff from a 24 hour, ARI 5 rainfall event. The sediment basin will discharge via spillway which is designed for an ARI 50 rainfall event.

Design of the spillway, catch drains and diversion channels on the site have been analysed using the Rational Method. The guideline utilised for the calculation of the rational method is as per the Queensland Urban Drainage Manual (QUDM) 2017.

In terms of water quality testing, sampling will be conducted at the nominated release points and in accordance with the sampling and monitoring conditions included in the EA permit.

Soil Erosion And Sediment Control Measures

All sediment basins, catch drains, diversion channels and diversion bunds will be constructed and maintained as outlined in Soil Erosion and Sediment Plan drawing attached in Appendix A of the SMP. The measures outlined within the plans are the minimum requirements for the site and are subject to on-going maintenance and performance criteria (i.e. WQO).



Sediment Basins

As nominated in the SMP, all basin on site have been designed to a Type D basin and must be operated with the following parameters:

- *The water level in the basins will be controlled so that at the end of the dry season, the available capacity of the basins is greater than the runoff calculated for a 24 hour, ARI 5 rainfall event;*
- *Within 120 hours of the most recent rainfall event the upper settling volume of all sediment basins must be made available to capture and store stormwater runoff from the next rainfall event;*
- *Prior to a rainfall event the sediment basin should be fully drained; and*
- *In between storm events the basin may retain but must be de-watered prior to any storm that is likely to produce runoff.*

The SMP outlines a series of procedures monitoring and reviewing how the basins are performing and appropriate actions to implement to improve the basins' performance:

- *De-watering procedures;*
- *Decant water quality objectives;*
- *Sediment basin performance assessment procedures;*
- *Corrective measures: coagulants and flocculants;*
- *Sediment basin de-silting procedure; and*
- *Sediment basin maintenance.*

SMP Summary

In summary, the SMP assessed for stormwater impacts associated with the facility and proposed changes and concludes the following:

- the working area of the facility is proposed to remain relatively the same as previously shown in the existing development approval;
- the facility does not propose to significantly increase stormwater run-off from the subject site;
- stormwater discharges to Christmas Creek and Sleeper Log Creek via existing streams and no changes are proposed to discharge locations;
- three sediment basins are required to treat run-off for sediment prior to discharge from the subject site:
 - existing Ponds 1 and 4 shall be modified and utilised as the sediment basins for catchments 1 and 3; and
 - a new sediment basin, previously approved under Development Approval D33/03 but not yet built, shall be constructed for treatment the south western area of the facility.

The existing EA includes conditions appropriate for the management of stormwater and these conditions should be maintained as part of this amendment application.



Groundwater

As part of the assessment of the Development Approval D33/03, GHD prepared a report addressing groundwater matters to respond to additional information requested by the Department of Natural Resources and Mines (DNRM).

Groundwater levels measured at the site between 21/02/2003 and 07/04/2003 ranged from approximately 4.5 m to 5.5 m below surface in monitoring bores GWB1 GWB2 and GWB3 and was approximately 7 m below surface in GWB4. The maximum fluctuation was in GWB1, from 5.205 m below surface on 18/03/2003 to 5.425 m below surface on 07/04/2003, a rise of 0.22 m.

The report concluded at the time (2003) that groundwater beneath the site was likely to discharge locally to Christmas and Sleeper Log Creek and was not suitable for irrigation or potable use. Consequently, the site was not within the recharge zone of a significant groundwater resource and was unlikely to support vegetation.

As groundwater beneath the site exceeded the leachate acceptance criteria for unlined landfills, the placement of material meeting unlined landfill acceptance criteria within a properly engineered landfill cell was unlikely to degrade groundwater quality.

Given the high chloride and low sulfate content of groundwater sampled at the site, and the fact that landfill leachate, including building waste, typically has elevated sulfate content, chloride sulfate ratios could be a useful indicator for leachate impact.

The GHD report recommended the following be implemented:

- future monitoring should include performance of "slug tests" to quantify aquifer hydraulic conductivity; and
- major ions should continue to be analysed to enable hardness correction of heavy metal concentrations and to monitor chloride/sulfate ratios.

The current EA permit contains Conditions 1-WT6 to 1-WT12, which appropriately deal with the requirements around ongoing management and monitoring of groundwater and surface water at the facility.

Noise

The activities undertaken at the facility do not generate significant amounts of noise. The main noise generating activities are from the operation of machinery on the site, including the screening and crushing plant, bulldozers and excavators. These activities are undertaken infrequently and as required.



In addition, the facility is located in a rural area and achieves sufficient separation from sensitive receptors. The closest sensitive receptor is the dwelling house located approximately 750 m from the subject land on Lot 1 on RP742572. There are also two existing background noise sources, being the Bruce Highway and the Great Western Railway Line, therefore, it is unlikely that noise emissions will exceed those required at a sensitive receptor as identified by the *Environmental Protection (Noise) Policy 2019*.

The existing EA includes conditions appropriate for the management of noise and these conditions should be maintained as part of this amendment application.

Dust

Dust emissions from the waste management and recycling activities are expected to be minimal but may occur as a result of:

- screening and crushing activities of concrete;
- concrete stockpiling activities and
- waste particles from the landfill.

Minor dust impacts are more commonly identified during the dry season. Fresh water is available on-site within the freshwater ponds around the landfill area and a water truck is filled for dust suppression purposes and applied to areas creating dust emissions as required. This occurs when concrete crushing is being undertaken and is applied to the crushed concrete stockpiles. If dust impacts are identified on the landfill, leachate water may be utilised for dust suppression purposes but generally this is not required.

The subject land consists primarily of loamy clay base which means that extraction activities for the creation of new waste cells generally comprises dense soil types that do not cause significant dust impacts.

Wind impacts are generally greatest during the dry season. The dust impacts from the facility are generally minimal however in the event dust impacts are observed the following mitigation measures are applied:

- dust suppression via a water truck; and
- restricting activities until there is less windy weather.

The waste management and recycling facility is located in a rural area and achieves sufficient separation from sensitive receptors. The closest sensitive receptor is the dwelling house located approximately 750m from the subject land on Lot 1 on RP742572. It is unlikely that dust emissions will exceed the thresholds at a sensitive receptor as identified by the *Environmental Protection (Air Quality) Policy 2019*.



The existing EA includes conditions appropriate for the management of dust and these conditions should be maintained as part of this amendment application.

Electricity and Communications

The facility is connected to the reticulated electricity network and is adequately serviced by telecommunications.

Landscaping

The facility contains existing trees and grassed areas and the existing landscaping will be retained, given the retention of the approved footprint of the facility.

4.2 Development Plans

The proposed development is detailed in the plan provided at **Appendix 6** and listed below. In addition, the proposed development is further detailed in the associated reports listed below and appended as referenced.

Title	Number	Issue	Date
Site Plan	M2301-SK-3	1	15-4-2025

Associated Reports

- Traffic Impact Assessment prepared by Langtree Consulting Engineers(refer **Appendix 7**)
- Stormwater Management Plan prepared by Langtree Consulting Engineers (refer **Appendix 8**)

4.3 Prelodgement Meetings

The proposed development was the subject of a prelodgement meeting between Townsville City Council (Council) and the Applicant’s representatives on 16 May 2024. Council were noted as being generally supportive of the proposed development given it involves increasing the threshold capacity of an existing waste management and recycling facility, to better service the community. The proposed use will require a new Material Change of Use, or an Other Change to D33/03.

Likely supporting technical reports will include:

- Traffic Impact Assessment (TIA);
- Flood Impact Assessment (potentially) (FIA); and
- Stormwater Management Plan (SMP).



A separate prelodgement meeting was occurred with SARA on 19 February 2025, where the following matters were discussed:

Traffic and Rail

- It is noted that the expected need for a traffic assessment based on the increased intensity of the project, is standard practice. It was emphasised the importance of providing details in accordance with guidelines, such as types of vehicles, volume, and daily site operations.
- The project might require further assessment of access lanes, turning lanes, and potentially lengthening these to accommodate increased traffic. DTMR acknowledged that the proximity to the railway means coordinating with the rail team for their input.
- There were questions posed about whether a separate traffic assessment was needed based on the intersection upgrade or whether being under the threshold of current approval was sufficient to avoid further traffic increases.
- DTMR requested that Milford Planning provide the current approval documents to review and offer feedback, emphasising that the information will help determine the need for additional details in their application and possibly influence the extent of required traffic assessment.

Groundwater and Landfill Considerations

There was an extensive discussion revolving around groundwater monitoring, potential use of liners for environmental protection, and modernisation approaches for landfill management. Considerations for proactive landfill management were discussed to reduce financial assurance for disturbances and protect groundwater values.

Storm Water and Leachate Management

The design and planning for stormwater management and leachate collection and treatment were emphasised, especially considering the wet and dry seasons in Townsville and minimising the water collection and treatment requirements.

Resource Recovery and Recycling

The Resource Recovery Areas under the Waste Reduction and Recycling Act were discussed, mentioning designed areas for material recovery, storage, and waste processing.

Application Process for Environmental Authority Amendment

Detailed clarification was sought about the application process for an environmental authority amendment, which involves referring the other change application to the council first and then being referred to SARA before then lodging an application to amend the Environmental Authority directly with DETSI.



Waste Levy and Volumetric Surveys

DESTI clarified the waste levy obligation and the need for volumetric surveys when new cells in landfills come online, including the continuation of normal data returns and the addition of annual surveys.

Amendment to EA P-EA100698838

EA P-EA100698838 for the facility includes the following ERA's:

- ERA60(2(c)) - Waste Disposal (receive > 5,000 but not more than 10,000 tonnes in a year);
- ERA62(1) - Resource Recovery and Transfer Facility Operation;
- ERA54 - Mechanical Waste Reprocessing; and
- ERA57 – Regulated Waste Transport.

SARA is a Referral Agency to the application pursuant to Schedule 10 Part 5, Division 4, Table 2 – Non devolved environmentally relevant activities of the *Planning Regulation 2017*, in terms of a land use assessment for the EA. A Major Amendment EA Application to P-EA100698838 will be lodged with DETSI to facilitate amending the threshold of ERA60 to ERA60 (2(e)) - Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste) more than 20,000 tonnes but not more than 50,000 tonnes in a year. An unsigned copy of amendment Application to Amend an Environmental Authority Form Form) is enclosed for reference purposes only (refer to **Appendix 9**). SARA has provided advice that this form does not need to be included in the development application for it to accepted as a properly made.



5.0 ASSESSMENT FRAMEWORK

5.1 Planning Act 2016

The *Planning Act 2016* (the Act) provides the framework for Queensland's planning system and coordinates local, regional, and State planning. The Act allows for the establishment and is supported by subordinate planning legislation and instruments such as planning schemes. The provisions of the Act are therefore applicable to the proposed development.

5.2 Planning Regulation 2017

The *Planning Regulation 2017* (the Regulation) is established under the Act and provides support to the Act by detailing how it functions at a practical level. The Regulation determines the Assessment Manager and Referral Agencies relevant to assessable development, and relevant State interests through the State Planning Policy (SPP) and State Development Assessment Provisions (SDAP). The provisions of the Regulation are therefore applicable to the proposed development.

5.3 Approval Sought

Approval Type	Development Permit
Development Type	Change (Other) Material Change of Use
Definition or General Description	Waste Disposal and Recycling Facility
Specific Description	Increase waste disposal threshold to not more than 50,000 tonnes in a year

5.4 Assessment Manager Assessment Parameters

Assessment Manager	Townsville City Council
Planning Instrument	<i>Townsville City Plan 2014</i> (the planning scheme)
Zone and Precinct	Rural Zone (Mixed Farming Precinct)
Triggered Overlays	▪ Bushfire Hazard Overlay (Map OM-02 Medium Bushfire Hazard Area) ▪ Flood Hazard – (Map OM-06.1 to OM-06.2 - Medium Hazard Further Investigation Area) ▪ Environment Natural Assets Overlay (Map OM-08 - Environmental importance – High and Very High)
Category of Assessment	Impact



Table of Assessment Reference	Table 5.5.21 – Rural Zone
Assessment Manager Assessment Benchmarks	▪ Strategic Framework ▪ Rural Zone Code ▪ Healthy Waters Code ▪ Landscaping Code ▪ Traffic Impact, Access and Parking Code ▪ Works Code ▪ Bushfire Hazard Overlay Code ▪ Flood Hazard Overlay Code ▪ Environment Natural Assets Overlay Code

5.5 Referral Agency Assessment Parameters

Referral Agencies	State Assessment Referral Agency
Planning Instrument	<i>Planning Regulation 2017</i> (the Regulation)
Referral Triggers	The proposed development triggers the following referrals: ▪ Schedule 10, Part 9, Division 4, Subdivision 1, Table 1 – Aspect of Development Stated in Schedule 20; and ▪ Schedule 10, Part 9, Division 4, Subdivision 2, Table 4 – Material Change of Use of premises near a State transport corridor or that is a future State transport corridor ▪ Schedule 10, Part 5, Division 4, Table 2 – Non devolved environmentally relevant activities
Referral Agency Assessment Benchmarks	▪ State code 1 – Development in a State-controlled road environment ▪ State code 2 – Development in a railway environment ▪ State code 6 – Protection of State transport networks ▪ State code 22 – Environmentally relevant activities



6.0 ASSESSMENT MANAGER CONSIDERATIONS

6.1 State Planning Policy

The *State Planning Policy* (the SPP) is a State planning instrument established under the Act and is designed to ensure the State's interests in planning are protected and delivered as part of local government planning across Queensland. Local government use the SPP when making or amending its planning scheme. Local government will also assess aspects of development applications using the SPP if their local planning scheme has not integrated certain State interests.

In accordance with Section 2.1 – State Planning Policy (SPP) of the planning scheme, the Minister has identified that all relevant State interests as outlined in the SPP dated July 2014 have been integrated into the planning scheme.

For the purpose of the proposed development, we consider that assessment against the provisions of the SPP is not required, and all relevant matters will be dealt with under the provisions of the planning scheme.

6.2 Regional Plan

Regional plans are State planning instruments established under the Act, and set the long term strategic direction for how regions grow and respond to change. Regional plans are designed to facilitate economic growth, development, liveable communities, and the protection of natural resources. Regional plans seek to balance the State interests identified by the SPP in the context of the particular region they apply to.

The *North Queensland Regional Plan* (the Regional Plan) applies to the local government areas of Townsville City, Hinchinbrook Shire, Burdekin Shire, Charters Towers Regional, and Palm Island Aboriginal Shire. The Regional Plan was implemented in March 2020, and seeks to capitalise on the growth, prosperity, and diversity of the region by supporting a vibrant economy, generating jobs, improving business investment, protecting our natural environment, and encouraging tourism and lifestyle opportunities over the next 25 years.

The proposed development is considered to align with the goals outlined in the Regional Plan. In particular, the proposed development will further the goals of the Regional Plan.

6.3 Planning Scheme Strategic Framework

The planning scheme incorporates a strategic framework, which sets the policy direction and basis for ensuring appropriate development occurs within the planning scheme area.



The strategic framework is represented by the following four themes:

- shaping Townsville;
- strong, connected community;
- environmentally sustainable future; and
- sustaining growth.

The strategic framework provides strategic outcomes for each of the above four themes.

The proposed change furthers the outcomes sought by the above themes and the relevant outcomes, particularly when considering:

- the proposed change provides increased capacity at the existing facility, whilst maintaining the historic approved footprint of the cell area;
- the additional capacity will assist in conserving valuable space at Council's existing waste disposal facilities;
- the additional capacity will relieve pressures and travel distance of disposing inert waste at landfill facilities elsewhere in Townsville;
- the proposed change provides increased opportunities for recycling waste;
- with the exception of the existing dwelling on within the subject site, there are no sensitive receptors within close proximity to the facility;
- the proposed change provides the facility increased waste disposal capacity, with minimal impacts in terms of additional demand on roads and infrastructure services;
- the EA for the facility include conditions that are appropriate for the management of environmental values to ensure the facility is operated and managed appropriately; and
- technical specialist reporting undertaken has identified site specific management measures that will ensure the safety of the site and will not impact upon the environment in any capacity.

6.4 Planning Scheme Purpose and Overall Outcomes

The proposed change is considered to further the purpose and overall outcomes sought by the relevant planning scheme codes by demonstrating compliance with the relevant performance and accepted outcomes.



6.5 Planning Scheme Assessment Matrix

The assessment matrix below summarises the outcome of an assessment of the proposed change against the relevant performance and accepted outcomes of the applicable Assessment Manager assessment benchmarks. The assessment matrix identifies the level of compliance of the proposed change in accordance with the legend below.

Legend	

■	Criteria is clearly met and no further assessment is required.
■	Criteria is met and further explanation is provided for clarity.
■	Criteria is not met and further performance assessment is required.
■	Not applicable or no criteria prescribed.

Outcome PO or AO	Zone		Healthy Waters Code		Landscape Code		Traffic Impact, Access & Parking Code		Work Code		Bushfire Hazard Overlay Code		Flood Hazard Overlay Code		Environment Natural Assets Overlay	
	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO
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Outcome PO or AO	Rural Zone Code		Healthy Waters Code		Landscape Code		Traffic Impact, Access & Parking Code		Work Code		Bushfire Hazard Overlay Code		Flood Hazard Overlay Code		Environment Natural Assets Overlay	
	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO	PO	AO
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7.0 REFERRAL AGENCY CONSIDERATIONS

7.1 State Code Purpose and Overall Outcomes

The proposed change is considered to further the purpose and overall outcomes sought by the relevant State Codes by demonstrating compliance with the relevant performance and accepted outcomes.

7.2 State Code Assessment Matrix

The assessment matrix below summarises the outcome of an assessment of the proposed change against the relevant performance and accepted outcomes of the applicable Referral Agency assessment benchmarks. The assessment matrix identifies the level of compliance of the proposed change in accordance with the legend below.

Legend		Criteria is clearly met and no further assessment is required.
		Criteria is met and further explanation is provided for clarity.
		Criteria is not met and further performance assessment is required.
		Not applicable or no criteria prescribed.

Outcome PO or AO	State Code 1		State Code 2		State Code 6		State Code 22	
	PO	AO	PO	AO	PO	AO	PO	AO
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Outcome PO or AO	State Code 1		State Code 2		State Code 6		State Code 22	
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Outcome PO or AO	State Code 1		State Code 2		State Code 6		State Code 22	
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8.0 ENVIRONMENTAL PROTECTION REGULATION 2019

8.1 Assessment Summary

The proposed development involves a change to existing EA P-EA100698838 for the facility, which includes the following ERA's:

- ERA60(2(c)) - Waste Disposal (receive > 5,000 but not more than 10,000 tonnes in a year);
- ERA62(1) - Resource Recovery and Transfer Facility Operation;
- ERA54 - Mechanical Waste Reprocessing; and
- ERA57 – Regulated Waste Transport.

Only ERA60(2)(c) - Waste Disposal (receive > 5,000 but not more than 10,000 tonnes in a year) needs to be changed to ERA60 (2(e)) - Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste) more than 20,000 tonnes but not more than 50,000 tonnes in a year.

An assessment of the proposed development against the applicable benchmarks of the *Environmental Protection Regulation 2019* has been provided within **Appendix 10**. It is noted that Schedule 8, Part 3, Division 1 contains the environmental objectives and performance benchmarks the development which need to be assessed. These include:

- Air;
- Water;
- Wetland;
- Noise;
- Waste; and
- Land.



9.0 OTHER RELEVANT MATTERS

9.1 Other Relevant Matters

There are substantial other relevant matters to support the approval of the proposed change. In accordance with Section 45, Item 5 (b) of the Act, an impact assessment may be carried out against, or having regard to, any other relevant matter, other than a person's personal circumstances, financial, or otherwise.

Other relevant matters supporting the approval of the proposed change include (but are not limited to) the following:

- there is a long-term community understanding and acceptance of development of this nature at this location, being a waste management and recycling facility;
- the continuation of the use of the property for non-rural purposes is not at odds with the community expectations for the use of the site;
- environmental values can be managed appropriately;
- the proposal integrates well into the existing infrastructure network and will not impact on state-transport corridors and associated infrastructure;
- the proposed development does not seek to change the existing layout or cell configuration at the facility;
- the proposed change will provide the facility with additional waste disposal capacity and recycling opportunities;
- the proposed change involves improvements to the existing established stormwater management plan for the facility, to ensure the facility is being managed as per the current standards and requirements;
- the proposed change will allow the most efficient use of the facility, which has been underutilised to date; and
- the proposed change will not have an adverse impact in terms of emissions and environmental impacts.



10.0 CONCLUSION

10.1 Assessment Summary

The assessment of the proposed development against the relevant assessment benchmarks detailed in this change application (other) supports a recommendation for approval based on the following reasons:

- the proposed development complies with the relevant assessment benchmarks; and
- compliance with the relevant assessment benchmarks can be managed through reasonable and relevant conditions.

10.2 Recommended Conditions of Approval

Given the above facts and circumstances presented in this change application, we recommend that Council **approve** the proposed change subject to the following reasonable and relevant conditions that are considered specifically relevant to the proposed change.

Condition 1 – Approved Plans and Supporting Documentation

- (a) The development must generally comply with the plan and supporting documentation referenced in the table below and attached as stamped “Approved Subject to Conditions” which forms part of this approval, unless otherwise specified by any condition of this approval.

Title	Number	Issue	Date
Site Plan	M2301-SK-3	1	15-4-2025
Associated Reports			
Traffic Impact Assessment prepared by Langtree Consulting Engineers			
Stormwater Management Plan prepared by Langtree Consulting Engineers			

- (b) The recommendations outlined in the above reports must be implemented prior to the commencement of the use.

Appendix 1

Change application form

Planning Act Form 5 (version 1.2 effective 7 February 2020) made under Section 282 of the Planning Act 2016.

This form is to be used for a change application made under section 78 of the *Planning Act 2016*. It is important when making a change application to be aware of whether the application is for a minor change that will be assessed under section 81 of the *Planning Act 2016* or for an other change that will be assessed under section 82 of the *Planning Act 2016*.

An applicant must complete all parts of this form, and provide any supporting information that the form identifies as being required to accompany the change application, unless stated otherwise. Additional pages may be attached if there is insufficient space on the form to complete any part.

Note: All terms used in this form have the meaning given under the *Planning Act 2016*, the *Planning Regulation 2017*, or the *Development Assessment Rules (DA Rules)*.

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	Queensland Resource and Recovery Pty Ltd C/- Milford Planning
Contact name (only applicable for companies)	Sarah Jones
Postal address (P.O. Box or street address)	PO Box 5463
Suburb	Townsville City
State	QUEENSLAND
Postcode	4810
Country	
Email address (non-mandatory)	info@milfordplanning.com.au
Mobile number (non-mandatory)	
Applicant's reference number(s) (if applicable)	M2301

2) Owner's consent - Is written consent of the owner required for this change application?

Note: Section 79(1A) of the *Planning Act 2016* states the requirements in relation to owner's consent.

- ☒ Yes – the written consent of the owner(s) is attached to this change application
☐ No

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)				
3.1) Street address and lot on plan				
☒ Street address AND lot on plan (all lots must be listed), or				
☐ Street address AND lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).				
a)	Unit No.	Street No.	Street Name and Type	Suburb
		42386	Bruce Highway	Bluewater
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
		1	RP735647	Townsville
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay) Note: Place each set of coordinates in a separate row.				
☐ Coordinates of premises by longitude and latitude				
Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)	
		☐ WGS84 ☐ GDA94 ☐ Other:		
☐ Coordinates of premises by easting and northing				
Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	
3.3) Additional premises				
☐ Additional premises are relevant to the original development approval and the details of these premises have been attached in a schedule to this application ☒ Not required				

PART 3 – RESPONSIBLE ENTITY DETAILS

4) Identify the responsible entity that will be assessing this change application Note: see section 78(3) of the Planning Act 2016
Townsville City Council

PART 4 – CHANGE DETAILS

5) Provide details of the existing development approval subject to this change application			
Approval type	Reference number	Date issued	Assessment manager/approval entity
☒ Development permit ☐ Preliminary approval	D33/03	3 February 2004	Former Thuringowa City Council
☐ Development permit ☐ Preliminary approval			
6) Type of change proposed			
6.1) Provide a brief description of the changes proposed to the development approval (e.g. changing a development approval for a five unit apartment building to provide for a six unit apartment building):			
Change the volume of waste the facility can receive and dispose of from no more than 10,000 tonnes per annum to no more than 50,000 tonnes per annum			
6.2) What type of change does this application propose?			
☐ Minor change application – proceed to Part 5 ☒ Other change application – proceed to Part 6			

PART 5 – MINOR CHANGE APPLICATION REQUIREMENTS

7) Are there any affected entities for this change application		
☐ No – proceed to Part 7 ☐ Yes – list all affected entities below and proceed to Part 7 Note: section 80(1) of the Planning Act 2016 states that the person making the change application must give notice of the proposal and the details of the change to each affected entity as identified in section 80(2) of the Planning Act 2016.		
Affected entity	Pre-request response provided? (where a pre-request response notice for the application has been given, a copy of the notice must accompany this change application)	Date notice given (where no pre-request response provided)
	☐ No ☐ Yes – pre-request response is attached to this change application	
	☐ No ☐ Yes – pre-request response is attached to this change application	
	☐ No ☐ Yes – pre-request response is attached to this change application	

PART 6 – OTHER CHANGE APPLICATION REQUIREMENTS

Note: To complete this part it will be necessary for you to complete parts of DA Form 1 – Development application details and in some instances parts of DA Form 2 – Building work details, as mentioned below. These forms are available at <https://planning.dsdmip.qld.gov.au>.

8) Location details - Are there any additional premises included in this change application that were not part of the original development approval?
☒ No ☐ Yes

9) Development details
9.1) Is there any change to the type of development, approval type, or level of assessment in this change application? ☒ No ☐ Yes – the completed Sections 1 and 2 of Part 3 (Development details) of DA Form 1 – Development application details as these sections relate to the new or changed aspects of development are provided with this application.
9.2) Does the change application involve building work? ☒ No ☐ Yes – the completed Part 5 (Building work details) of DA Form 2 – Building work details as it relates to the change application is provided with this application.

10) Referral details – Does the change application require referral for any referral requirements?
Note: The application must be referred to each referral agency triggered by the change application as if the change application was the original development application including the proposed change. ☐ No ☒ Yes – the completed Part 5 (Referral details) of DA Form 1 – Development application details as it relates to the change application is provided with this application. Where referral is required for matters relating to building work the Referral checklist for building work is also completed.

11) Information request under Part 3 of the DA Rules
☒ I agree to receive an information request if determined necessary for this change application ☐ I do not agree to accept an information request for this change application Note: By not agreeing to accept an information request I, the applicant, acknowledge:

- that this change application will be assessed and decided based on the information provided when making this change application and the assessment manager and any referral agencies relevant to the change application are not obligated under the DA Rules to accept any additional information provided by the applicant for the change application unless agreed to by the relevant parties
 - Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.
- Further advice about information requests is contained in the [DA Forms Guide: Forms 1 and 2](#).

12) Further details

- ☒ Part 7 of DA Form 1 – Development application details is completed as if the change application was a development application and is provided with this application.

PART 7 – CHECKLIST AND APPLICANT DECLARATION

13) Change application checklist

I have identified the:

- responsible entity in 4); and
- for a minor change, any affected entities; and ☒ Yes
- for an other change all relevant referral requirement(s) in 10)

Note: See the Planning Regulation 2017 for referral requirements

For an other change application, the relevant sections of [DA Form 1 – Development application details](#) have been completed and is attached to this application ☒ Yes
☐ Not applicable

For an other change application, where building work is associated with the change application, the relevant sections of [DA Form 2 – Building work details](#) have been completed and is attached to this application ☐ Yes
☒ Not applicable

Supporting information addressing any applicable assessment benchmarks is attached to this application ☒ Yes
Note: This includes any templates provided under 23.6 and 23.7 of DA Form 1 – Development application details that are relevant as a result of the change application, a planning report and any technical reports required by the relevant categorising instrument(s) (e.g. the local government planning scheme, State Planning Policy, State Development Assessment Provisions). For further information, see [DA Forms Guide: Planning report template](#).

Relevant plans of the development are attached to this development application ☒ Yes
Note: Relevant plans are required to be submitted for all relevant aspects of this change application. For further information, see [DA Forms Guide: Relevant plans](#).

14) Applicant declaration

- ☒ By making this change application, I declare that all information in this change application is true and correct.
- ☒ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the responsible entity and any relevant affected entity or referral agency for the change application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*.

Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the responsible entity and/or chosen assessment manager, any relevant affected entity or referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the change application.

All information relating to this change application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 8 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE
USE ONLY

Date received: Reference number(s):

QLeave notification and payment			
<i>Note: For completion by assessment manager if applicable</i>			
Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

DA Form 1 – Development application details

Approved form (version 1.6 effective 2 August 2024) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

Note: All terms used in this form have the meaning given under the *Planning Act 2016*, the *Planning Regulation 2017*, or the *Development Assessment Rules (DA Rules)*.

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	
Contact name (only applicable for companies)	
Postal address (P.O. Box or street address)	
Suburb	
State	
Postcode	
Country	
Contact number	
Email address (non-mandatory)	
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	
1.1) Home-based business	
☐ Personal details to remain private in accordance with section 264(6) of <i>Planning Act 2016</i>	
2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
☐ Yes – the written consent of the owner(s) is attached to this development application	
☐ No – proceed to 3)	

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

3.1) Street address and lot on plan

- ☐ Street address **AND** lot on plan (all lots must be listed), **or**
☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row.

- ☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		☐ WGS84 ☐ GDA94 ☐ Other:	

- ☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ Other:	

3.3) Additional premises

- ☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application
☐ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

- ☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

- ☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

- ☐ In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

☐ On airport land under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i>
Name of airport:
☐ Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>
EMR site identification:
☐ Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>
CLR site identification:

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).

- ☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- ☐ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect
a) What is the type of development? <i>(tick only one box)</i>
☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work
b) What is the approval type? <i>(tick only one box)</i>
☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval
c) What is the level of assessment?
☐ Code assessment ☐ Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
e) Relevant plans
Note: <i>Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.</i>
☐ Relevant plans of the proposed development are attached to the development application
6.2) Provide details about the second development aspect
a) What is the type of development? <i>(tick only one box)</i>
☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work
b) What is the approval type? <i>(tick only one box)</i>
☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval
c) What is the level of assessment?
☐ Code assessment ☐ Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
e) Relevant plans
Note: <i>Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.</i>
☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

- ☐ Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- ☐ Not required

6.4) Is the application for State facilitated development?

- ☐ Yes - Has a notice of declaration been given by the Minister?
- ☐ No

Section 2 – Further development details**7) Does the proposed development application involve any of the following?**

Material change of use	☐ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☐ Yes – complete division 3
Building work	☐ Yes – complete <i>DA Form 2 – Building work details</i>

Division 1 – Material change of use

Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use

Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m ²) (if applicable)

8.2) Does the proposed use involve the use of existing buildings on the premises?

- ☐ Yes
- ☐ No

8.3) Does the proposed development relate to temporary accepted development under the Planning Regulation?

- ☐ Yes – provide details below or include details in a schedule to this development application
- ☐ No

Provide a general description of the temporary accepted development	Specify the stated period dates under the Planning Regulation

Division 2 – Reconfiguring a lot

Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)

☐ Subdivision (complete 10)	☐ Dividing land into parts by agreement (complete 11)
☐ Boundary realignment (complete 12)	☐ Creating or changing an easement giving access to a lot from a constructed road (complete 13)

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?	
☐ Yes – provide additional details below ☐ No	
How many stages will the works include?	
What stage(s) will this development application apply to?	

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?				
Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment			
12.1) What are the current and proposed areas for each lot comprising the premises?			
Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)
12.2) What is the reason for the boundary realignment?			

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)				
Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?		
☐ Road work ☐ Drainage work ☐ Landscaping ☐ Other – please specify:	☐ Stormwater ☐ Earthworks ☐ Signage	☐ Water infrastructure ☐ Sewage infrastructure ☐ Clearing vegetation
14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)		
☐ Yes – specify number of new lots:		
☐ No		

14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)

\$

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

16) Has the local government agreed to apply a superseded planning scheme for this development application?

- ☐ Yes – a copy of the decision notice is attached to this development application
- ☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
- ☐ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?

Note: A development application will require referral if prescribed by the Planning Regulation 2017.

- ☐ No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Act 2016:**

- ☐ Clearing native vegetation
- ☐ Contaminated land (*unexploded ordnance*)
- ☒ Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- ☐ Infrastructure-related referrals – designated premises
- ☒ Infrastructure-related referrals – state transport infrastructure
- ☒ Infrastructure-related referrals – State transport corridor and future State transport corridor
- ☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure-related referrals – near a state-controlled road intersection
- ☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- ☐ Koala habitat in SEQ region – key resource areas
- ☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- ☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
- ☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
- ☐ Ports – Brisbane core port land – hazardous chemical facility
- ☐ Ports – Brisbane core port land – taking or interfering with water
- ☐ Ports – Brisbane core port land – referable dams
- ☐ Ports – Brisbane core port land – fisheries
- ☐ Ports – Land within Port of Brisbane's port limits (*below high-water mark*)
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ SEQ northern inter-urban break – tourist activity or sport and recreation activity

- ☐ SEQ northern inter-urban break – community activity
- ☐ SEQ northern inter-urban break – indoor recreation
- ☐ SEQ northern inter-urban break – urban activity
- ☐ SEQ northern inter-urban break – combined use
- ☐ Tidal works or works in a coastal management district
- ☐ Reconfiguring a lot in a coastal management district or for a canal
- ☐ Erosion prone area in a coastal management district
- ☐ Urban design
- ☐ Water-related development – taking or interfering with water
- ☐ Water-related development – removing quarry material *(from a watercourse or lake)*
- ☐ Water-related development – referable dams
- ☐ Water-related development – levees *(category 3 levees only)*
- ☐ Wetland protection area

Matters requiring referral to the local government:

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) *(only if the ERA has been devolved to local government)*
- ☐ Heritage places – Local heritage places

Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:

- ☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:

- The **Chief Executive of the holder of the licence**, if not an individual
- The **holder of the licence**, if the holder of the licence is an individual
- ☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the Brisbane City Council:

- ☐ Ports – Brisbane core port land

Matters requiring referral to the Minister responsible for administering the Transport Infrastructure Act 1994:

- ☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
- ☐ Ports – Strategic port land

Matters requiring referral to the relevant port operator, if applicant is not port operator:

- ☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the Chief Executive of the relevant port authority:

- ☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the Gold Coast Waterways Authority:

- ☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the Queensland Fire and Emergency Service:

- ☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

- ☐ Yes – referral response(s) received and listed below are attached to this development application
- ☒ No

Referral requirement	Referral agency	Date of referral response

Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application *(if applicable)*.

PART 6 – INFORMATION REQUEST

19) Information request under the DA Rules

☐ I agree to receive an information request if determined necessary for this development application

☐ I do not agree to accept an information request for this development application

Note: By not agreeing to accept an information request I, the applicant, acknowledge:

- that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties
- Part 3 under Chapter 1 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules or
- Part 2 under Chapter 2 of the DA Rules will still apply if the application is for state facilitated development

Further advice about information requests is contained in the [DA Forms Guide](#).

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)

☒ Yes – provide details below or include details in a schedule to this development application

☐ No

List of approval/development application references	Reference number	Date	Assessment manager
☒ Approval ☐ Development application	D33/03	3 February 2004	Former Thuringowa City Council
☐ Approval ☐ Development application			

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

☐ Yes – a copy of the receipted QLeave form is attached to this development application

☐ No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid

☒ Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

☐ Yes – show cause or enforcement notice is attached

☒ No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

- ☒ Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below
- ☐ No

Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:	60	Proposed ERA threshold:	2(e)
Proposed ERA name:	Waste Disposal		

- ☐ Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

- ☐ Yes – *Form 536: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application
- ☒ No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

- ☐ Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)
- ☒ No

Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.
2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

- ☐ Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter
- ☒ No

Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

- ☐ Yes – the development application involves premises in the koala habitat area in the koala priority area
- ☐ Yes – the development application involves premises in the koala habitat area outside the koala priority area
- ☒ No

Note: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.desi.qld.gov.au for further information.

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the *Water Act 2000***?

☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

☒ No

Note: Contact the Department of Resources at www.resources.qld.gov.au for further information.

DA templates are available from planning.statedevelopment.qld.gov.au. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works

23.7) Does this application involve **waterway barrier works**?

☐ Yes – the relevant template is completed and attached to this development application

☒ No

DA templates are available from planning.statedevelopment.qld.gov.au. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

☐ Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

☒ No

Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake under the *Water Act 2000***?

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

Note: Contact the Department of Resources at www.resources.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water under the *Coastal Protection and Management Act 1995***?

☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

☒ No

Note: Contact the Department of Environment, Science and Innovation at www.desi.qld.gov.au for further information.

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the *Water Supply Act*)?

☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application

☒ No

Note: See guidance materials at www.resources.qld.gov.au for further information.

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- ☐ Yes – the following is included with this development application:
- ☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - ☐ A certificate of title

☒ No

Note: See guidance materials at www.desi.qld.gov.au for further information.

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

☐ Yes – details of the heritage place are provided in the table below

☒ No

Note: See guidance materials at www.desi.qld.gov.au for information requirements regarding development of Queensland heritage places. For a heritage place that has cultural heritage significance as a local heritage place and a Queensland heritage place, provisions are in place under the Planning Act 2016 that limit a local categorising instrument from including an assessment benchmark about the effect or impact of, development on the stated cultural heritage significance of that place. See guidance materials at www.planning.statedevelopment.qld.gov.au for information regarding assessment of Queensland heritage places.

Name of the heritage place:

Place ID:

Decision under section 62 of the Transport Infrastructure Act 1994

23.14) Does this development application involve new or changed access to a state-controlled road?

☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)

☒ No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.15) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

☐ Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

☒ No

Note: See guidance materials at www.planning.statedevelopment.qld.gov.au for further information.

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17

☐ Yes

Note: See the Planning Regulation 2017 for referral requirements

If building work is associated with the proposed development, Parts 4 to 6 of [DA Form 2 – Building work details](#) have been completed and attached to this development application

☐ Yes

☐ Not applicable

Supporting information addressing any applicable assessment benchmarks is with the development application

Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see [DA Forms Guide: Planning Report Template](#).

☐ Yes

Relevant plans of the development are attached to this development application

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).

☐ Yes

The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (see 21)

☐ Yes

☐ Not applicable

25) Applicant declaration

- ☐ By making this development application, I declare that all information in this development application is true and correct
- ☐ Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*

Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, Planning Regulation 2017 and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the Planning Regulation 2017, and the access rules made under the *Planning Act 2016* and Planning Regulation 2017; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager

Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

MP ref: M2301
QA: sj

22 April 2025

Assessment Manager
Townsville City Council
PO Box 1268
TOWNSVILLE QLD 4810

Attention: Planning and Development

Dear Sir/ Madam,

Re: Land Owner Consent

Under the provisions of the *Planning Act 2016*, we **Bluewater Property Assets Pty Ltd A.C.N 677 037 099 PTY LTD**, being the registered owner of land described as **LOT 1 ON RP735647** and located at **42386 BRUCE HIGHWAY, BLUEWATER**, do hereby authorise and confirm the engagement and appointment of Milford Planning to act on our behalf with respect to the procurement of all development approvals for the aforementioned land.

Date	22	April	2025
	Day	Month	Year
Signature			
Name	Mel Peppel		
Position	director		

Note
Where registered owner is a company the ACN must be included and accompanied by: (a) the signature of either: - two directors of the company; - a director and a company secretary of the company; or - if a proprietary company that has a sole director who is also the sole company secretary, that director; or (b) the company seal (if the company has a common seal) witnessed by: - two directors of the company; - a director and a company secretary of the company; or - for a propriety company that has a sole director who is also the sole company secretary, that director.

Our ref 485/00499, e66441
Your ref M2301
Enquiries Patrick Leys

Department of
Transport and Main Roads

11 SEP 2025

Ms Sarah Jones
Senior Town Planner
Milford Planning
PO Box 5463
Townsville City Qld 4810

Dear Ms Jones

This notice is in response to your request of 28 August 2025 to obtain owner's consent from the Department of Transport and Main Roads (TMR) to lodge a change request for a development approval completely or partially over land held or administered by the department.

Pursuant to section 52(2) of the *Planning Act 2016* ('the Planning Act'), the consent of the owner of land that is the subject of a change request is required. The department has considered your request and **provides owner's consent** for the lodging of the change request under s79(1) of the Planning Act. The development approval consists of:

- Development Permit No. M33/03, issued by the former Thuringowa City Council, dated 19 February 2004, which involves the following rail corridor land;
- Lot 140 on SP112726.

TMR's owner's consent is only provided for the purposes of making the application and does not:

- constitute TMR's approval of, or support for, the application for the purpose of the Development Assessment System (DAS);
- provide permission to undertake works on land held or administered by the department associated with a development approval without the permission of TMR;
- remove the requirement to obtain any other approvals from TMR or another government department;
- constitute owner's consent for any other development application over land owned or administered by the department; or
- constitute approval for any person to enter a rail corridor.

Property
Rail Corridor Management
Level 17, 61 Mary Street
Brisbane Qld 4000
GPO Box 1412 Brisbane Qld 4001

Telephone +61 7 3066 7430
Website www.tmr.qld.gov.au
Email RCM@tmr.qld.gov.au
ABN 39 407 690 291

TMR regulates structures, works and activities that occur within land administered or owned by the department. It may be necessary to obtain TMR or Railway Manager approval prior to accessing or undertaking works within an existing or future transport corridor.

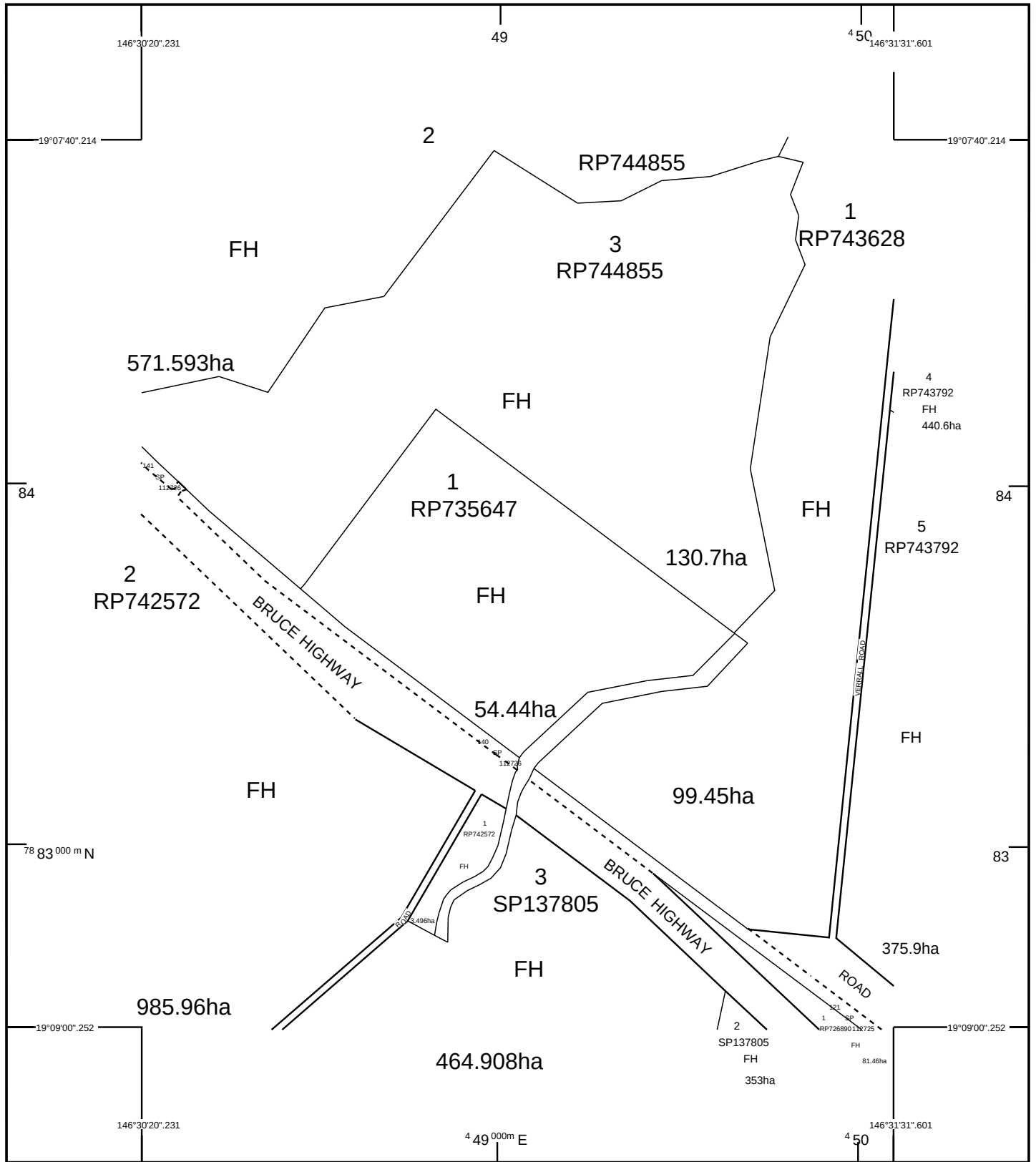
If you have any queries or wish to seek clarification about any of the details in this response, please contact Patrick Leys on 3066 7430.

Yours sincerely

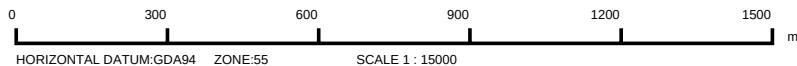
A handwritten signature in black ink, appearing to be 'D. Gleadow', with a stylized, cursive script.

David Gleadow
A/Manager (Rail Corridor Management)
Authorised Delegate of the Chief Executive

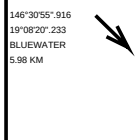
Appendix 2



STANDARD MAP NUMBER
8259-43444



MAP WINDOW POSITION &
NEAREST LOCATION



SUBJECT PARCEL DESCRIPTION

DCDB	
Lot/Plan	1/RP735647
Area/Volume	54.44ha
Tenure	FREEHOLD
Local Government	TOWNSVILLE CITY
Locality	BLUEWATER
Segment/Parcel	31922/11

CLIENT SERVICE STANDARDS

PRINTED 02/10/2025

DCDB 01/10/2025 (Lots with an area less than 1500m² are not shown)

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<https://www.qld.gov.au/housing/buying-owning-home/property-land-valuations/smartmaps>

SmartMap

An External Product of
SmartMap Information Services

Based upon an extraction from the
Digital Cadastral Data Base



**Queensland
Government**

(c) The State of Queensland,
(Department of Resources) 2025.





**MILFORD**
PLANNING

Drawing
Site Aerial

Property
42386 Bruce Highway, Bluewater
Lot 1 on RP735647

Drawing Number	Issue	Sheet
M2301-SK-01	A	1
Date	Author	Reviewer
16.9.25	MM	SJ

Legend

-  Cadastre
-  Subject Site

Scale (A3 Original)
1:6,000

0 40 80 120 160 200 m

Sources
Milford Planning GIS (2025)
DIDB extract - State of Queensland (2025)
Aerial imagery - Bing (2025)

Disclaimer
Areas and dimensions are approximate only
and are subject to site survey.



Appendix 3

Matters of Interest for all selected Lot Plans

Coastal management district

Coastal area - erosion prone area

Coastal area - medium storm tide inundation area

Coastal area - high storm tide inundation area

Queensland waterways for waterway barrier works

Regulated vegetation management map (Category A and B extract)

Railway corridor

Area within 25m of a railway corridor

Matters of Interest by Lot Plan

Lot Plan: 1RP735647 (Area: 544400 m²)

Coastal management district

Coastal area - erosion prone area

Coastal area - medium storm tide inundation area

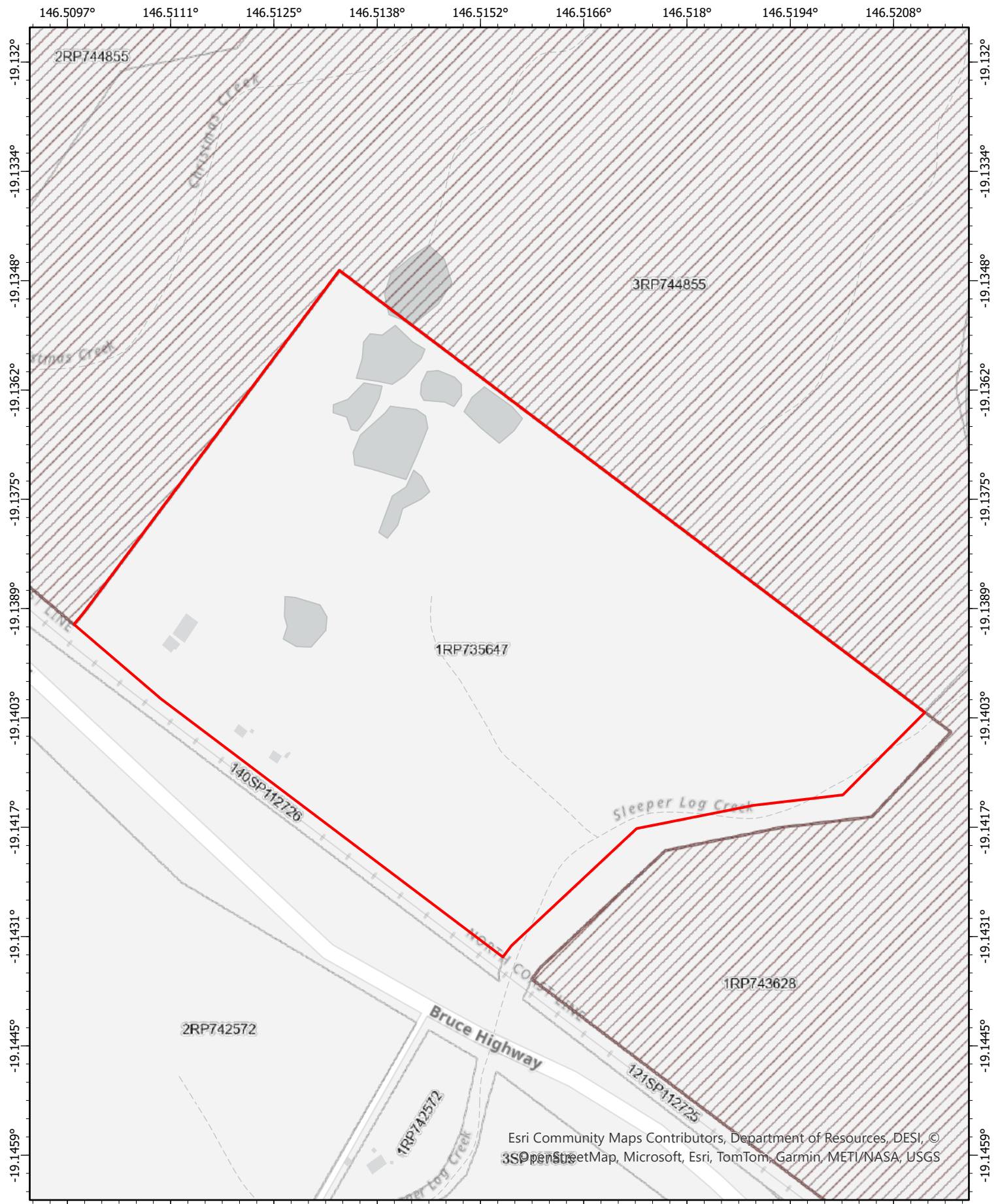
Coastal area - high storm tide inundation area

Queensland waterways for waterway barrier works

Regulated vegetation management map (Category A and B extract)

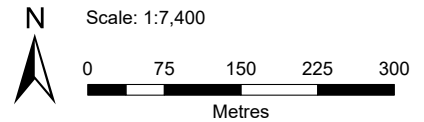
Railway corridor

Area within 25m of a railway corridor



 Coastal management district

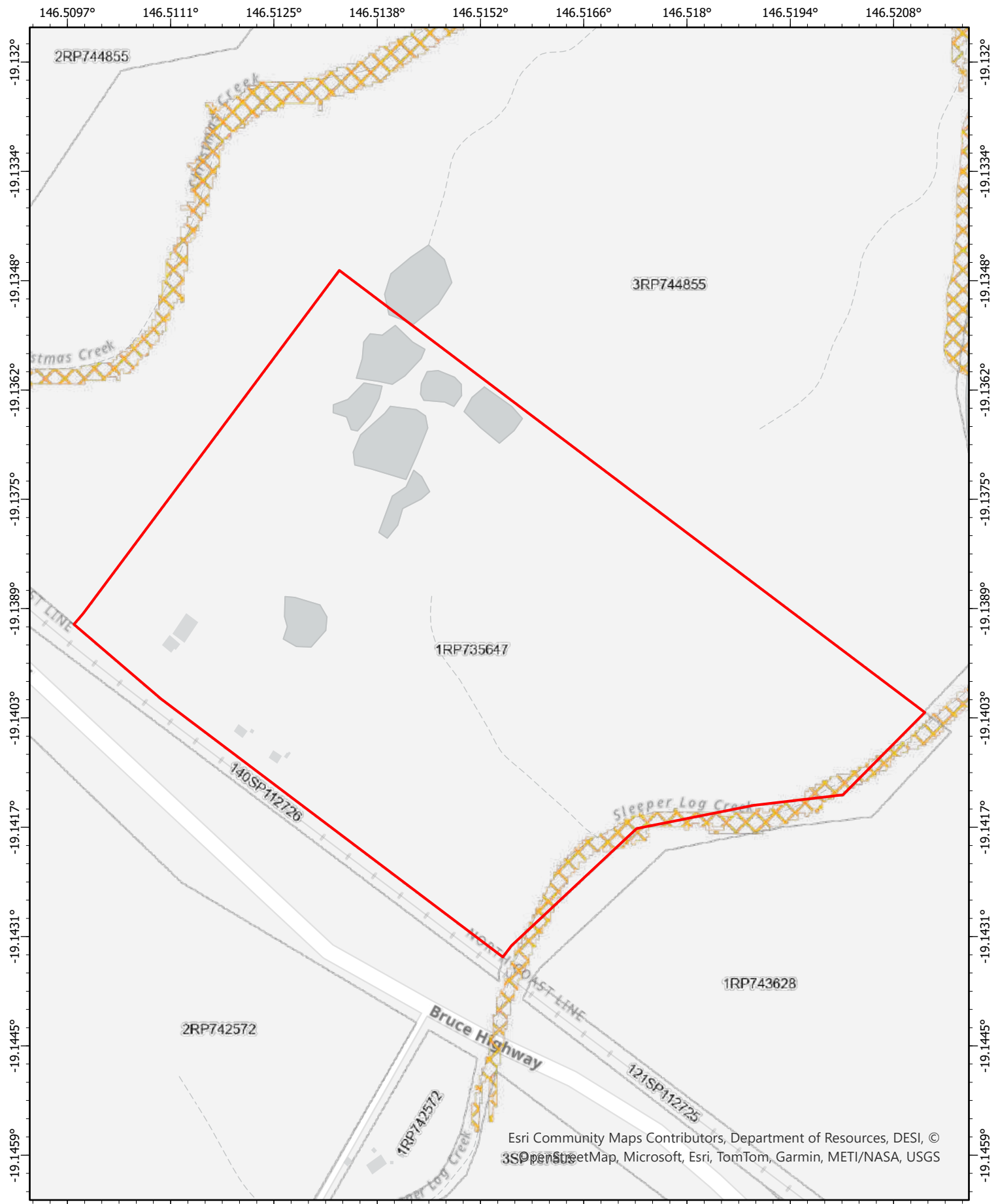
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Queensland Government



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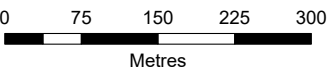


 Coastal area - erosion prone area

Date: 02/10/2025



Scale: 1:7,400



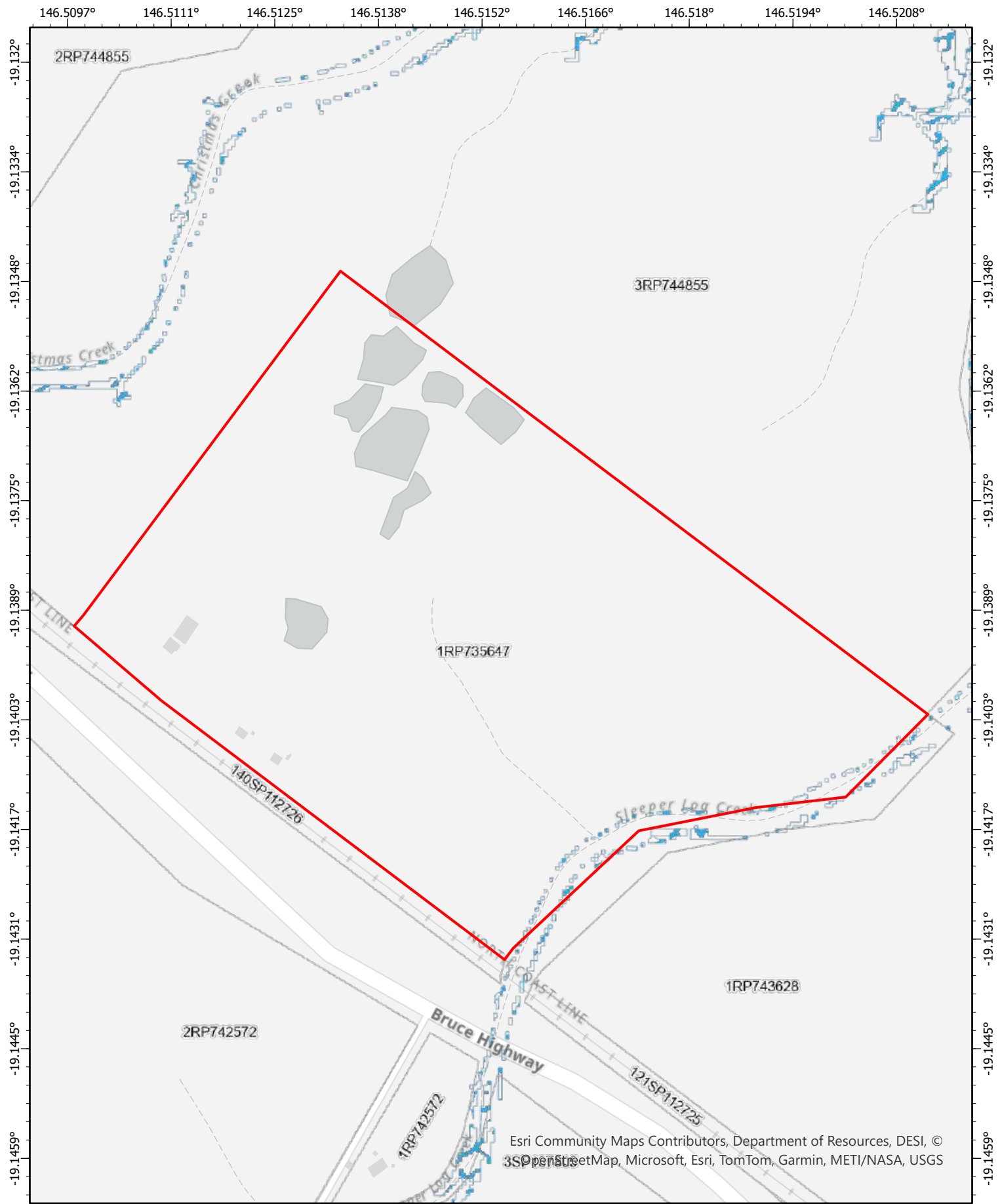
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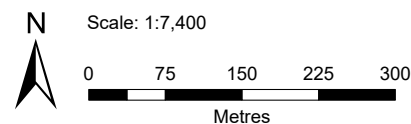
Document ID: 23724598
Version: 1, Version Date: 03/11/2025

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 Coastal area - medium storm tide inundation area

Date: 02/10/2025



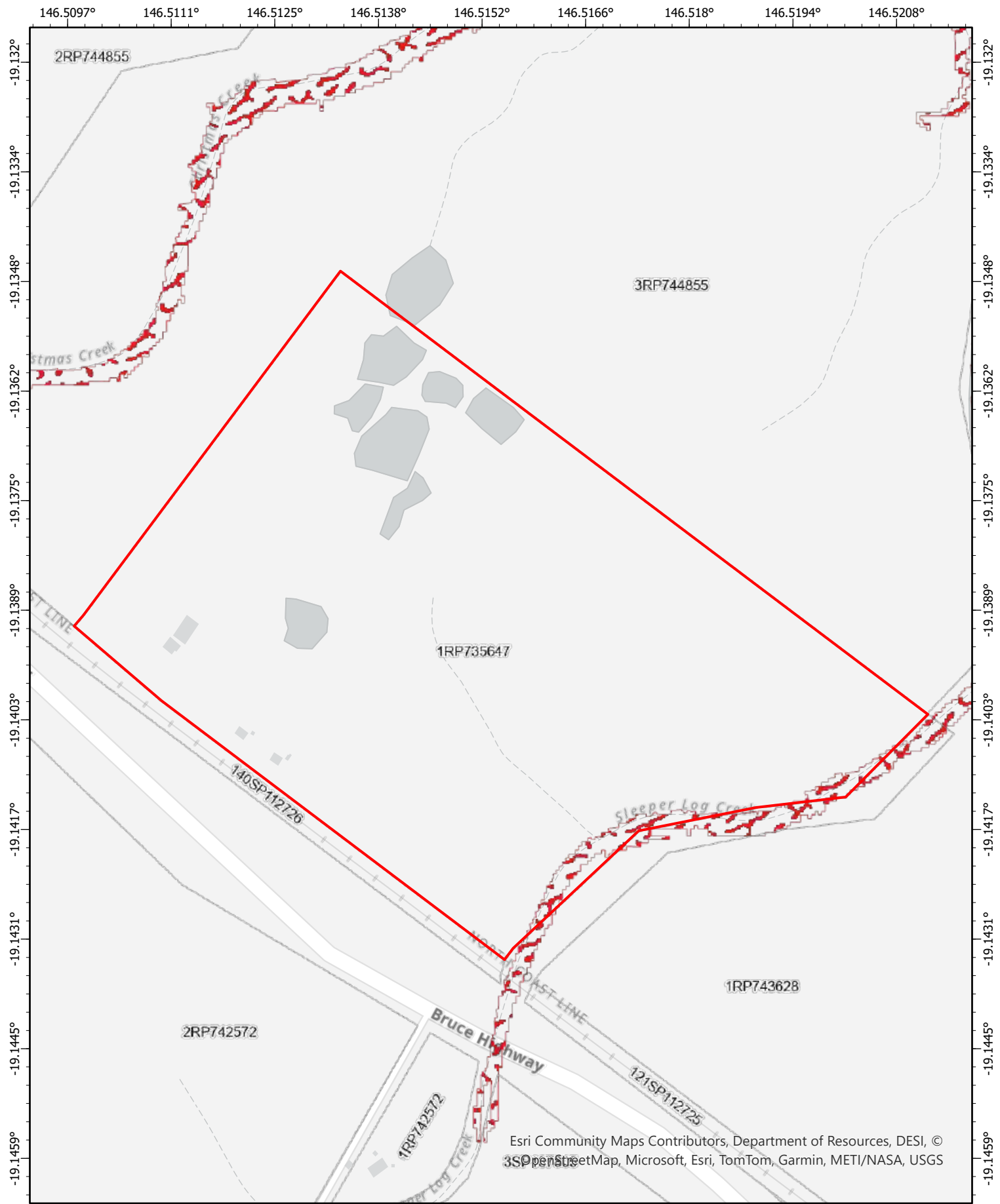
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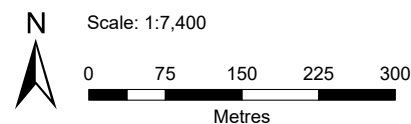
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 Coastal area - high storm tide inundation area

Date: 02/10/2025



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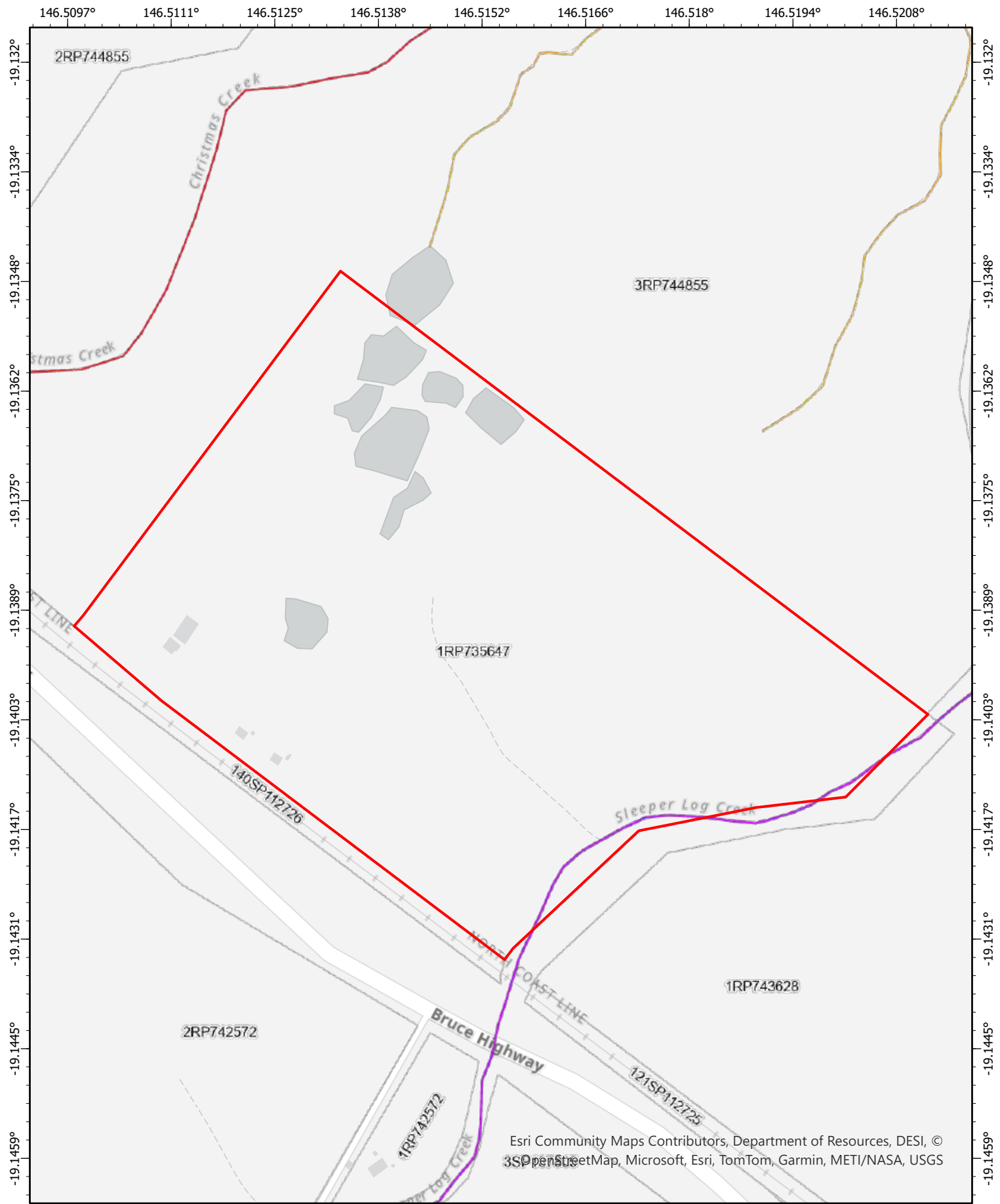


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Queensland waterways for waterway barrier works

Risk of impact

- Moderate
- High
- Major

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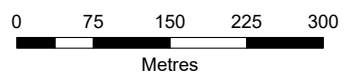
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Date: 02/10/2025



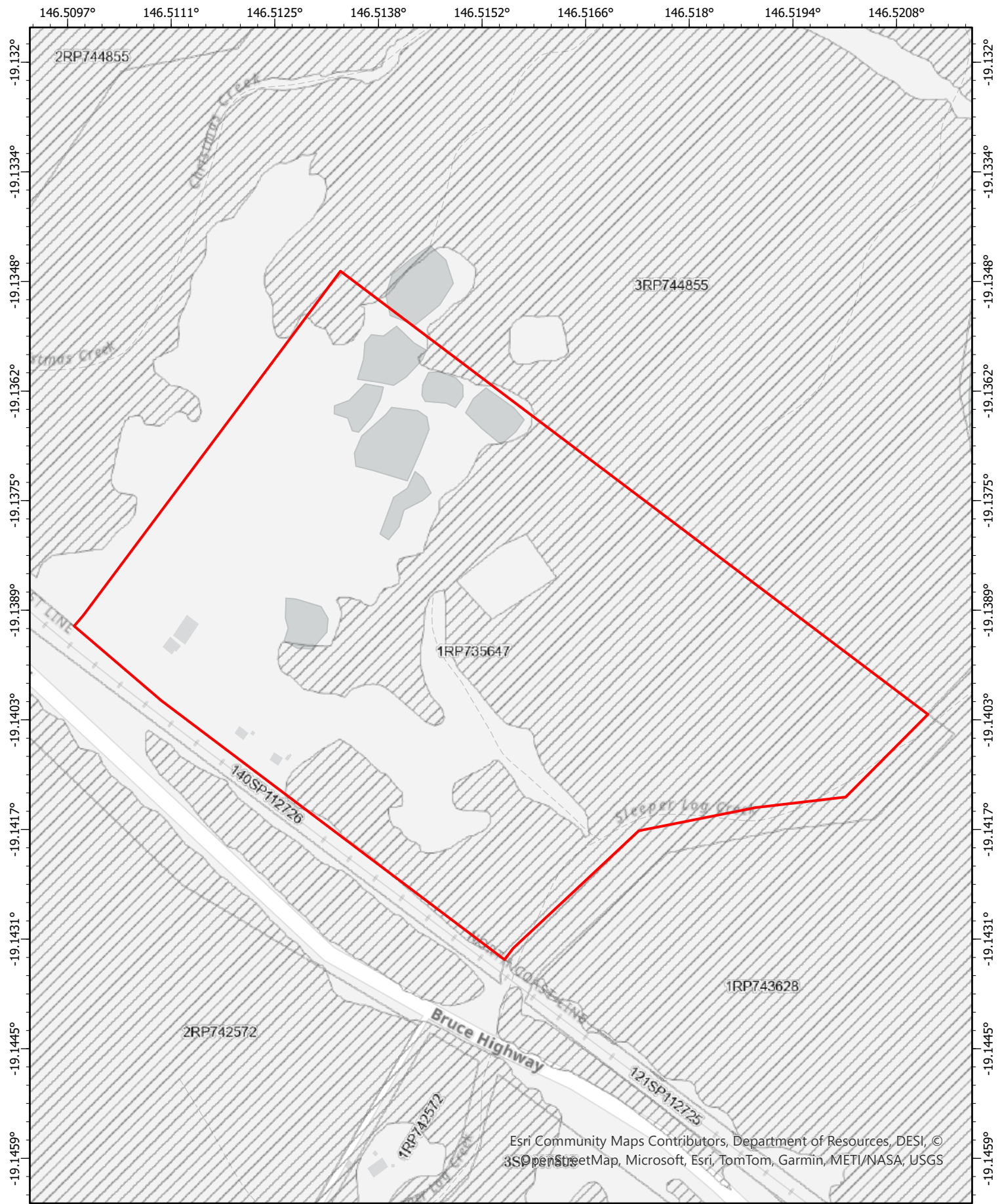
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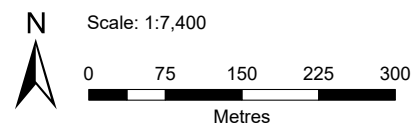
Regulated vegetation
management map (Category A
and B extract)

Category B on the
regulated vegetation
management map

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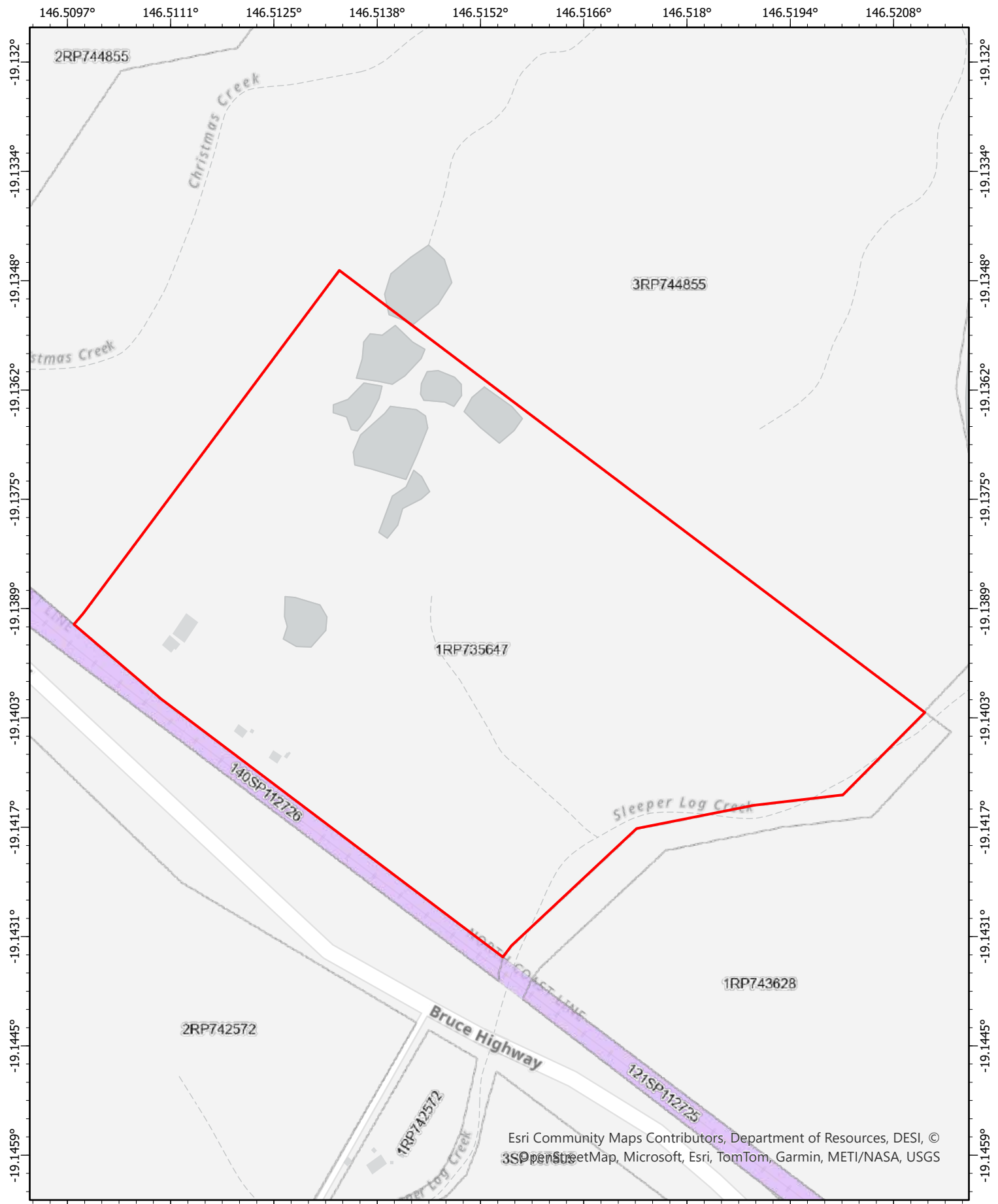
Date: 02/10/2025



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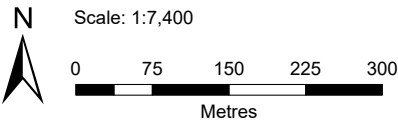


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 Railway corridor

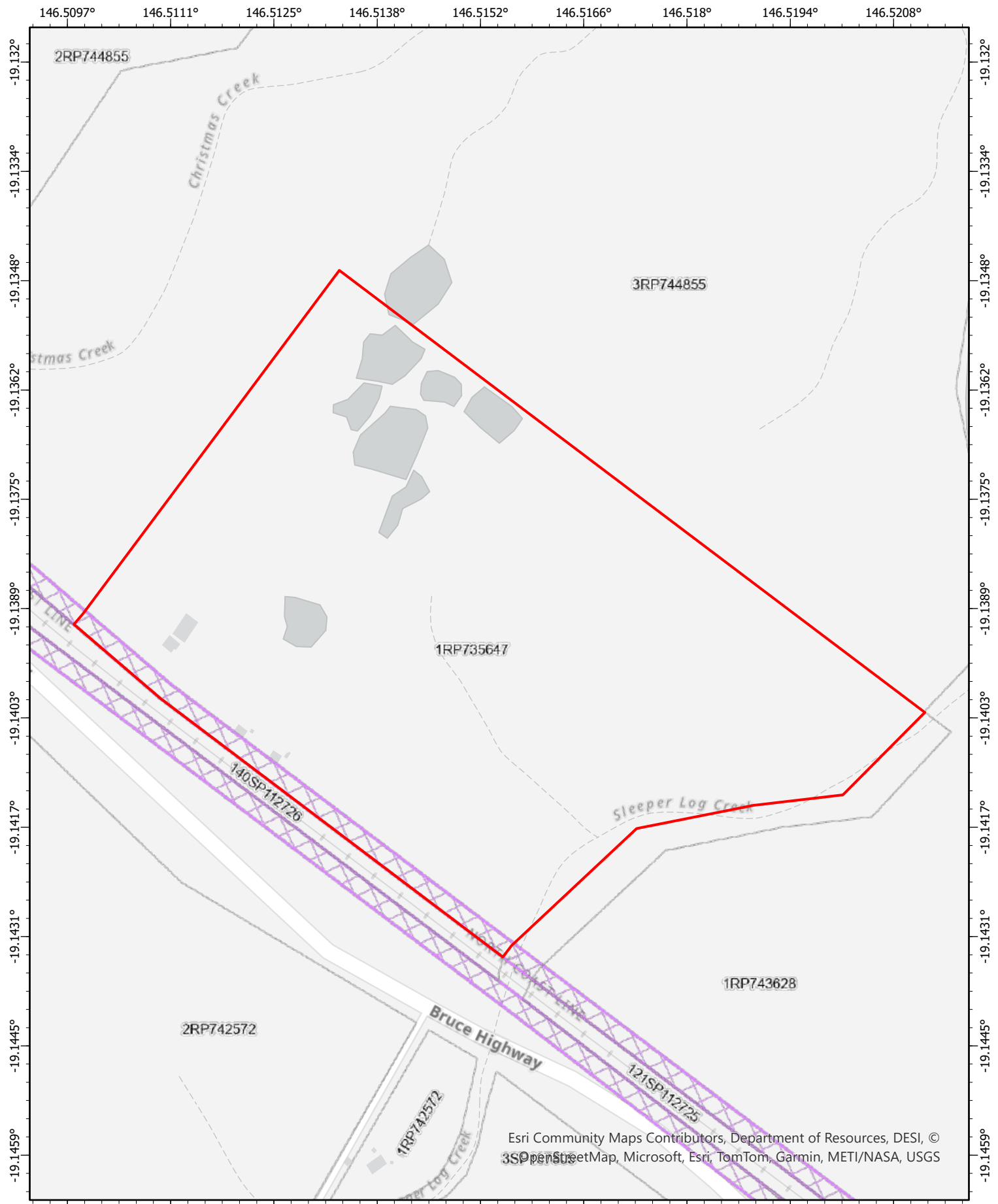
Date: 02/10/2025



Queensland
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 Area within 25m of a railway corridor



Scale: 1:7,400
 0 75 150 225 300
 Metres

Date: 02/10/2025

Queensland
Government



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 Version: 1, Version Date: 03/11/2025

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Appendix 4

M33/03; 1070 JVS:KMW

19 February 2004

D and N Pascoe
29 Mimosa Court
ANNANDALE QLD 4814

Dear Sir/Madam

DEVELOPMENT APPLICATION DECISION NOTICE
DEVELOPMENT PERMIT NO. M33/03
(Pursuant to Section 3.5.15 of the Integrated Planning Act 1997)

Application Details

Application No:	M33/03; 1070
Proposal:	Recycling Facility
Real Property Description:	Lot 1 RP 735647
Property Location:	Bruce Highway, Bluewater
Decision Date:	18 February 2004
Decision:	Approved Subject to Conditions
Decision Type:	Development Permit
Type of Development Work:	Making a Material Change of Use of Premises
Decision Authority:	Planning and Development Committee under Delegated Authority

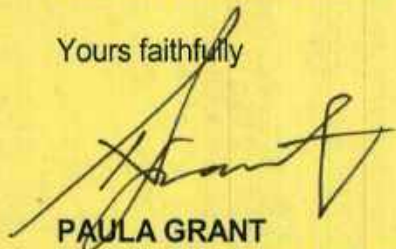
A copy of the approved plan/s and conditions are **attached**.

Pursuant to the provisions of the Integrated Planning Act 1997, I also **enclose** herewith a copy of the relevant sections concerning the institution of an appeal.

If you are dissatisfied with the decision you may, within 20 business days after the day this decision notice is given, appeal to the Planning and Environment Court.

Should you require anything further please contact Council's Planning Services Department on (07) 4773 8546.

Yours faithfully



PAULA GRANT
DIRECTOR PLANNING SERVICES





SCHEDULE OF CONDITIONS OF APPROVAL GRANTED BY RESOLUTION OF THE COUNCIL:

03 February 2004

APPLICANT: D & N Pascoe

LAND OWNED BY: D & N Pascoe

LAND DESCRIBED AS: Lot 1 on RP 735647, Bruce Highway, Bluewater

MATERIAL CHANGE OF USE: Waste Management/Recycling Facility

FILE: M33/03; 1070

SCHEDULE OF CONDITIONS

GENERAL

- 1.1 The development and conduct of the approved use(s) of the premises, the carrying out and maintenance of any works on the premises and construction and maintenance of any building on the premises must be generally in accordance with:-
- (a)
 - (i) The approved Plan No. 42-11525-D01.DWG 42-11525-D02.DWG, 42-11525-D03.DWG attached as Schedule A to this approval;
 - (ii) The plans, specifications, facts and circumstances as set out in the application submitted to Council; and
 - (iii) The supporting documentation, response to the coordinated information request and the additional information on groundwater dated 16 December 2003 prepared by GHD Engineers;
- except where modified by these conditions of approval and any approval issued thereunder; and
- (b) Any approval issued under this approval.
- 1.2 The conditions of the development permit must be effected prior to the commencement of the use, except where specified otherwise in these conditions of approval.

ACCESS

- 2.1 Access to the premises must be designed and constructed to a gravel paved and bitumen sealed standard, from its connection to the Main Roads Type B turnout to the property boundary, in accordance with Council's current Standard Drawings for rural roads and turnouts.
- 2.2 Carparking and manoeuvring areas must be constructed to a gravel paved and bitumen sealed standard.
- 2.3 Council is prepared to defer the requirement to bitumen seal both the access and carparking areas to be constructed in Conditions 3 and 4 above in this instance based on the stated vehicle movements in the Assessment Report of 50 vehicles per week maximum. Upon confirmation by future traffic counts of movements in excess of 50 vehicles per week, the access, carparking and manoeuvring areas shall be upgraded to full bitumen surfacing as specified in Condition 3 and 4.

CARPARKING REQUIREMENTS

- 3.1 Four (4) carparking spaces must be provided. This condition is satisfied by:-
- (a) Each parking space must have minimum dimensions as prescribed in Council's "Design Code for Off-Street Carparks", namely 14.85 square metres in area and a minimum width of 2.7 metres.
 - (b) The parking area must be designed in accordance with AS2890.1 1993 - Parking Facilities - Off Street Parking and section 14.3.1 of Council's Planning Scheme.
 - (c) A plan complying with this condition and the Planning Scheme must be submitted to Council with an application for operational works and the works must be completed in accordance with the approved plan prior to commencement of the use.

STORMWATER DRAINAGE

- 4.1 The approved development and use(s) must not interfere with the natural flow of stormwater in the locality in such a manner as to cause ponding or concentration of stormwater on adjoining land or roads.

LANDSCAPING AND SCREENING REQUIREMENTS

- 5.1
- (a) Landscaping must be carried out to provide reasonable screening and buffering to the Highway frontage of the development.;
 - (b) The landscaping layout plan must be submitted to Council for approval prior to the commencement of the use and must be maintained at all times in accordance with that plan. The plan must be prepared by a landscape architect or other suitably experienced person and must detail existing site conditions as well as details of proposed plantings.
- 5.2 The storage of any machinery, materials, vehicles must be appropriately screened so as not to be directly visible from any road to which the premises has frontage, to the satisfaction of Council.

EXTERNAL WORKS

SIGNS

- 6.1 Signs on the premises must conform with Council's Local Law No. 21M with respect to content and a plan must be submitted to Council with the application for operational works in relation to the signs. In particular, the development must provide clear and legible signage:-
- (a) incorporating the street numbers for the benefit of the motoring public; and
 - (b) drawing the attention of users to the existence of overhead high tension electricity lines, which shall be designed and installed in accordance with the requirements of the Queensland Electricity Commission.

HOURS OF OPERATION

- 7.1 The approved use(s) must not operate outside the following hours:-
- (a) 6.00am to 7.00pm seven days a week.

BUILDING WORK

- 8.1 An approval under the Integrated Planning Act is to be obtained from the Council before any building works are carried out.

DEFINITIONS

In these conditions:-

- A reference to an Act includes all statutory instruments and subordinate legislation made under that Act; and
- Terms used have the meaning contained in the Planning Scheme, the *Integrated Planning Act 1997* or the relevant legislation referred to in those conditions, as the case may be.

CONCURRENCE AGENCY CONDITIONS

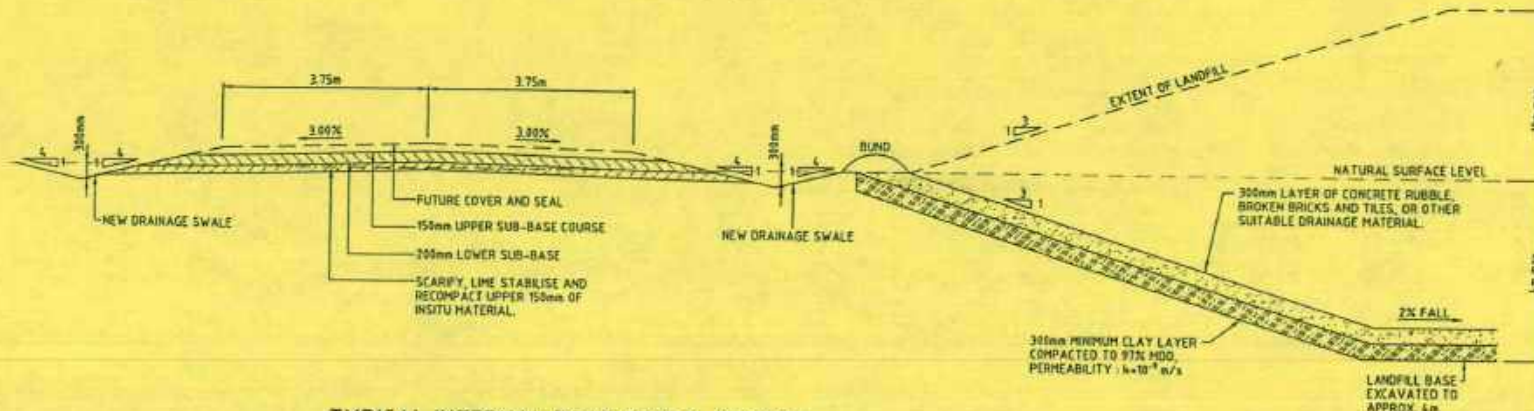
- Refer to the Environmental Protection Agency's letter dated 18 November 2003.
- Refer to the Department of Main Roads letter dated 25 July 2003.

ADVICE (Note: these are not conditions)

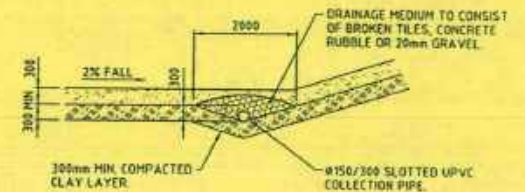
- A development permit under the *Integrated Planning Act* must be obtained before any operational works are carried out. Plans and specifications for all operational works must be submitted with the application.

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DO NOT SCALE

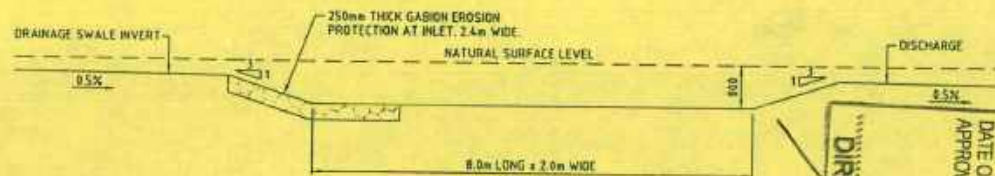
TYPICAL INTERNAL ROAD CROSS-SECTION
AND CELL WALL & LINING

SCALE 1:50



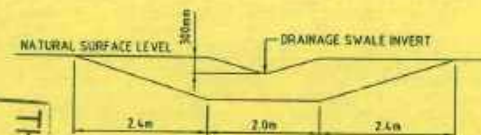
LEACHATE COLLECTION TRENCH DRAIN

SCALE 1:50



SEDIMENT POND LONG SECTION

SCALE 1:50



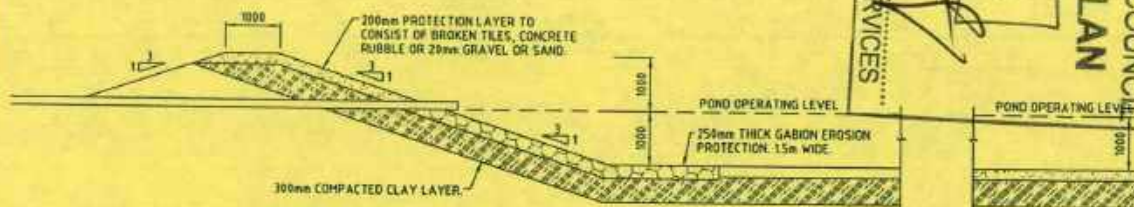
SEDIMENT POND CROSS SECTION

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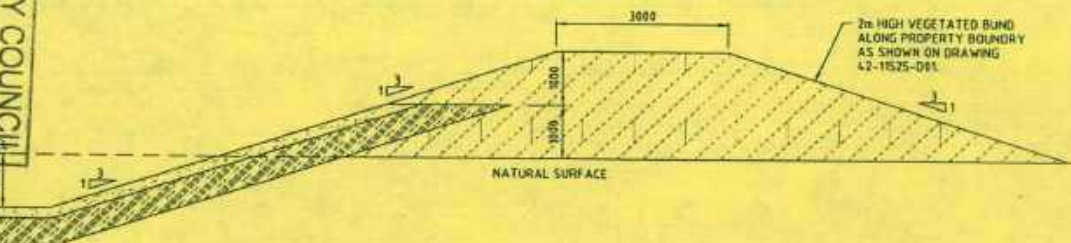
CAPPING LAYERS

NOT TO SCALE



PRELIMINARY LEACHATE COLLECTION POND INLET

SCALE 1:50



LEACHATE COLLECTION POND BUND

SCALE 1:50

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SCALE IN METRES (1:50 BEFORE REDUCTION)

THURINGOWA CITY COUNCIL
APPROVED PLAN
DATE OF APPROVAL
18 FEB 2004
DIRECTOR PLANNING SERVICES

GHD
MANAGEMENT
ENGINEERING
ENVIRONMENT

Level 1, 42 Sturt Street, Townsville QLD 4810
PO Box 530, Townsville QLD 4810
Telephone (07) 4771 3643
Facsimile (07) 4772 4014
Email: townsville@ghd.com.au

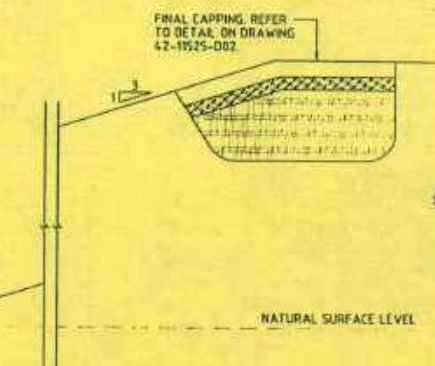
DNF Pty Ltd - ACN 808 480 213

SCALE 1:50
DESIGNED JS
CHECKED
APPROVED
DATE 18 FEB 2004

D & N PASCOE
DEVELOPMENT APPLICATION
WASTE MANAGEMENT FACILITY
DETAILS

Rev. A1 Drg. No. 42-11525-002.DWG

Rev.



THURINGOWA CITY COUNCIL
APPROVED PLAN
DATE OF APPROVAL 18 FEB 2004
DIRECTOR PLANNING SERVICES
PRELIMINARY

Age Group	18-24	25-34	35-44	45-54
18-24	10	10	10	10
25-34	10	10	10	10
35-44	10	10	10	10
45-54	10	10	10	10

Samples

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Drawing File No.

MANAGEMENT
ENGINEERING
ENVIRONMENT

Level 1, 47 Start Street, Toowoomba QLD 4601
PO Box 930, Toowoomba QLD 4610
Telephone (07) 4771 5645
Facsimile (07) 4772 8314
Email: toowo2@yahoo.com.au
© 1997 Pty Ltd - ACN 085 688 373

SCALE		1:1000	
DRAWING THICK	NAT	DESIGN	PL
DRAFTING CHECKED		DESIGN CHECKED	
APPROVED			

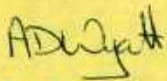
CLIENT AND JOB	D & N PASCOE DEVELOPMENT APPLICATION		
TITLE	WASTE MANAGEMENT FACILITY FINAL LANDFORM & REHABILITATION PLAN		
REV.	Drg. No.	42-11525-D03.DWG	
A1			

3. No discharge of overland or piped drainage from the proposed hardstand recycling area directly or indirectly into state-controlled road reserve. Prior to Thuringowa City Council issuing a development permit for operational work or commencing the proposed use, submit to Main Roads for approval detailed engineering plans of proposed earthworks and drainage works showing finished ground levels, proposed drainage catchments, overland and piped stormwater drainage paths and lawful points of discharge.

We note written advice from Mr Toby Innes (Senior Property Management Officer) of QRail dated 16 May 2002 (copy enclosed). A complete copy of this application is with Queensland Transport for third party review to ascertain whether the existing North Coast Railway level crossing is adequate.

A copy of this letter has been mailed to the applicants, Mr D and Mrs N Pascoe.

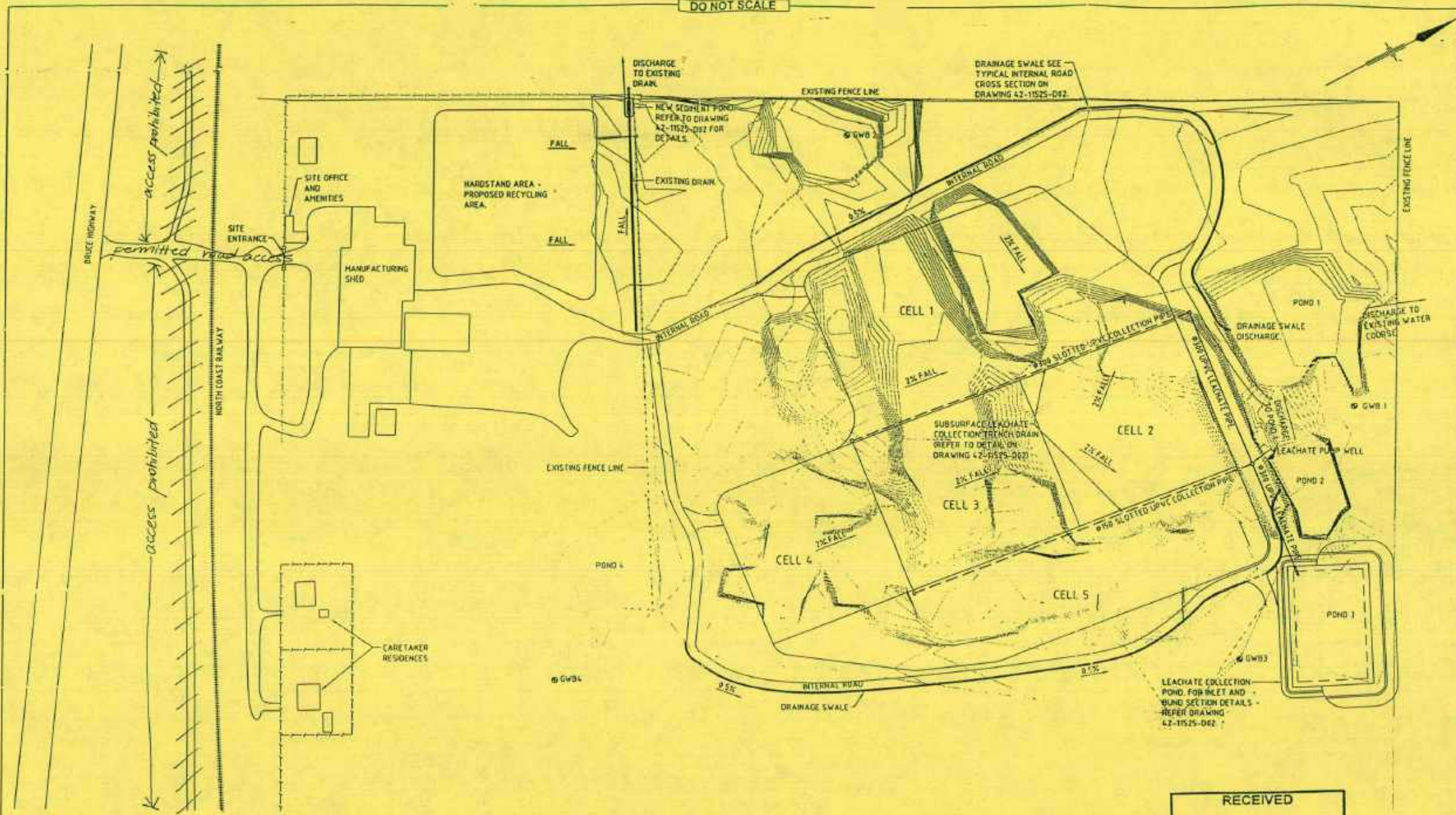
Yours sincerely


for Ian Rose

District Director (Northern)

Enc

DO NOT SCALE



PROPOSED SITE LAYOUT
SCALE 1:1000

PRELIMINARY
8/7/03

RECEIVED
14 JUL 2003
DEPARTMENT OF MAIN ROADS TOWNSVILLE

DATE	8/7/03
BY	8/7/03
CHECKED	8/7/03
APPROVED	8/7/03
GATE	8/7/03
U/PLN	8/7/03

1:1000 for A1 Site Plan

Notes:
1. This document is a preliminary design and should not be used for construction purposes without the approval of the relevant authorities.
2. The design is based on the information provided and is subject to change without notice.
3. The design is for general guidance only and should not be used for specific construction purposes without the approval of the relevant authorities.



Level 1, 42 Short Street, Townsville QLD 4810
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Telephone (07) 4771 2645
Facsimile (07) 4772 8214
Email: townsville@ghd.com.au

NAME	1:1000
REVIEW	DATE
DESIGNED	DATE
CHECKED	DATE
APPROVED	DATE
DATE	8/7/03
BY	8/7/03
CHECKED	8/7/03
APPROVED	8/7/03
GATE	8/7/03
U/PLN	8/7/03

D & N PASCOE
DEVELOPMENT APPLICATION
WASTE MANAGEMENT FACILITY
PROPOSED SITE LAYOUT

42-11525-001DWG

Document Set ID: 27724598
Version: 1, Version Date: 03/11/2025

Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact Anne McLaughlin on either phone 47225368 or e-mail: anne.mclaughlin@epa.qld.gov.au

Signed



Date

18/11/03

Rob Curtis
District Manager
Delegate of Administering Authority
Environmental Protection Act 1994

Concurrence Agency Response
Section 3.3.16 and 3.3.18 *Integrated Planning Act 1997*

Applicant:	D & N Pascoe
Assessment Manager	RCU1155
Application number:	
EPA Development	NR0520DA
Application number:	
Date application received by EPA:	11 July 2003
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i> and subordinate legislation
Jurisdiction::	Item 5 of Schedule 2 of the <i>Integrated Planning Regulation 1998</i>

Development Description:

Carrying out of Environmentally Relevant Activity (ERA):

75(a)(iii) Waste disposal - Operating a facility for disposing of only general waste or limited regulated waste, if the facility is designed to receive waste at the rate of 5 000 t or more, but less than 10 000 t, per year

20(a) Extracting rock or other material - Extracting rock (other than rock mined in block or slab form for building purposes), sand (other than foundry sand), clay (other than clay used for its ceramic properties, kaolin or bentonite), gravel, loam or other material (other than gravel, loam or other material under a mining authority) from a pit or quarry using plant or equipment having a design capacity of not more than 5 000 t per year

84(b) Regulated waste storage - Operating a facility for receiving and storing regulated waste [other than 84(a)] - excepting (i) on a farm for use as a soil conditioner or fertiliser in carrying out an agricultural activity; or (ii) for use in manufacturing a saleable product under another item of this schedule; or (iii) for incineration under item 76; or (iv) recycling, reprocessing or reconditioning under items 77 to 79 or 81)

at the following place(s):

Lot 1 on Plan RP735647

located at:

Bruce Highway, Bluewater

Type of development

Material change of use of premises is:

- the start of a new use of the premises

Response to Development Application

The Environmental Protection Agency, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above.

The concurrence agency response is that conditions must attach to any development approval

Reasons for inclusion of development conditions or refusal

In accordance with section 3.3.18(7) of the *Integrated Planning Act 1997* and section 27B of the *Acts Interpretation Act 1954*, a concurrence response must include reasons for a refusal or for the inclusion of development conditions. The Environmental Protection Agency is recognised as a concurrence agency under the *Integrated Planning Amendment Regulation (No. 1) 1998* for the protection of the environment against the release or potential release of contaminants that will or may cause environmental harm. Development conditions placed on the development approval for the environmentally relevant activity are in accordance with section 79 of the *Environmental Protection Act 1994* ('the EP Act').

The Environmental Protection Agency concurrence agency conditions for this proposed development that are contained within this response, are required in accordance with section 92 of the *EP Act* and are relevant to the object and policies pertaining to the *EP Act*.

Additional comments or advice about the application

Contaminated Land conditions attached

Additional information for applicants

This concurrence response pursuant to section 79 the EP Act applies only to the environmentally relevant activity(ies) component of the development and does not remove the need to obtain any further approval for this development which may be required pursuant to this or other legislation, both State and Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware a Notifiable Activity (as defined under schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within 30 days after becoming aware the activity is being carried out, give notice to the Environmental Protection Agency. A list of Notifiable Activities is provided within Schedule 2 of the *Environmental Protection Act 1994*.

Signed



Date

18/11/03

Rob Curtis
District Manager
Delegate of Administering Authority
Environmental Protection Act 1994

Conditions of the development approval

As part of the concurrence agency response the following schedules of development conditions are to be attached to the development approval:

The aforementioned description of the environmentally relevant activity (ERA) for which this development approval is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing this development approval. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERA, then such conditions prevail to the extent of the inconsistency.

This development approval authorises the ERA. It does not authorise environmental harm unless a concurrence agency condition 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 shall not be construed as authorising harm.

- Schedule A - Activity
- Schedule B - Air
- Schedule C - Water
- Schedule D - Noise
- Schedule E - Waste
- Schedule F - Land
- Schedule G - Community
- Schedule H - Definitions
- Schedule I - Maps / Plans

Part 1 - Conditions related to all environmentally relevant activities

Schedule A - Activity

Extent of Approval

- (A1-0) The only area approved for extraction and waste disposal under this development permit is the area shown as the "proposed landfill" area outlined in plan GHD figure B3 included in Schedule I.

Prevent and /or minimise likelihood of environmental harm

- (A1-1) In carrying out the environmentally relevant activities, you must take all reasonable and practicable measures to prevent and / or to minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that, if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with the conditions of this approval.

NOTE: This approval authorises the environmentally relevant activities. It does not authorise environmental harm unless a condition contained within this approval explicitly authorises that harm. Where there is no condition or the approval is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

Maintenance of measures, plant and equipment

(A2-1) The holder must:

- install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and
- maintain such measures, plant and equipment in a proper and efficient condition; and
- operate such measures, plant and equipment in a proper and efficient manner.

Site based management plan

(A3-1) From commencement of the activity, 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 Environmentally Relevant Activities that are carried out.

The site based management plan must address the following matters:

- Environmental commitments - a commitment by senior management to achieve environmental goals.
- Identification of environmental issues and potential impacts.
- Control measures for routine operations to minimise likelihood of environmental harm.
- Contingency plans and emergency procedures for non-routine situations.
- Organisational structure and responsibility.
- Effective communication.
- Monitoring of the contaminant releases.
- Conducting environmental impact assessments.
- Staff training.
- Record keeping.
- Periodic review of environmental performance and continual improvement.

Notification of Emergencies, Incidents and Exceptions

(A8-5) You must, as soon as practicable after becoming aware of:

- (a) any emergency or incident which results in the release of contaminants not in accordance, or reasonable expected to be not in accordance with the conditions of this development approval or
- (b) any monitoring result that indicates an exceedence of any approval limit.

Monitoring and Measurements

(A8-6) All determinations of the quality of contaminants released to the environment and all measurement and reporting of noise levels that are required by this development approval must be undertaken by a person or body possessing appropriate experience and qualifications to perform the required determinations and the required measurements.

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Nuisance

- (B1-2) 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 odour sensitive place.

Dust nuisance

- (B2-1) The release of dust and/or particulate matter resulting from the activity must not cause an environmental nuisance at any dust sensitive place.
- (B2-2) Exceedance of any of the following levels when measured at any dust sensitive place is an environmental nuisance for the purposes of condition B2-1.
- Dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10 of 1991; OR
 - 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 dust sensitive place downwind of the site, when monitored in accordance with:
 - Australian Standard AS 3580.9.6 'Ambient air - Particulate matter - Determination of suspended particulate PM10 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.
- (B2-3) 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 and must include:
- 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 particulate matter with an aerodynamic diameter of less than 10 micrometre (μm) (PM10) suspended in the atmosphere over a 24hr averaging time.

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Erosion protection measures and sediment controls

- (C2-2) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment. The size of any sedimentation dam must be sufficient to contain the run-off expected from a 24 hour storm with an annual recurrence interval of 1 in 5 years.

Control of Off-Site movement of mud and waste on vehicles

- (C2-3) Prevent vehicles from carrying waste, mud or dirt off the site and depositing these materials on any road or in any location likely to be washed into any waters.

Release to waters

- (C3-1) Contaminants must not be released from the site to any waters or the bed and banks of any waters.

Stormwater management

- (C5-1) There must be no release of stormwater runoff that has been in contact with any contaminants at the site to any waters, roadside gutter or stormwater drain.
- (C5-2) Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering any ponds or other structures used for the storage or treatment of contaminants or wastes.

Wastewater management

- (C5-3) All wastewaters, leachates or contaminated stormwater runoff from any waste handling, processing, storage or disposal area on the site or any vehicle maintenance or washdown area may only be discharged to the leachate collection pond.

Sampling and Monitoring Methods

- (C6-6) All sampling and analysis to determine the level of contaminants in leachate or waters must be carried out in accordance with methods prescribed in the latest edition of the Environmental Protection Agency Water Quality Sampling Manual and on representative samples

END OF SCHEDULE C

Schedule D- Noise and vibration

Noise monitoring

- (D1-1) Noise from activities must not cause an environmental nuisance at any noise affected premises.
- (D2-1) When requested by the Administering Authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:
- L_A 10, adj, 10 mins
 - L_A 1, adj, 10 mins
 - the level and frequency of occurrence of impulsive or tonal noise;
 - atmospheric conditions including wind speed and direction;
 - effects due to extraneous factors such as traffic noise; and
 - location, date and time of recording.
- (D2-2) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

END OF CONDITIONS FOR SCHEDULE D

Schedule E-Waste

Transport of Waste

- (E5-1) All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*.

END OF CONDITIONS FOR SCHEDULE E

Schedule F- Land

Fuel and Chemical storage

- (F3-2) Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm.

NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.

END OF CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint response

- (G1-1) All complaints received must be recorded including investigations undertaken, conclusions formed and action taken. This information must be made available to the administering authority on request.
- (G1-2) In consultation with the administering authority, cooperate with and participate in any community environmental liaison committee established in respect of either the site specifically, or the industrial estate where the site is located.

END OF CONDITIONS FOR SCHEDULE G

Schedule H - Definitions

Words and phrases used throughout this licence or development approval are defined below:
Where a definition for a term used in this approval is sought and the term is not defined within this approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used.

Word Definitions

"administering authority" means the Environmental Protection Agency or its successor.

"you" means the holder of this Environmental Authority or owner / occupier of the land which is the subject of this Development Approval.

"site" means the place to which this environmental authority relates or the premises to which this development approval relates.

"authorised place" means the place authorised under this environmental authority/development approval for the carrying out of the specified environmentally relevant activities.

"this authority" means this environmental authority/development approval.

"authority" means level 1 licence (without development approval), or level 1 approval (without development approval), or level 2 approval (without development approval) under the *Environmental Protection Act 1994*.

"approval" means 'notice of development application decision' or 'notice of concurrence agency response' under the *Integrated Planning Act 1997*

"dust sensitive place" means -

- a dwelling, mobile home or caravan park, residential marina or other residential place;
 - a motel, hotel or hostel;
 - a kindergarten, school, university or other educational institution;
 - a medical centre or hospital;
 - a protected area;
 - a park or gardens; or
 - a place used as an office or for business or commercial purposes.
- and includes the curtilage of any such place.

"odour sensitive place" has the same meaning as a "dust sensitive place"

"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;
- a water craft in a marina.

"noxious" means harmful or injurious to health or physical well being.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

"nuisance sensitive place" includes -

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
 - a motel, hotel or hostel; or
 - a kindergarten, school, university or other 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 thoroughfare, park or gardens; 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.

"noise affected premises" means a "noise sensitive place" or a "commercial place"

"noise sensitive place" means -

- a dwelling, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area; or
- a park or gardens.

and includes the curtilage of such place.

"commercial place" means a place used as an office or for business or commercial purposes.

"intrusive noise" means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration -

- is clearly audible to, or can be felt by, an individual; and
- annoys the individual.

In determining whether a noise annoys an individual and is unreasonably intrusive, regard must be given to Australian Standard 1055.2 - 1997 Acoustics - Description and Measurement of Environmental Noise Part 2 - Application to Specific Situations.

"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.

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

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the Environmental Protection Regulation 1998 (whether or not it has been treated or immobilised), and includes:

- for an element - any chemical compound containing the element; and
- anything that has contained the waste.

"licensed vehicle" means a vehicle authorised to be used under the licence to transport regulated waste.

"registered vehicle" means "licensed vehicle"

"clinical waste" means waste that has the potential to cause disease including, for example, the following:

- animal waste;
- discarded sharps;
- human tissue waste;
- laboratory waste.

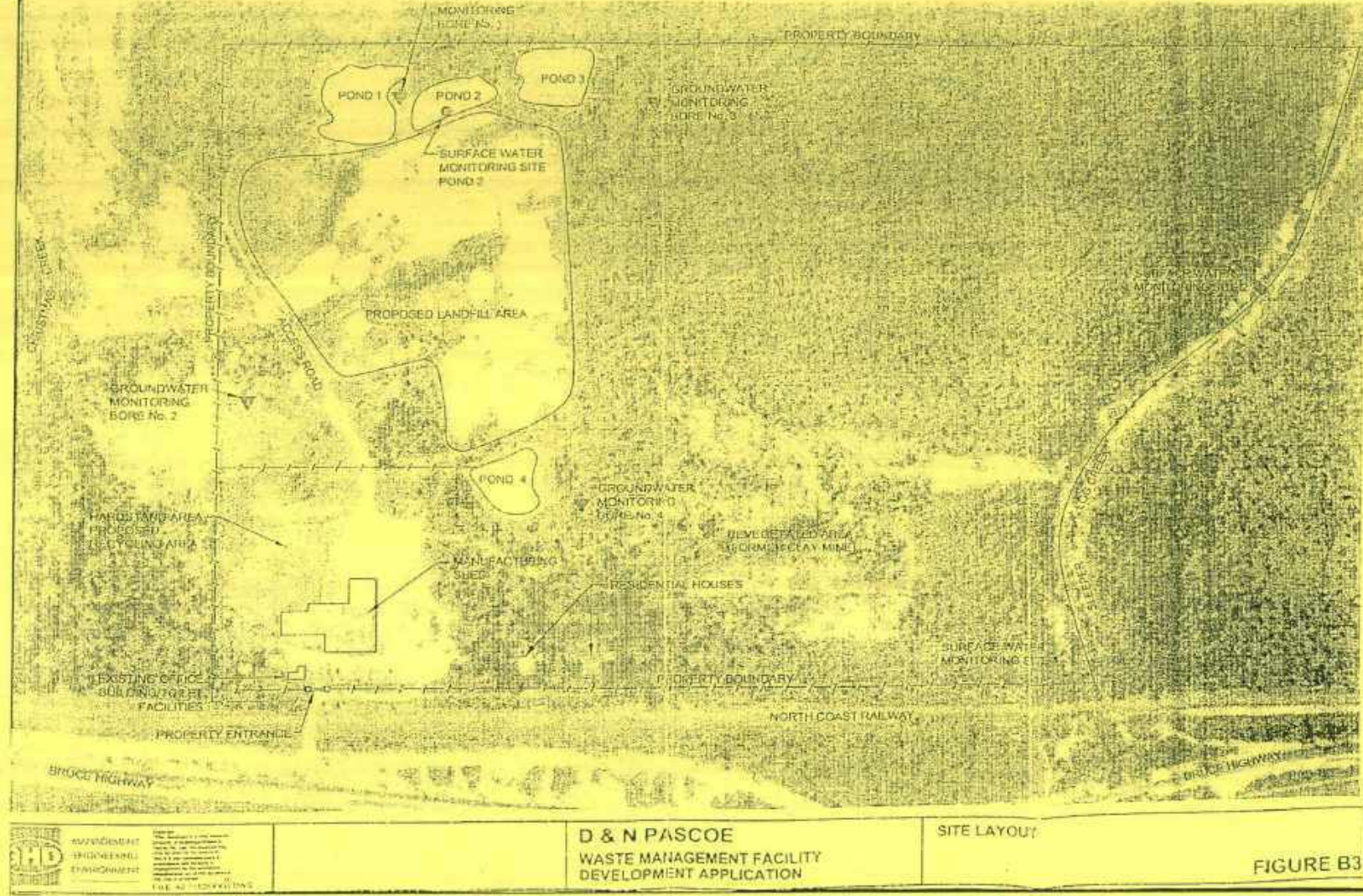
"infectious waste" means "clinical waste"

"vibration sensitive place" means a noise sensitive place or a commercial place.

"annual return" means the return required by the annual notice (under section 316 of the *Environment Protection Act, 1994*) for the section 86(2) licence that applies to the development approval.

END OF DEFINITIONS FOR SCHEDULE H

Schedule 1 - Maps / Plans



END OF CONDITIONS FOR SCHEDULE 1

18/10/03
Page 10 of 20

Part 2 – Conditions only relating to ERA 75(a)(iii)- Waste Management Facility

Schedule A – Activity

Site Development Plan

- (A3-2) A Site Development Plan, identifying all activities to be carried out on the site during the period of the plan, must be prepared for each cell subject to this development permit. Each Site Development Plan must be finalised at least 3 months before the expiring of the previous plan and must include details of at least the following:
- (a) dimensions of landfill units used for waste disposal or storage;
 - (b) an accurate level survey of any area to be utilised for the disposal or storage of wastes. The levels must be reduced to a common datum and related to contour plans;
 - (c) the dimensions of the active waste disposal face;
 - (d) location of any new site infrastructure or extensions, such as a new leachate dam, pond, or pump well to be used or other plant and equipment, required to the leachate collection, storage and recirculation infrastructure to serve the new cell;
 - (e) location of any new stormwater drains, diversion embankments or settling ponds required to serve the new cell;
 - (f) location of any areas to be capped (both final and interim capping where the next stage on the completed cell will not commence within 12 months), the proposed capped surface levels and contours, surface drainage system and species of vegetation to be planted as part of a rehabilitation program;

Closure and Post Closure Care Plan

- (A8-2) A Closure and Post Closure Care Plan must be submitted to the administering authority at least twelve months prior to the completion of waste receipt operations of the landfill.
- (A8-3) The Closure and Post Closure Care Plan for the site must be implemented for a nominal period of:
- (a) at least thirty years after completion of waste disposal activities; or
 - (b) such shorter period until the landfill unit and surrounding site are geotechnically stable and it can be demonstrated to the Administering Authority that no release of waste material, leachate, landfill gas or other contaminants to the environment is likely.
- (A8-4) The post closure care element of the Closure and Post Closure Care Plan must include at least the following:
- (1) monitoring of
 - (a) leachate quality;
 - (b) groundwater quality.
 - (2) maintenance of
 - (a) the leachate collection system;
 - (b) the groundwater monitoring network;
 - (c) the integrity and effectiveness of final cover systems.

Security and Supervision

- (A9-1) Gates and fences or barriers must be erected and maintained at the site to prevent unauthorised vehicle and stock access to any waste disposal, storage or processing area and, where necessary, to prevent the escape of waste materials onto land adjoining any waste disposal, storage or processing area.
- (A9-2) You must ensure that the site is adequately supervised to ensure compliance with the conditions of this approval.
- (A9-3) You must prominently display at appropriate locations on the site signs indicating emergency contact details, and any other applicable information to assist with compliance with the conditions of this approval.

Fire Prevention

- (A10-1) An appropriate fire fighting system, including fire breaks, must be established and maintained.

Weed Control Program

- A(11-1) Maintain and implement a weed control Program to:
- Prevent the introduction of weed species from activities carried out at the site; and
 - Control any weed species that may occur on the development site.

END OF CONDITIONS FOR SCHEDULE A

Schedule B - Air

Nil conditions

END OF CONDITIONS FOR SCHEDULE B

Schedule C - Water

Landfill Liner Construction

- (C5-4) The design of any constructed waste disposal cells shall incorporate an effective liner system to capture and minimise the direct or indirect release of contaminants to any groundwater or stormwater. The liner shall be constructed to achieve a maximum permeability of no greater than 1×10^{-6} m/s and managed so as to effectively maintain a level of leachate head of no more than 0.3 m over the uppermost layer in the lining system.

Leachate Management

- (C5-5) You must operate the site in a manner that minimises the generation of leachate.

Leachate Collection

- (C5-6) A leachate collection system must be installed and maintained at the site to effectively and efficiently:

- (a) collect any leachate generated in the landfill; and
- (b) convey the collected leachate to a leachate storage or disposal facility.

Leachate Disposal

- (C5-7) Leachate or contaminated stormwater intercepted by the leachate collection system may only be disposed of:
- (a) by evaporation in a pond constructed on the site; or
 - (b) by recirculating back into the landfilled waste; or
 - (c) by irrigation over exposed wastes on the site that have not received their final cover; or
 - (d) to a sewage treatment plant.

Pond conditions

- (C5-8) All ponds used for the storage of leachate or contaminated stormwater on the site must be constructed to achieve a permeability of less than 1×10^{-9} m/s and must be installed and maintained:
- (a) So to prevent release through the bed or banks of the pond to any waters (including ground water).
 - (b) So that a freeboard capable of containing at least a 1 in 10 year 24 hr storm event is maintained at all times; and
 - (c) So as to ensure the stability of ponds construction

Groundwater and Leachate monitoring

- (C6-5) An effective groundwater and leachate monitoring program must be developed and implemented for the site. The program must include:
- (a) installation of a groundwater monitoring network which:
 - (i) establishes the background quality of groundwater up gradient of the landfill site;
 - (ii) is installed and maintained by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters;
 - (iii) include a sufficient number of bores to detect any impact on groundwater as a consequence of landfill operation, constructed in accordance with the "minimum construction Requirements for Water Bores in Australia (Agricultural and Resource Management Council of Australia and New Zealand 1997), that are located not more than 150 m from the landfill area or at the boundary of the landfill facility whichever is the closer; and
 - (b) analysis of groundwater and leachate samples for at least the quality characteristics identified in Schedule C Table 2;
 - (c) collection of groundwater quality samples from groundwater bores and leachate from the landfill at least in January, April, July and October of each year; and
 - (d) assessment of monitoring results to determine whether or not there has been any adverse change for each groundwater quality characteristic at locations hydraulically down gradient of the landfill when compared to background values;
 - (e) A sufficient number of monitoring locations to establish the composition and volume of leachate generated within the landfill.

Schedule C Table 2

Quality Characteristic	Leachate	Groundwater
pH	X	X
temperature	X	X
Electrical conductivity	X	X
Redox potential	X	X
Total Dissolved solids	X	X
Dissolved oxygen	X	X
Carbonate	X	X
Bicarbonate (HCO ₃)	X	X
Nitrate	X	X
Total Nitrogen	X	X
TKN	X	X
Ammonia	X	X
Total P	X	X
Calcium	X	X
Sulphate	X	X
Chloride	X	X
Hexavalent chromium	X	X
Cadmium	X	X
Potassium	X	X
Magnesium	X	X
Sodium	X	X
Manganese	X	X
Mercury	X	X
Arsenic	X	X
Nickel	X	X
Aluminium	X	X
Iron	X	X
Copper	X	X
Lead	X	X
Zinc	X	X
Total Petroleum Hydrocarbons	X	X
BTEX	X	X
5- Bay Biological Oxygen Demand	X	X
Total Organic Carbon	X	X
Static water levels	X	X

END OF SCHEDULE C

Schedule D- Noise and vibration

Nil conditions

END OF SCHEDULE D

Schedule E - Waste

Waste composition

- (E4-1) Only the following waste materials are permitted to be accepted for disposal:
- domestic clean-up waste
 - construction and demolition waste
 - asbestos
- (E4-2) Keep and maintain records of source, volumes and composition of asbestos accepted at the premises.
- (E4-4) Segregated recyclable material, including wastes such as tyres, must not be disposed of in the landfill area but should be dealt with in accordance with the following hierarchy with the preference reducing down the list:
- reuse
 - recycling
 - energy recovery
- Notes: definitions of domestic clean-up, construction or demolition wastes and in section 12 of the *Environmental Protection (Interim Waste) Regulation 1996*.
- (E4-5) Notwithstanding any other condition of this environmental authority, the following wastes must not be accepted for disposal:
- (a) liquescent waste streams or any waste capable of yielding free liquids (does not include leachate);
 - (b) untreated infectious and chemical wastes and liquid pharmaceuticals from clinical and related waste stream;
 - (c) cytotoxic wastes;
 - (d) untreated sharps;
 - (e) S8 pharmaceuticals;
 - (f) all radioactive wastes, unless otherwise approved under the Radioactive Substances Act 1958;
 - (g) pyrophoric wastes (where co-disposed with other potentially combustible material); and
 - (h) explosives and ammunition, pyrotechnics or propellants, apart from trace residues no longer capable of supporting combustion or an explosive reaction.
- (E4-6) No wastes must be interred at the waste disposal facility which exhibit any of the hazard characteristics listed in Schedule 2G - Table 1.

Schedule - Table 1

Hazard Characteristic	Description Of The Hazard Characteristic
Ignitability	wastes that are capable of causing a fire when ignited through friction, absorption of moisture, or spontaneous chemical changes under standard temperature and pressure
Corrosively	wastes which on dissolution exhibit a pH of 2 or less, or 12.5 or greater
Reactivity	wastes if they have any of the following properties: • react violently with water; • form potentially explosive mixtures with water; and or other co-disposed wastes; • generate toxic gases, vapours, of fumes dangerous to human health or the environment when mixed with water; and or other co-disposed wastes; • contain substances which generate toxic gases vapours or fumes when exposed to pH conditions between 2 and 12.5, and/or • are capable of detonation or explosive reaction when subjected to a strong initiating source or if heated under confinement; and / or • are readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
Radioactivity	wastes containing radioactive substances unless disposal is specifically authorised under the <i>Radioactive Substances Act 1958</i>

Burning of waste

(E4-7) You must not burn:

- (a) waste at or on the site; nor
- (b) allow waste to burn or be burnt at or on the site; nor
- (c) remove waste and burn such waste elsewhere unless the burning is carried out at a facility appropriately licensed under the provisions of the *Environmental Protection Act 1994*

Vector Control

(E4-8) You must take all measures necessary to ensure that operations on the site do not cause environmental nuisance in relation to nuisance vectors, including fly breeding, mosquito breeding, and harbourage and/or breeding of rats and other pest organisms.

(E4-9) In the event of environmental nuisance arising in relation to nuisance vectors then you must do all such acts and things and carry out any such works as may be necessary to:

- (a) abate such adverse effects and such nuisance; and
- (b) prevent the likelihood of any recurrence of the circumstances which gave rise to such adverse effects and/or nuisance.

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Cover Material

- (E4-10) Wastes must be consolidated, compacted and covered with a layer of inert earthen material as often as is necessary to effectively minimise the quantity of wind blown litter or nuisance.

Litter Management

- (E4-11) Where litter is blown or washed from the site you must:
- (a) retrieve the litter and ensure that it is disposed of in an appropriate manner; and
 - (b) implement measures to prevent a recurrence of litter being blown or washed from the site.

Waste Handling, Storage, Treatment And Reprocessing

Removal of Prohibited Waste

- (E5-2) In the event of you becoming aware of any waste other than that permitted to be accepted being received at the site you must:
- (a) cease depositing such waste if it is still occurring;
 - (b) remove the prohibited waste and store in a covered and bunded area; and
 - (c) arrange for a person who can lawfully transport such waste to collect it by the next business day of it being identified and remove it to a facility that can lawfully accept it, unless the waste is otherwise permitted to be stored on site as a condition of this development approval.

Waste Storage, and Reprocessing Areas

- (E5-3) All storage, treatment and reprocessing of wastes must only be carried out on the hard stand area:
- (a) constructed of concrete or other low permeable material to minimise soil infiltration;
 - (b) graded to prevent rainwater ponding;
 - (c) bunded to contain the materials stored; and
 - (d) graded to facilitate collection of leachates and contaminated stormwater runoff for discharge to the leachate pond.

Asbestos Disposal

- (E5-4) All asbestos waste must be:
- (a) buried under supervision in an area where no future excavation will take place;
 - (b) immediately covered after disposal with a minimum of 200 mm of consolidated earth or equivalent cover material; and
 - (c) placed to ensure that a minimum distance of 2 metres is achieved from both the surface and flanks of the landfill, excluding any final cover system required by this approval.

END OF SCHEDULE E


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Schedule F- Land

Nil conditions

END OF SCHEDULE F

Schedule G – Community

Nil conditions

END OF SCHEDULE G

Schedule H - Definitions

Words and phrases used throughout this licence or development approval are defined below:
Where a definition for a term used in this approval is sought and the term is not defined within this approval the definitions provided in the *Environmental Protection Act 1994*, its regulations, and Environmental Protection Policies shall be used.

END OF SCHEDULE H

Schedule I – Maps/Plans

Nil

END OF SCHEDULE I

Part 3 – Conditions only relating to ERA 20(a) - Extracting rock or other material

Schedule A - Activity

Nil conditions

END OF SCHEDULE A

Schedule B - Air

Nil conditions

END OF SCHEDULE B

Schedule C - Water

Nil conditions

END OF SCHEDULE C

Schedule D – Noise and Vibration

Nil conditions

END OF SCHEDULE D

Schedule E - Waste

Nil conditions

END OF SCHEDULE E

Schedule F - Land

Land rehabilitation (extraction)

- (F1-1) The authorised place must be rehabilitated (including all disturbed areas such as slopes, borrow pits, stockpile and screening areas) in a manner such that:
- suitable native species of vegetation are planted and established;
 - potential for erosion of the site is minimised;
 - the likelihood of environmental nuisance being caused by release of dust is minimised;
 - the water quality of any residual water bodies meets criteria for subsequent uses and does not have potential to cause environmental harm;
 - the final landform is stable and not subject to slumping; and
 - any actual and potential acid sulfate soils in or on the site are either not disturbed; or, submerged, or treated so as to not be likely to cause environmental harm.
- (F1-2) Rehabilitation of disturbed areas must take place progressively as works are staged and new areas of extraction are commenced.

Schedule G- Community

Nil conditions

END OF SCHEDULE G

Schedule H - Definitions

Nil conditions

END OF SCHEDULE H

Schedule I – Maps/Plans

Nil conditions

END OF SCHEDULE I

Part 4 - Conditions relating to ERA 84(b) - regulated waste storage

Schedule A - Activity

Nil conditions

END OF SCHEDULE A

Schedule B - Air

Nil conditions

END OF SCHEDULE B

Schedule C - Water

Nil conditions

END OF SCHEDULE C

Schedule D – Noise and Vibration

Nil conditions

END OF SCHEDULE D

Schedule E – Waste

(E4-1) The only waste materials are permitted to be accepted for storage:

- (a) batteries
- (b) paint waste
- (c) oil

END OF SCHEDULE E

Schedule F – Land

(F3-1) Contaminants must not be released to land.

END OF SCHEDULE F

Schedule G- Community

Nil conditions

END OF SCHEDULE G

Schedule H - Definitions

Nil conditions

END OF SCHEDULE H

Schedule I – Maps/Plans

Nil

END OF SCHEDULE

END OF CONCURRENCE AGENCY RESPONSE



Notice of concurrence agency response

Sections 3.3.16 and 3.3.18 *Integrated Planning Act 1997*

This notice is issued by the administering authority pursuant to sections 3.3.16 and 3.3.18 of the *Integrated Planning Act 1997*, to advise you of a decision or action.

Enquiries to: Kapila Bogoda
Telephone: 3225 8416 E-mail: Kapila.Bogoda@epa.qld.gov.au
Your reference: M33/03;1070
Our reference: 15102 Part 1 File No.:900839

CC: Dave Pascoe
29 Mimosa Court
ANNANDALE 4814

Chief Executive Officer
Thuringowa City Council
PO Box 86
THURINGOWA CENTRAL QLD 4817

Attention: Stephen Smith

Re: Application (No. M33/03;1070) for development approval for assessable development to be carried out at Bruce Highway, Bluewater (Lot 1 on RP735647).

Pursuant to the following items of Schedule 2 of the *Integrated Planning Regulation 1998*, the Environmental Protection Agency is a concurrence agency for the development application:

- ☐ Item 3 of Schedule 2 of the *Integrated Planning Regulation 1998* (for Environmentally Relevant Activities)
- ☒ Item 6 of Schedule 2 of the *Integrated Planning Regulation 1998* (for contaminated land)

The Environmental Protection Agency (EPA), acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above as attached.

It would be appreciated if Council could provide a signed hard copy of the final development approval issued by Council (which includes the Agency's concurrence conditions).

The EPA has not provided a notification to native title parties for this application. The State's Native Title Work Procedures indicate that responsibility for assessment of native title issues for an IDAS application rest with the Assessment Manager. It is recommended that you undertake an assessment using your own guidelines to determine if a native title notification is required for this application.

Should you require any further information please do not hesitate to contact the above officer on the telephone number or e-mail address provided.

.....
Signed

26/9/03

.....
Date

Delegate of Administering Authority
Environmental Protection Act 1994.

Concurrence agency response

Sections 3.3.16 and 3.5.18 *Integrated Planning Act 1997*

Applicant:	Dave Pascoe
Council Application Number:	M33/03;1070
EPA Application Number:	15102 Part 1
Date application received by EPA:	5/08/2003
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i>
Jurisdiction:	Chapter 7, Part 8 <i>Environmental Protection Act 1994</i>

Development Description:

Material Change of Use

where:

- ☐ the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for a notifiable activity under the *Environmental Protection Act 1994*.
- ☐ the proposed use of the land is for child care, educational, recreational, residential or similar purposes and the existing use of the land is, or if the land is vacant land with no existing use the most recent use of the land was, for an industrial activity.
- ☒ the land is on the Environmental Management Register or Contaminated Land Register under the *Environmental Protection Act 1994*.
- ☐ the land is wholly or partly within an area for which an Area Management Advice for industrial activity or natural mineralisation has been issued and the proposed use of the land is for child care, educational, recreational, residential or similar purposes.
- ☐ the land is wholly or partly in an area for which an Area Management Advice for unexploded ordnance has been issued.

at the following place(s):

Bruce Highway, Bluewater
(Lot 1 on RP735647)

Response to Development Application

The Environmental Protection Agency, acting as a concurrence agency under the *Integrated Planning Act 1997*, provides its response to the application detailed above.

The concurrence agency response is that

- ☒ **conditions must attach to any development approval**
- ☐ any approval must be for part only of the development
- ☐ any approval must be a preliminary approval only
- ☐ there are no concurrence agency requirements;
- ☐ the application must be refused

Conditions of the development approval

The following concurrence agency condition(s) is/are to be attached to any development approval issued for this application:

1. No soil may be removed from the site without adequate sampling and appraisal by a suitably qualified professional complying with Section 381 of the *Environmental Protection Act 1994* (EP Act). Contaminated soil must not be removed from the site without a permit issued by the Environmental Protection Agency under the EP Act.
2. It is a requirement of the EP Act that if the owner or occupier of this site becomes aware a Notifiable Activity (as defined in Schedule 2 of the EP Act) is being carried out on this land they must, within 30 days after becoming aware the activity is being carried out, give notice to the EPA. A list of Notifiable Activities is attached for your information.

Reasons for inclusion of development conditions or refusal

In accordance with section 3.3.18 of the *Integrated Planning Act 1997* and section 27B of the Acts Interpretation Act 1954, a concurrence response must include reasons for a refusal or for the inclusion of development conditions.

The Environmental Protection Agency is recognised as a concurrence agency under the *Integrated Planning Regulation 1998* for the protection of the environment by the management of contaminated land. The Environmental Protection Agency concurrence agency conditions for this proposed development that are contained within this response are required to mitigate any potential risk to human health or the environment from possible hazardous contaminants present on the site.

Additional comments or advice about the application

Not applicable

Additional information for applicants

This concurrence response pursuant to Chapter 7, Part 8 of the *Environmental Protection Act 1994* applies only to contaminated land issues and does not remove the need to obtain any further approval for this development which may be required by this or other legislation, State and/or Commonwealth. Applicants are advised to check with all relevant statutory authorities for such approvals as may be required.

~ End Of Concurrence Agency Response ~

Information Sheet

Notifiable Activities

Activities that have been identified as likely to cause land contamination are listed in Schedule 3 of the *Environmental Protection Act 1994*. Under the Act, land that has been or is currently used for a notifiable activity must be notified to the Department of Environment (DoE) by landowners and local government. Land that has been or is being used for a notifiable activity is recorded on the Environmental Management Register, which is maintained by DoE.

Schedule 3

NOTIFIABLE ACTIVITIES

1. **Abrasive blasting**—carrying out abrasive blast cleaning (other than cleaning carried out in fully enclosed booths) or disposing of abrasive blasting material.
2. **Aerial spraying**—operating premises used for—
 - (a) filling and washing out tanks used for aerial spraying; or
 - (b) washing aircraft used for aerial spraying.
3. **Asbestos manufacture or disposal**—
 - (a) manufacturing asbestos products; or
 - (b) disposing of unbonded asbestos; or
 - (c) disposing of more than 5 t of bonded asbestos.
4. **Asphalt or bitumen manufacture**—manufacturing asphalt or bitumen, other than at a single-use site used by a mobile asphalt plant.
5. **Battery manufacture or recycling**—assembling, disassembling, manufacturing or recycling batteries (other than storing batteries for retail sale).
6. **Chemical manufacture or formulation**—manufacturing, blending, mixing or formulating chemicals if—
 - (a) the chemicals are designated dangerous goods under the dangerous goods code; and
 - (b) the facility used to manufacture, blend, mix or formulate the chemicals has a design production capacity of more than 1 t per week.
7. **Chemical storage** (other than petroleum products or oil under item 29)—storing more than 10 t of chemicals (other than compressed or liquefied gases) that are dangerous goods under the dangerous goods code.
8. **Coal fired power station**—operating a coal fired power station.
9. **Coal gas works**—operating a coal gas works.
10. **Defence establishments or training areas**—operating a defence establishment or a training area used for handling ammunition in a way that may have caused, or may cause, remnant unexploded ordnance.
11. **Drum reconditioning or recycling**—reconditioning or recycling of metal or plastic drums including storage drums.
12. **Dry cleaning**—operating a dry cleaning business where—
 - (a) solvents are stored in underground tanks; or
 - (b) more than 500 L of halogenated hydrocarbon are stored.
13. **Electrical transformers**—manufacturing, repairing or disposing of electrical transformers.
14. **Engine reconditioning works**—carrying out engine reconditioning work at a place where more than 500 L of the following are stored—
 - (a) halogenated and non-halogenated hydrocarbon solvents;
 - (b) dangerous goods in class 6.1 under the dangerous goods code;
 - (c) industrial degreasing solutions.
15. **Explosives production or storage**—operating a factory under the *Explosives Act 1952*.
16. **Fertiliser manufacture**—manufacturing agriculture fertiliser (other than the blending, formulation or mixing of fertiliser).
17. **Foundry operations**—commercial production of metal products by injecting or pouring molten metal into moulds and associated activities in works having a design capacity of more than 10 t per year.
18. **Gun, pistol or rifle range**—operating a gun, pistol or rifle range.
19. **Herbicide or pesticide manufacture**—commercially manufacturing, blending, mixing or formulating herbicides or pesticides.
20. **Landfill**—disposing of waste (excluding inert construction and demolition waste).
21. **Lime burner**—manufacturing cement or lime from limestone material using a kiln and storing wastes from the manufacturing process.
22. **Livestock dip or spray race operations**—operating a livestock dip or spray race facility.

Permit

Environmental Protection Act 1994

Environmental authority P-EA-100698838

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

Environmental authority number: P-EA-100698838

Environmental authority takes effect on the date that settlement of the sale of business from D.J Pascoe & N.A. Pascoe (trading as Bluewater Landfill) to Queensland Resource and Recovery Pty Ltd (ACN 677 037 268 Pty Ltd, ACN 677 037 035 Pty Ltd and ACN 677 037 099 Pty Ltd) occurs. This is the take effect date.

Within 5 business days of the environmental authority taking effect, the administering authority must be given written notice of the occurrence.

The first annual fee is payable within 20 business days of the take effect date.

The anniversary date of this environmental authority is the same day each year as the take effect date. The payment of the annual fee will be due each year on this day.

Environmental authority holder

Name	Registered address
A.C.N. 677 037 268 PTY LTD	96 Artillery Road, MULARA QLD 4703

Environmentally relevant activity and location details

Environmentally relevant activities	Locations
ERA 60 – Waste disposal 2(c) Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste): >5,000-10,000t/yr	42386 Bruce Highway, BLUEWATER QLD 4818 – Lot 1 RP735647
ERA 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing— (b) general waste (c) category 2 regulated waste (d) category 1 regulated waste.	
ERA 54 – Mechanical waste reprocessing	

Environmentally relevant activities	Locations
1: Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only.	
ERA 57 – Regulated waste transport	Mobile and temporary within the State of Queensland.

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.

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 land give written notice to the administering authority if they become aware of the following:

- the presence of, or happening of an event involving, a hazardous contaminant on the land that is causing, or is reasonably likely to cause, serious or material environmental harm (notice must be given within 24 hours); or
- if the land is contaminated land – a change in the condition of the land that is causing, or is reasonably likely to cause, serious or material environmental harm (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 land (notice must be given within 20 business days).

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 *Planning Act 2016* 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.



Signature

30 August 2024

Date

Scott Blanchard
Department of Environment, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Waste Assessment
Department of Environment, Science and Innovation
GPO Box 2454 BRISBANE
Phone: 1300 130 372
Email: palm@des.qld.gov.au

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)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access State controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment, Science and Innovation to ensure that you have the most current version of the environmental authority relating to this site.

Conditions of environmental authority**Part 1 – Bluewater Waste Management Facility**

Location: 42386 Bruce Highway, BLUEWATER QLD 4818 – Lot 1 RP735647

Relevant activities: ERA 60 – 2(c) Waste disposal facility (any combination of general waste and no more than 10% limited regulated waste): >5,000-10,000t/yr

ERA 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing—(b) general waste

ERA 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing—(c) category 2 regulated waste

ERA 62 – Resource recovery and transfer facility operation 1: Operating a facility for receiving and sorting, dismantling, baling or temporarily storing—(d) category 1 regulated waste

ERA 54 – Mechanical waste reprocessing 1: Operating a facility for receiving and mechanically reprocessing, in a year, more than 5,000t of inert, non-putrescible waste or green waste only.

The environmentally relevant activities conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Condition number	Condition
Agency interest: General	
1-G1	Activities under this environmental authority must be conducted in accordance with the following limitations: a) the activity must be undertaken in accordance with Appendix A – Bluewater Site Plans, Figure 1: Current Site Plan with Waste Storage Locations; b) the landfill facility must be constructed and operated in accordance with the figures depicted in Appendix A – Bluewater Site Plans; c) a landfill liner must be installed in every landfill unit; and d) the only waste types which may be mechanically reprocessed are concrete and green waste.
1-G2	All reasonable and practicable measures must be taken to prevent or minimise environmental harm caused by the activities.
1-G3	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable within 24 hours of becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions taken.
1-G4	The reporting and recording of breaches required in condition 1-G3 must include the following details about the breach, as it becomes available: a) date; and b) time; and c) duration; and d) location; and e) what happened; and f) why did it happen; and g) conditions breached; and

Condition number	Condition
	h) actions taken to contain and rectify; and i) continuous improvement actions to prevent a recurrence.
1-G5	Written procedures must be developed and documented for the activity that meet the following standards: a) identify all potential risks to the environment from the activity, including during and outside routine operations, during closure and in an emergency; and b) identify measures to prevent or minimise the potential for environmental harm for each of the potential risks identified; and c) establish an inspection and maintenance program for plant and equipment including calibration and servicing that is in accordance with manufacturer's instructions; and d) establish a staff training program on obligations under this environmental authority and the <i>Environmental Protection Act 1994</i> to be conducted as part of staff inductions and at least annually; and e) establish processes to review environmental risks, incidents, performance and complaints.
1-G6	Procedures required by condition 1-G5 must include a Fire Prevention and Contingency Plan (FPCP) that must include, but not be limited to, the following: a) the scale of fire emergencies covered under the plan; and b) fire prevention measures including tyre storage configuration; and c) fire response measures, including effective firefighting means and containment; and d) clean-up procedures and strategies; and e) reporting procedures to relevant authorities; and f) the responsibilities for site personnel; and g) staff training on the FPCP; and h) containment, management and disposal systems and procedures for fire washwater; and i) details regarding the implementation of the FPCP; and j) monitoring and reporting of the effectiveness of the FPCP and any corrective measures taken; and k) requirements for a periodic review of the FPCP.
1-G7	Written procedures required by condition 1-G5 must be: a) implemented; and b) reviewed at least annually; and c) provided to the administering authority upon request at the time and in the format requested.
1-G8	For plant and equipment, all measures necessary to comply with the conditions of this environmental authority must be: a) installed, operated and maintained in a proper and effective manner; and b) in accordance with condition 1-G5.
1-G9	All information and records required by the conditions of this environmental authority must be kept for a minimum of five years with the exception of environmental monitoring results must be kept until the surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority upon request and in the format requested.

Condition number	Condition
1-G10	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.
1-G11	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses.
1-G12	When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a complaint of environmental nuisance arising from the activity. The monitoring results must be provided within 10 business days to the administering authority upon its request.
1-G13	The receiving environment monitoring program must include at least the following: a) a groundwater monitoring program as prescribed in conditions 1-WT6 and 1-WT7; b) a surface water monitoring program as prescribed in condition 1-WT5; c) leachate monitoring as prescribed in condition 1-W16.
1-G14	An annual monitoring report must be prepared by an appropriately qualified person(s) and submitted to the administering authority by the anniversary date each year. The annual monitoring report must include: a) a summary of the previous 12 months monitoring data obtained in accordance with any of the monitoring requirements of this approval; and b) an evaluation/explanation of the data from any monitoring programs, including graphical representations showing relevant limits and trends referenced to baseline data; and c) an outline of actions taken, and proposed to be taken, to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.
1-G15	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.
1-G16	Financial assurance must be paid to the administering authority within two months of the take effect date.
Agency interest: Waste	
1-W1	The activity must only receive the following waste streams on site for disposal: 1. Construction and demolition waste; 2. Domestic clean-up waste; 3. Inert commercial and industrial waste; and 4. Asbestos, including soils which are contaminated by asbestos only.

Condition number	Condition
1-W2	The only regulated wastes which may be accepted on site for temporary storage are: a) batteries; b) paint waste; c) oil; and d) end-of-life tyres.
1-W3	All storage, sorting and mechanical reprocessing of wastes must only be carried out on the hardstand area: a) constructed of concrete or other low permeable material to minimise soil infiltration; b) graded to prevent rainwater ponding; c) bunded to contain the materials stored; and d) graded to facilitate collection of leachates and contaminated stormwater runoff for discharge to the leachate pond.
1-W4	Asbestos must: a) only be accepted for disposal if packaged and managed in accordance with all relevant work health and safety legislation requirements; b) be managed at all times to avoid any potential release of particulate matter to the atmosphere; c) be disposed of as a special burial of waste that is located greater than 2 metres from the sides and final waste surface of the landfill cell; and d) be covered immediately when being disposed with at least 200mm of soil, and prior to any compaction.
1-W5	An effective firebreak between the areas where end-of-life tyres are stored and the surrounding environment, properties and infrastructure must be provided and maintained at all times.
1-W6	The minimum separation distance between flammable and combustible materials and end-of-life tyre stacks or stockpiles must be at least ten metres in any direction.
1-W7	The dimension of the end-of-life tyre stack or stockpile must not exceed: a) five metres as the maximum width of the base; and b) thirty metres for the maximum length of the base; and c) three metres for the maximum height; and d) a maximum of 10 tonnes or end-of-life tyres.

Condition number	Condition
1-W8	A Site Development Plan, identifying all activities to be carried out on the site during the period of the plan, must be prepared for each cell subject to this development permit. Each Site Development Plan must be finalised at least 3 months before the expiring of the previous plan and must include details of at least the following: a) dimensions of landfill units used for waste disposal or storage; b) an accurate level survey of any area to be utilised for the disposal or storage of wastes. The levels must be reduced to a common datum and related to contour plans; c) the dimensions of the active waste disposal face; d) location of any new site infrastructure or extensions, such as a new leachate dam, pond, or pump well to be used or other plant and equipment, required to the leachate collection, storage and recirculation infrastructure to serve the new cell; e) location of any new stormwater drains, diversion embankments or settling ponds required to serve the new cell; and f) location of any areas to be capped (both final and interim capping where the next stage on the complete cell will not commence within 12 months), the proposed capped surface levels and contours, surface drainage system and species of vegetation to be planted as part of a rehabilitation program.
1-W9	In addition to condition 1-W1, the following waste streams must not be disposed at the landfill: a) liquid or semi-liquid waste, other than: i. liquid or semi-liquid waste that has been produced in the carrying out of the activity; ii. liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams. b) hot ash; c) material that is smouldering or aflame; d) material containing a substance which is ignitable, corrosive, reactive or toxic material (other than materials containing a toxic substance from domestic premises; e) waste that possesses characteristics of controlled waste listed in the “National Environmental Protection (Movement of Controlled Waste between states and territories) Measure 1998” other than toxic or ecotoxic if it complies with conditions 1-W1 and 1-W7; f) an explosive; g) all radioactive wastes and any soils contaminated by radioactive material, unless otherwise approved under the Radiation Safety Act 1999; h) ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction; i) salt or brine generated from coal seam gas water; and j) green waste.
1-W10	Deposited waste must be covered as soon as practicable to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and pest species.
1-W11	All reasonable and practicable measures must be taken to exclude vectors of disease and pest species to prevent environmental nuisance.
1-W12	All reasonable and practicable measures must be taken to contain litter.

Condition number	Condition
1-W13	Waste must not be burnt.
1-W14	The landfill liner system must be designed, installed and maintained by appropriately qualified person(s) to: - prevent release of contaminants, including leachate, to land and waters; and - prevent subsurface migration of landfill gas from the landfill unit.
1-W15	A leachate management system must be designed by an appropriately qualified person(s) and installed and maintained to: - collect leachate generated in the landfill unit; and - convey the collected leachate out of the landfill unit to an appropriate leachate storage facility; and - restrict the height of the leachate above the liner system to a maximum level of 300mm.
1-W16	Leachate must be stored in the leachate storage facility and be: - recirculated through a landfill unit; or - disposed of at a facility that is approved to receive such waste.
1-W17	All ponds used for the storage of leachate or contaminated stormwater on the site must be constructed to achieve a permeability of less than 1×10^{-9} m/s and must be installed and maintained: - so to prevent release through the bed or banks of the pond to any waters (including groundwater); and - so that a freeboard capable of containing at least a 24 hour storm event with an average recurrence interval of 1 in 10 years is maintained at all times; and - so as to ensure the stability of ponds construction.
1-W18	The Leachate Monitoring Program must include: - leachate quality monitoring undertaken at least quarterly; - the annual measurement and recording of the quantity of leachate recirculated through the landfill facility; and - monitoring for, at a minimum, the following water quality characteristics: - Ammonia (as N) (mg/L); - Calcium (mg/L); - Chloride (mg/L); - Iron (total) (mg/L); - Lead (total µg/L); - Nitrate + Nitrite (as N) (mg/L); - pH (pH units); - Potassium (mg/L); - Sodium (mg/L); - Sulphate (mg/L); - specific conductance (µS/cm); - Total Organic Carbon (TOC) (mg/L); - Zinc (total µg/L); - Aluminium (total µg/L); - Carbonate and bicarbonate (mg/L);

Condition number	Condition
	xvi. Magnesium (mg/L); xvii. Total nitrogen (mg/L); - xviii. Copper (total µg/L); xix. Lead (total µg/L); xx. PFAS, TOP Assay and TOF as required by condition 1-WT12; xxi. Temperature (°C); xxii. Redox potential (mV); - xxiii. Total dissolved solids (mg/L); xxiv. Dissolved oxygen (mg/L); xxv. Carbonate (mg/L); xxvi. TKN (mg/L); - xxvii. Total phosphorus (mg/L); - xxviii. Hexavalent chromium (mg/L); xxix. Cadmium (mg/L); xxx. Mercury (mg/L); xxxi. Arsenic (mg/L); - xxxii. Nickel (mg/L); - xxxiii. Total petroleum hydrocarbons (mg/L); - xxxiv. BTEX (mg/L); and xxxv. 5 day biological oxygen demand (mg/L).
Agency interest: Air	
1-A1	Other than as permitted within this environmental authority, odours or airborne contaminants must not cause environmental nuisance to any sensitive place or commercial place.
1-A2	Dust and particulate matter emissions must not exceed the following concentrations at any sensitive place 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 (or more recent editions); or b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24-hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.6 (or more recent editions) or any other method approved by the administering authority. c) a concentration of respirable crystalline silica (as PM2.5) of 3 micrograms per cubic metre over a 1 year averaging time, when monitored in accordance with Australian Standard AS 3580.9.10 (or more recent editions) or any other method approved by the administering authority.
1-A3	The only materials that can be used for dust suppression purposes are: i. stormwater that has not been in contact with waste; and ii. products specifically designed for dust suppression.

Condition number	Condition
1-A4	Landfill gas measured as methane must not exceed: 25% of the lower explosive limit at any location at the landfill (but excluding facility structures used for the management of landfill gas or leachate); and 25% of the lower explosive limit within service pits, service trenches, stormwater drains or other structures beyond the landfill site boundary; and - the lower explosive limit in subsurface geology at or beyond the landfill site boundary.
1-A5	Additional measures to manage landfill gas must be taken if landfill gas levels measured as methane exceed 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the landfill unit.
Agency interest: Noise	
1-N1	Noise generated by the activity must not cause environmental nuisance to any sensitive place or commercial place.
Agency interest: Land	
1-L1	Other than permitted within this environmental authority, contaminants must not be released to land.
1-L2	When the deposition of waste to the landfill unit ceases, a final capping system to the landfill unit must be designed by an appropriately qualified person(s) and installed to minimise: - infiltration of water into the landfill unit and water ponding on the surface; and - the likelihood of any erosion occurring to either the final capping system or the landfilled materials. A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.
1-L3	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: - suitable species of vegetation for the location are established and sustained for earthen surfaces; and - potential for erosion is minimised; and - the quality of water, including seepage, released from the site does not cause environmental harm; and - potential for environmental nuisance caused by dust is minimised; and - the water quality of any residual water body does not have potential to cause environmental harm; and - the final landform is stable and protects public safety; and - the contaminant concentrations within the final capping layer for the landfill facility are appropriate for the final land use and in accordance with the latest edition of the 'National Environmental Protection (Assessment of Soil Contamination) Measure'. NOTE: This condition continues to apply after the environmental authority has ended or ceased to have effect pursuant to section 207(3) of the <i>Environmental Protection Act 1994</i>.

Condition number	Condition
1-L4	Following cessation of deposition of waste in the landfill unit, post-closure care of the landfill unit must be conducted for a period of 30 years or until such time that the operator demonstrates, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate, landfill gas or other contaminants that may cause environmental harm is likely. NOTE: This condition continues to apply after the environmental authority has ended or ceased to have effect pursuant to section 207(3) of the <i>Environmental Protection Act 1994</i>.
1-L5	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused and must achieve the final rehabilitation criteria stated in condition 1-L3. The program must include measures to: 1. maintain the structural integrity and effectiveness of the final capping system; 2. maintain and operate the leachate collection system; 3. maintain the groundwater monitoring program and monitor quality of groundwater at a frequency sufficient to detect any release of contaminants to groundwater; 4. monitor long term subsidence and stability using routine GPS survey monitoring, Lidar or equivalent monitoring methods, to provide a means to quantify the occurrence of subsidence and link the results to the groundwater monitoring program; 5. maintain and operate the landfill gas monitoring system; and 6. maintain and operate the landfill gas collection system. NOTE: This condition continues to apply after the authority has ended or ceased to have effect pursuant to section 207(3) of the <i>Environmental Protection Act 1994</i>.
Agency interest: Water	
1-WT1	Contaminants must not be released to any waters in a manner that causes or is likely to cause environmental harm.
1-WT2	Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment from the site.
1-WT3	The stormwater runoff from disturbed areas, generated by (up to and including) a 24 hour storm event with an average recurrence interval of 1 in 5 years must be retained on site or managed to remove contaminants that may cause environmental harm before release.
1-WT4	The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause: 1. re-suspension of particles; or 2. erosion of bed or banks of receiving waters; or 3. landscape damage; or 4. ponding of the water; or 5. vegetation damage.

Condition number	Condition
1-WT5	The surface water monitoring program must include: a) monitoring locations for upstream of the discharge points and downstream of the discharge points; b) at least quarterly monitoring to identify potential impacts by the landfill facility on surface waters; c) monitoring of at least the following parameters: i. pH (pH units) ii. Electrical Conductivity ($\mu\text{S}/\text{cm}$) iii. Dissolved Oxygen (mg/L) iv. Suspended Solids (mg/L) v. Total Organic Carbon (mg/L) vi. Total fluorinated organic compounds* (mg/L) vii. Heavy metals (total and dissolved) viii. appropriate trigger values that reflect the Water Quality Objectives or locally relevant water quality guidelines derived in accordance with the Queensland Water Quality Guidelines (2009 or most recent update). NOTE: *For monitoring of fluorinated organic compounds, monitoring must be consistent with recommendations in the PFAS National Environmental Management Plan.
1-WT6	The groundwater monitoring program required by condition 1-G13 must be designed, carried out and periodically reviewed and updated by an appropriately qualified person(s). The appropriately qualified person(s) must have appropriate qualifications and experience in the fields of hydrology and groundwater monitoring programs to be able to competently make recommendations about these matters.
1-WT7	The groundwater monitoring program required by condition 1-G13 must include but not necessarily be limited to: a) identification of the aquifer(s) for which groundwater will be monitored; b) baseline monitoring undertaken in accordance with the latest version of the administering authority's guideline Using Monitoring Data to Assess Groundwater Quality and Potential Environmental Impacts; c) identification of trigger parameters that are associated with the potential or actual contaminants held on the site; d) identification of trigger concentration levels that are suitable for early detection of contaminant releases at the site; e) installation of interpretation groundwater monitoring bores where groundwater quality will not have been affected by the site's activities authorised under this environmental authority; f) installation of compliance groundwater monitoring bores that: i. are within formations potentially affected by the activities authorised under this environmental authority (i.e. within the potential area of impact); ii. provide for the early detection of negative impacts in the immediate vicinity of potential contaminant sources, prior to reaching groundwater dependent ecosystems, site boundaries, landholder's active groundwater bores, or water supply bores; iii. provide for the early detection of negative impacts prior to reaching migration pathways to other formations (i.e. faults, areas of unconformities known to connect two or more formations) if applicable; and

Condition number	Condition																																				
	iv. establish the quality of groundwater down-gradient of any potential leakage of contaminants to groundwater from the landfill site. g) monitoring of groundwater at each interpretation groundwater monitoring bore and compliance groundwater monitoring bore at least quarterly for the trigger parameters identified in Table 1 – Groundwater monitoring parameters below; h) groundwater trigger action response procedures for when trigger parameters and trigger levels identified in point (c) above trigger the early detection of seepage of contaminants, or upon becoming aware of any monitoring results that indicate potential groundwater contamination; and i) a rationale detailing the groundwater monitoring program conceptualisation including assumptions, determinations, monitoring equipment, sampling methods and data analysis.																																				
1-WT8	The locations of wells and groundwater monitoring facilities that comprise the groundwater monitoring program must be given with horizontal coordinates of such facilities accurate to 1.0 metre.																																				
1-WT9	On any occasion that samples are obtained, the holder of the environmental authority must measure and record standing groundwater levels in metres, accurate to 0.001 metres. The elevation of the reference point, relative to Australian Height Datum, for use in any groundwater level measurement must be determined to an accuracy of 0.005 metres.																																				
1-WT10	Measurements of groundwater levels must be undertaken prior to any disturbance by sampling and must be reported as the depth in metres from the established reference point to the water surface within the bore.																																				
1-WT11	The groundwater monitoring must be undertaken for, at least, the following water quality characteristics: Table 1 - Groundwater monitoring parameters <table><tr><th>Quality Characteristic</th><th>Unit of Measure</th><th>Frequency</th></tr><tr><td>pH</td><td>pH</td><td rowspan="16">Quarterly</td></tr><tr><td>Dissolved oxygen</td><td>mg/L</td></tr><tr><td>Electrical conductivity (EC)</td><td>µS/cm</td></tr><tr><td>Redox potential</td><td>mV</td></tr><tr><td>Temperature</td><td>°C</td></tr><tr><td>Standing Water Level</td><td>m AHD</td></tr><tr><td>5-Day Biological Oxygen Demand</td><td>mg/L</td></tr><tr><td>Total Organic Carbon</td><td>mg/L</td></tr><tr><td>Total Dissolved Solids</td><td>mg/L</td></tr><tr><td>Calcium</td><td>mg/L</td></tr><tr><td>Magnesium</td><td>mg/L</td></tr><tr><td>Potassium</td><td>mg/L</td></tr><tr><td>Sodium</td><td>mg/L</td></tr><tr><td>Chloride</td><td>mg/L</td></tr><tr><td>Sulphate</td><td>mg/L</td></tr><tr><td>Fluoride</td><td>mg/L</td></tr></table>	Quality Characteristic	Unit of Measure	Frequency	pH	pH	Quarterly	Dissolved oxygen	mg/L	Electrical conductivity (EC)	µS/cm	Redox potential	mV	Temperature	°C	Standing Water Level	m AHD	5-Day Biological Oxygen Demand	mg/L	Total Organic Carbon	mg/L	Total Dissolved Solids	mg/L	Calcium	mg/L	Magnesium	mg/L	Potassium	mg/L	Sodium	mg/L	Chloride	mg/L	Sulphate	mg/L	Fluoride	mg/L
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Chloride	mg/L																																				
Sulphate	mg/L																																				
Fluoride	mg/L																																				

Condition number	Condition			
	Alkalinity (Carbonate and Bicarbonate)	mg/L		
	Ammonia	mg/L		
	Nitrate and nitrite	mg/L		
	Total phosphorus	mg/L		
	Aluminium	mg/L		
	Arsenic	mg/L		
	Barium	mg/L		
	Cadmium	mg/L		
	Chromium	mg/L		
	Cobalt	mg/L		
	Lead	mg/L		
	Copper	mg/L		
	Iron	mg/L		
	Manganese	mg/L		
	Mercury	mg/L		
	Nickel	mg/L		
	Zinc	mg/L		
	Phenols	mg/L		
	Petroleum Hydrocarbons	mg/L		
	Monoaromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene and xylene)	mg/L		
	Organochlorine and Organophosphate Pesticides	mg/L		
	Chlorinated Compounds	mg/L		
	Polycyclic Aromatic Hydrocarbons*	mg/L		
	Per- and Poly-Fluoroalkyl Substances*	mg/L		
	Associated monitoring requirements			
1. Monitoring must be in accordance with the methods prescribed in the current edition of the administering authority’s <i>Water Quality and Sampling Manual</i>.				
2. Samples must be representative of the groundwater quality within the well.				
3. All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives / triggers relevant to the water quality characteristic.				
4. Monitoring must be undertaken as per the frequency stated.				
5. All monitoring devices must be correctly calibrated and maintained.				
*For monitoring of Per- and Poly-Fluoroalkyl Substances, monitoring must be consistent with recommendations in the most recent version of the PFAS National Environmental Management Plan.				

Condition number	Condition
1-WT12	The surface water and groundwater monitoring programs must include: a) determination of PFAS compounds low level trace analysis, under both standard analysis and total oxidisable precursor assay; b) determination of total organic fluorine content; c) for characterising leachate and any surface water or groundwater found to contain more than 50% additional PFAS present on a molar basis or organic fluorine content compared to the standard analysis, qualitative compound identification by liquid chromatography quadrupole time of flight mass spectrometry (LC-QToF-MS); d) compliance with quality assurance and quality control measures, including those advised in the most recent version of the PFAS National Environmental Management Plan; and e) measurement of PFAS concentrations in sediments in any water storages or waters found to be materially affected by PFAS compounds.

Part 2 – Regulated waste transport

Location: Mobile and temporary within the State of Queensland

Relevant activities: ERA 57 – Regulated waste transport

Eligibility criteria

Eligibility criteria
Regulated waste is transported by road vehicles only (not by train, boat, aircraft, pipeline or other means).

Conditions

Condition number	Condition
2-G1	For new operators — details of all vehicles used to transport regulated waste must be provided to the department before commencing the activity.
2-G2	For existing operators — if any vehicle registration details change, or any vehicles are added to or removed from the fleet of vehicles used to transport regulated waste, details of these changes must be provided to the department: a) as soon as practicable after the changes occur; or b) if transporting tyres — prior to each anniversary day (see section 9); or c) if transporting other regulated wastes — when paying the annual fee to the department for the registration certificate.
2-G3	Incompatible wastes must not be: a) placed in the same container; or b) transported in such a way that mixing may occur.
2-G4	Regulated waste must only be transported in suitably designed vehicles, tanks, containers or secondary containers that are appropriate for containing the waste being transported.
2-G5	All vehicles, tanks, containers and secondary containers used to transport regulated waste: a) must be maintained in a good condition at all times to prevent any spillage or leakage of regulated waste or other contaminants; and b) kept free of regulated waste residues at all times when not in use.
2-G6	A solid impervious partition must be provided to separate the load compartment/area of the regulated waste transport vehicle from the driver's compartment.
2-G7	Regulated waste must not be removed or released from any vehicle other than: a) at a facility that can lawfully receive the regulated waste; or b) for the purpose of consolidation grease trap and/or other oily wastes in a larger road tank vehicle where access to the waste source is restricted to smaller road tank vehicles.
2-G8	Regulated waste must not leak or spill from the vehicle.
2-G9	Notwithstanding condition 2-G8, any leakage or spillage of regulated wastes must be contained immediately, recovered and disposed of to a facility that can lawfully accept the waste.

Condition number	Condition
2-G10	An appropriate spill kit, personal protective equipment and relevant instructions for the management of the regulated wastes transported must be maintained and kept in each vehicle.
2-G11	If operating interstate, any spillage, leak, escape or other loss of regulated waste from the vehicle must be reported as soon as practicable to the relevant regulatory agency of the State or Territory in which the vehicle is travelling when the incident occurs.
2-G12	When operating in Queensland, any release of contaminants not in accordance with the conditions of this code must be reported by telephone to the department's Pollution Hotline or regional office located in the area where the release occurred. Any such release must be reported as soon as practicable, but no later than 24 hours (depending on the level of risk to the environment), after becoming aware of the release.
2-G13	A written notice detailing the following information must be provided to the department within 14 days of any advice provided in accordance with condition 2-G12: a) the name of the operator, including the operator's registration certificate number; b) the name and telephone number of a designated contact person; c) substance and quantity released; d) vehicle and vehicle 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 the risk or extent of environmental harm caused by the release; k) the success of any actions taken to mitigate the risk or extent of environmental harm; and l) proposed actions to prevent a recurrence of the release.
2-G14	All vehicles used to transport regulated wastes (that are not classified as dangerous goods, or as a placard load of dangerous goods), must be covered by a policy of insurance or other form of indemnity, for a sum that is not less than \$100,000, in respect of: a) personal injury, death, property damage and other damage (except consequential economic loss) arising out of fire, explosion, leakage or spillage of dangerous goods in, on or from the vehicle or a container on the vehicle; and b) costs incurred by or on behalf of a Commonwealth, State or Territory government authority in a clean-up resulting from any event of the kind referred to in subparagraph a) of this condition.
2-G15	All records required by this code must be kept for 5 years and be made available to an authorised officer of the department when requested.
2-G16	A record of all regulated waste (excluding trackable waste) must be kept detailing the following information for every load of waste transported: a) date of pickup of waste; b) description of waste; c) quantity of waste; d) origin of the waste; and e) destination of the waste.

Condition number	Condition
2-G17	At all times, a copy of: a) the registration certificate issued by the department for regulated waste transport activities; and b) the appropriate emergency guides in relation to the waste transported must be carried in the cabin of each vehicle used to transport regulated waste and when requested, be presented to an authorised officer of the department or relevant regulatory agency of the State or Territory in which the vehicle is travelling.
2-G18	All vehicle drivers must: a) have access to a copy of this code in the vehicle, or through direct communication with the vehicle depot or operations base; and b) be trained in the requirements of this code, including the use of all equipment and procedures necessary to comply with the conditions of this code, and document all training undertaken.
2-G19	The following details must be recorded: a) time, date, name and contact details of the complainant; b) reasons for the complaint; c) any investigations undertaken; d) conclusions formed; and e) any actions taken.

Table 2.1 Asbestos conditions**Additional conditions applying to the transport of asbestos waste under this code.**

2-G20	All asbestos transported must be: a) double bagged and sealed in heavy-duty polythene bags (minimum 200 µm thickness); or b) contained in sealed drums or bins that are lined with heavy-duty plastic (minimum 200 µm thickness); or c) where the volume or size of asbestos waste (e.g. large asbestos cement sheets) is greater than the volume or size of a bag, drum or bin: i. for friable asbestos waste, sealed in double lined heavy-duty plastic sheeting (minimum 200 µm thickness) prior to being placed into a waste skip, vehicle tray or similar container; or ii. for non-friable asbestos waste, kept damp and contained in a waste skip, vehicle tray or similar container that has been double lined with heavy duty plastic sheeting (minimum 200 µm thickness) and then completely sealed with the plastic sheeting and adhesive tape.
2-G21	All asbestos transported must be: a) labelled with a warning statement to indicate the presence of asbestos and that dust creation and inhalation needs to be avoided; b) securely loaded and stowed on the vehicle during transit in such a way that does not cause the packaging to rupture; c) off loaded carefully to prevent the packaging from rupturing; and d) repackaged immediately if rupturing of the packaging does occur.

Table 2.2 Lead conditions**Additional conditions applying to the transport of particulate lead waste under this code.**

2-G22	All particulate lead waste must be: a) double bagged and sealed in heavy duty polythene bags (minimum 200 µm thickness), and placed in containers on the vehicle; b) labelled to indicate the presence of lead and with appropriate lead risk and safety phrases (see definitions “risk phrase” and “safety phrase” in section 9 of this code); c) securely loaded and stowed on the vehicle during transit in such a way that does not cause the packaging to rupture; d) off loaded carefully to prevent the packaging from rupturing; and e) repackaged immediately if rupturing of the packaging does occur.

Table 2.3 Clinical and related waste conditions**Additional conditions applying to the transport of clinical and related waste under this code.**

2-G23	All clinical and related wastes must be transported in a fully enclosed load compartment of a vehicle that: a) is bunded or otherwise designed to contain any spills and leaks; b) is lockable; and c) has internal surfaces which are rigid and seamless to facilitate cleaning and disinfection.
2-G24	Vehicles and load compartments must be locked when unattended.
2-G25	All clinical and related wastes must be provided with rigid secondary containment during transport.
2-G26	Secondary containers used for the transportation of clinical and related wastes must be effectively cleaned and disinfected before reuse.
2-G27	Clinical and related wastes must not be transported in vehicles fitted with compaction systems.
2-G28	Noxious or offensive odours must not be released from any vehicle transporting clinical or related wastes.

Table 2.4 Polychlorinated biphenyl (PCB) conditions**Additional conditions applying to the transport of PCB waste under this code.**

2-G29	The transport of wastes containing PCBs that are also classified as scheduled wastes under the Australian and New Zealand Environment and Conservation Council (ANZECC) <i>Polychlorinated Biphenyls Management Plan – July 1999</i> must comply with the requirements of that Plan.
2-G30	Personnel suitably trained in methods of handling and containing spilled PCBs must accompany any vehicle transporting waste containing PCBs.

Table 2.5 Rigid vehicle conditions

Additional conditions applying to the transport of regulated waste in rigid vehicles and trailers under this code.

2-G31	When transporting regulated waste in rigid vehicles and trailers, the tray of the vehicles must be: a) constructed of an impervious material; b) maintained in a sound condition; and c) designed to contain any spills on the tray.
2-G32	When transporting regulated waste in rigid vehicles and trailers, any waste not fully contained within weatherproof packages must be covered during transport to contain the load and protect it from wind and rain.
2-G33	When transporting regulated waste in rigid vehicles and trailers, all regulated waste containers must be: a) mounted securely to the vehicle; and b) contained within the tray of the vehicle.
2-G34	When transporting regulated waste in rigid vehicles and trailers, the vehicle must be fitted with: a) adequate cargo securing devices; and b) in the case of vehicles transporting packaged regulated waste (see definitions in section 9 of this code), rigid sides or gates that contain the load while in transit.
2-G35	When transporting packaged regulated waste in rigid vehicles and trailers, the top of any container must not protrude above the sides or gates of the vehicle by more than 30% of the height of the container.

Table 2.6 Road tank vehicle conditions

Additional conditions applying to the transport of liquescent and dry particulate regulated waste in road tank vehicles under this code.

2-G36	Road tank vehicles must be constructed to minimise instability and risk of rollover.
2-G37	Road tank vehicles must be provided with roll-over protection to protect all tanks, components and fittings on the upper and side surfaces of the tank in the event of the vehicle rolling over or becoming inverted.
2-G38	Waste transfer equipment, including discharge point and pipe-work on road tank vehicles, must be: a) fitted to the vehicle so as to not extend beyond the outer body line of the vehicle; or b) designed to provide sufficient inherent resistance to damage; or c) provided with protection to prevent damage.
2-G39	Road tank vehicles used for the transport of liquid regulated waste must have sampling points on the top of each compartment that are readily accessible for the purposes of a roadside inspection.
2-G40	Regulated waste material must not leak or spill from waste transfer hoses to the ground while the road tank vehicle is in transit.
2-G41	All tank filling and discharge points on road tank vehicles must have adequate ground clearance and be rigidly connected to the tank.

2-G42	All road tank vehicle vacuum pump systems must be fitted with operational: a) pressure and/or vacuum relief valves; and b) pump shut-off valves.
2-G43	Where regulated waste is transported in road tank vehicles, the tank capacity must not be exceeded and a mechanism for volume measurement that is readily visible and calibrated to show maximum volume of waste in the tank must be fitted to each tank.
2-G44	Where regulated waste is transported in road tank vehicles, manholes of sufficient size to allow internal inspection, cleaning and maintenance of the tanks must be fitted.
2-G45	All filling and discharge points of road tank vehicles must be fitted with suitable leak proof caps and captive chains when regulated wastes are in transit.
2-G46	Each road tank vehicle must be provided with an effective bumper and/or barrier system to protect the tank and fittings from rear impact.
2-G47	The transfer of grease trap and/or oily wastes as permitted in condition 2-G7 must: a) only occur directly from one road tank vehicle to another; b) be conducted using a closed vacuum system; and c) be supervised at all times.
2-G48	The transfer of grease trap waste and/or oily wastes must: a) not take place at a sensitive place; b) not take place on a road adjacent to a sensitive place; c) not cause odour nuisance at a sensitive place. The transfer of grease trap waste and/or oily wastes must take place at least 10 metres up gradient from any waters or stormwater drain inlet.
2-G49	Where practicable the transfer of waste must be conducted on a bunded, hardstand area to minimise any releases of contaminants to land or water if a spill occurs. Where there is potential for a release to waters or stormwater during a transfer, temporary bunding and/or containment devices must be used to minimise the potential for release.

Table 2.7 Operating 36 or more vehicles.**Additional conditions applying to an activity that involves the operation of 36 or more regulated waste transport vehicles (i.e. ERA 57(2)(c)) under this code.**

2-G50	When an activity involves the operation of 36 or more regulated waste transport vehicles, an Operational Management System (OMS) must be developed for implementation by the person carrying out the activity. The OMS must be implemented on commencement of the activity and provide for: a) identification of actual and potential releases of all contaminants, their environmental impacts and the actions to be taken to prevent the likelihood of environmental harm; b) establishment and maintenance of procedures to identify the potential for accidents; c) activation of appropriate responses to emergency situations; d) training of staff to achieve awareness of the potential for environmental harm and competence in the application of preventative measures and emergency response procedures; and e) a review of, and continual improvement to, the overall environmental performance of the business operations.

Definitions for Part 1

Where a word or phrase in this document is defined in this Schedule or within the document, it has its corresponding meaning. Where a word or phrase in this document is not defined in this Schedule, it has the meaning given to it in (in order of priority):

- the *Environmental Protection Act 1994* (EP Act), its regulations or its environmental protection policies;
- the *Acts Interpretation Act 1954*;
- the Macquarie Dictionary (taking account of the context in which the word or phrase is used in this document).

For example, environmental value, environmental harm, environmental nuisance, material environmental harm, serious environmental harm and relevant act are defined in the EP Act and groundwater is defined in the Environmental Protection Regulation 2019.

Defined words or phrases in the singular include the plural and vice versa.

24 hour storm event with an average recurrence interval of 1 in 5 years means the maximum rainfall depth from a 24-hour duration precipitation event with an average recurrence interval of once in 5 years.

24 hour storm event with an average recurrence interval of 1 in 10 years means the maximum rainfall depth from a 24 hour duration precipitation event with an average recurrence interval of once in 10 years. *For example, an Intensity-Frequency-Duration table for a 24 hour duration event with an average recurrence interval of 1 in 10 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.*

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

Administering authority means the Department of Environment and Science or its successors or predecessors.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

Coal seam gas water means underground water brought to the surface of the earth, or moved underground in connection with exploring for, or producing coal seam gas.

Commercial place means 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.

Commercial and industrial waste as defined in the Environmental Protection Regulation 2019.

Construction and demolition waste as defined in the Waste Reduction and Recycling Regulation 2011.

Disturbed areas include areas:

1. that are susceptible to erosion;
2. that are contaminated by the **activity**; and/or
3. upon which stockpiles of soil or other materials are located.

Domestic clean-up waste means non-putrescible, dry and inoffensive waste, other than green waste or recyclable waste, produced as a result of a clean-up of domestic premises.

Environmental harm as defined in Chapter 1 of the *Environmental Protection Act 1994*.

Environmental nuisance as defined in Chapter 1 of the *Environmental Protection Act 1994*.

Financial assurance as defined in Chapter 5 of the *Environmental Protection Act 1994*.

Fire washwater includes, but is not limited to, firefighting water; firefighting foams and other firefighting additives used in fire fighting operations.

General waste means waste other than regulated waste.

Green waste means grass cuttings, trees, bushes, shrubs, loppings of trees, bushes or shrubs, or similar matter produced as a result of the ordinary use or occupation of premises.

Groundwater monitoring bore means groundwater monitoring bore, constructed in accordance with the relevant Australian Standard, and used to sample groundwater from an aquifer the water quality of which may be potentially affected by the activity. This may be a background bore, an up-gradient bore, down-gradient bore or bore in the same aquifer in a nearby location unaffected by the activity.

Groundwater monitoring program means a system of groundwater monitoring devices, such as monitoring bores, and specified monitoring requirements used to provide data in respect to the level and quality of groundwater in the uppermost aquifer.

Incompatible waste means waste that may chemically react when:

- a) placed in proximity to other wastes; and / or
- b) mixed with other wastes.

Inert means:

1. bricks, pavers, ceramics, concrete, glass or steel; or
2. similar general waste that does not biodegrade or decompose.

Land does not include **waters**.

Landfill facility means land and structures at the site approved used for the disposal of solid waste.

Landfill liner means a compacted clay barrier at least 600 mm thickness achieving a maximum permeability of 1×10^{-9} metres per second.

Landfill unit means a discrete area of land or an excavation that receives solid waste.

Leachate means a **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 site that contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

Liquid means any substance that:

1. has an angle of repose of less than five degrees; or
2. becomes free flowing at or below 60 degrees Celsius or when it is transported; or
3. is not generally capable of being picked up by a spade or shovel.

Measures have the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

NATA means National Association of Testing Authorities.

PFAS Compounds means the PFAS sub-classes outlined in the most recent edition of the PFAS National Environmental Management Plan.

Receiving environment monitoring program means a monitoring program designed to monitor and assess the potential impacts of controlled or uncontrolled releases of contaminants to the environment from the **activity**.

Records include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, groundwater, or surface waters.

Semi-liquid means imperfectly fluid, having both fluid and solid characteristics.

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

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. a kindergarten, school, university or other educational institution; or
4. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
6. a public park or garden; or
7. for noise, a place listed as a sensitive receptor in Schedule 1 of the Environmental Protection (Noise) Policy 2019.

Toxic material means:

1. cytotoxic wastes;
2. drugs and poisons listed in the Health (Drugs and Poisons) Regulation 1996; and
3. any other material that:
 - a. has contaminant concentrations in the waste exceeding the allowable levels in *Appendix B – Additional Tables, Table 2 - Maximum contaminant levels*; or
 - b. has leaching contaminant levels in the waste when measured in accordance with toxicity characteristic leaching procedure (TCLP), exceeding the concentrations prescribed in *Appendix B – Additional Tables, Table 3 - Allowable leaching contaminant levels*.

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

Definitions for Part 2

Where a word or phrase in this document is defined in this Schedule or within the document, it has its corresponding meaning. Where a word or phrase in this document is not defined in this Schedule, it has the meaning given to it in (in order of priority):

- the *Environmental Protection Act 1994* (EP Act), its regulations or its environmental protection policies;
- the *Acts Interpretation Act 1954*;
- the Macquarie Dictionary (taking account of the context in which the word or phrase is used in this document).

For example, environmental value, environmental harm, environmental nuisance, material environmental harm, serious environmental harm and relevant act are defined in the EP Act and groundwater is defined in the Environmental Protection Regulation 2019.

Defined words or phrases in the singular include the plural and vice versa.

Activity means the **environmentally relevant activity**, or aspect of the ERA to which this code relates.

ADG Code means the *Australian Code for the Transport of Dangerous Goods by Road and Rail*, 7th edition, or more recent versions as they become available. The ADG Code is available for purchase from Canprint — Telephone: (02) 6293 8383 or from the National Transport Commission website at www.ntc.gov.au

Anniversary day, for a **registration certificate** is defined in Schedule 4 of the EP Act.

Asbestos-containing material means any material, object, product or debris that contains asbestos.

Asbestos waste means all removed **asbestos-containing materials** and disposable items used during the asbestos removal work, such as plastic sheeting used for an enclosure or to cover surfaces in the asbestos work area, disposable coveralls, disposable respirators and rags used for cleaning etc.

Clinical waste means waste that has the potential to cause disease including, for example, the following:

- a) animal waste;
- b) discarded sharps;
- c) human tissue waste; and
- d) laboratory waste.

Code of environmental compliance means a code of environmental compliance approved or made under a regulation of the EP Act.

Department means the Department of Environment, Science and Innovation or its successor or predecessors.

Environmentally relevant activity (ERA) means an activity prescribed by regulation as an ERA.

Friable asbestos means **asbestos-containing material** which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure.

Note: This may include asbestos containing materials that have been subjected to conditions, such as weathering, physical damage, water damage etc., that leave them in a state where they meet the above definition.

Incompatible wastes means wastes that are likely to interact and increase the risk to human health and/or the environment when mixed or brought into contact.

Liquescent waste means waste tending toward a liquid state; waste that is not spadable.

Oily waste means hydrocarbons and water mixtures or emulsions, including oil and water mixtures or emulsions, which is the **regulated waste** item 37 of Schedule 7 of the Environmental Protection Regulation

2008. **Oily waste** does not include mineral oil (item 34) that is not in a mixture or emulsion with water. Vegetable oil (item 63) is also excluded.

Operator means the person carrying out the ERA.

Packaged regulated waste means **regulated waste** in a container with:

- e) a capacity of not more than 450 litres; and
- f) a nett mass of not more than 400 kilograms.

Registration certificate means a **registration certificate** given under section 73F of the EP Act to the **operator** of an ERA.

Regulated waste means waste that—

1. a) is commercial or industrial waste, whether or not it has been immobilised or treated; and
b) is of a type, or contains a constituent of a type, mentioned in schedule 7.
2. Waste prescribed under subsection (1) includes—
 - a) for an element—any chemical compound containing the element; and
 - b) anything that contains residues of the waste.

Regulatory agency means the agency of a State or Territory that has responsibility for regulating the transport of regulated wastes in that State or Territory.

Related waste means waste that constitutes, or is contaminated with, chemicals, cytotoxic drugs, human body parts, pharmaceutical products or radioactive substances.

Release of a contaminant into the environment, includes:

- a) to deposit, discharge, emit or disturb the contaminant;
- b) to cause or allow the contaminant to be deposited, discharged, emitted or disturbed;
- c) to allow the contaminant to escape; and
- d) to fail to prevent the contaminant from escaping.

Rigid vehicle means a vehicle the load carrying area of which is fixed to the vehicle's chassis or frame (as defined in the ADG Code).

Risk phrase means a phrase stated in the National Occupational Health and Safety Commission's (NOHSC's) document entitled *National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]*, or more recent versions, that gives information about the substance's hazards.

Road tank vehicle means a truck, trailer or semi-trailer or unit in a road train, incorporating a tank, or having a tank or tanks mounted thereon, either permanently or temporarily (as defined in AS 2809.1–2008 — *Road Tank Vehicles for Dangerous Goods*).

Safety phrase means a phrase stated in National Occupational Health and Safety Commission's document entitled *National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]*, or more recent versions, that gives information about:

- a) the safe use of the substance; or
- b) the personal protective equipment for the substance.

Sensitive place means—

- a) a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel);
- b) a library, childcare centre, kindergarten, school, university or other educational institution;
- c) a medical centre, surgery or hospital; or

- d) a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment.

Standard environmental conditions for a **code of environmental compliance**, means the **standard environmental conditions** approved for the ERA, or aspect of the ERA, under section 549 of the EP Act.

Ullage means a vapour space which is left above the liquid surface after filling, to permit a degree of thermal expansion of the liquid without loss of cargo (as defined in AS 2809.1–2008 — *Road Tank Vehicles for Dangerous Goods*)

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), and groundwater and any part thereof.

Appendix A – Blue Water Site Plans



Figure 1: Current Site Plan with Waste Storage Locations

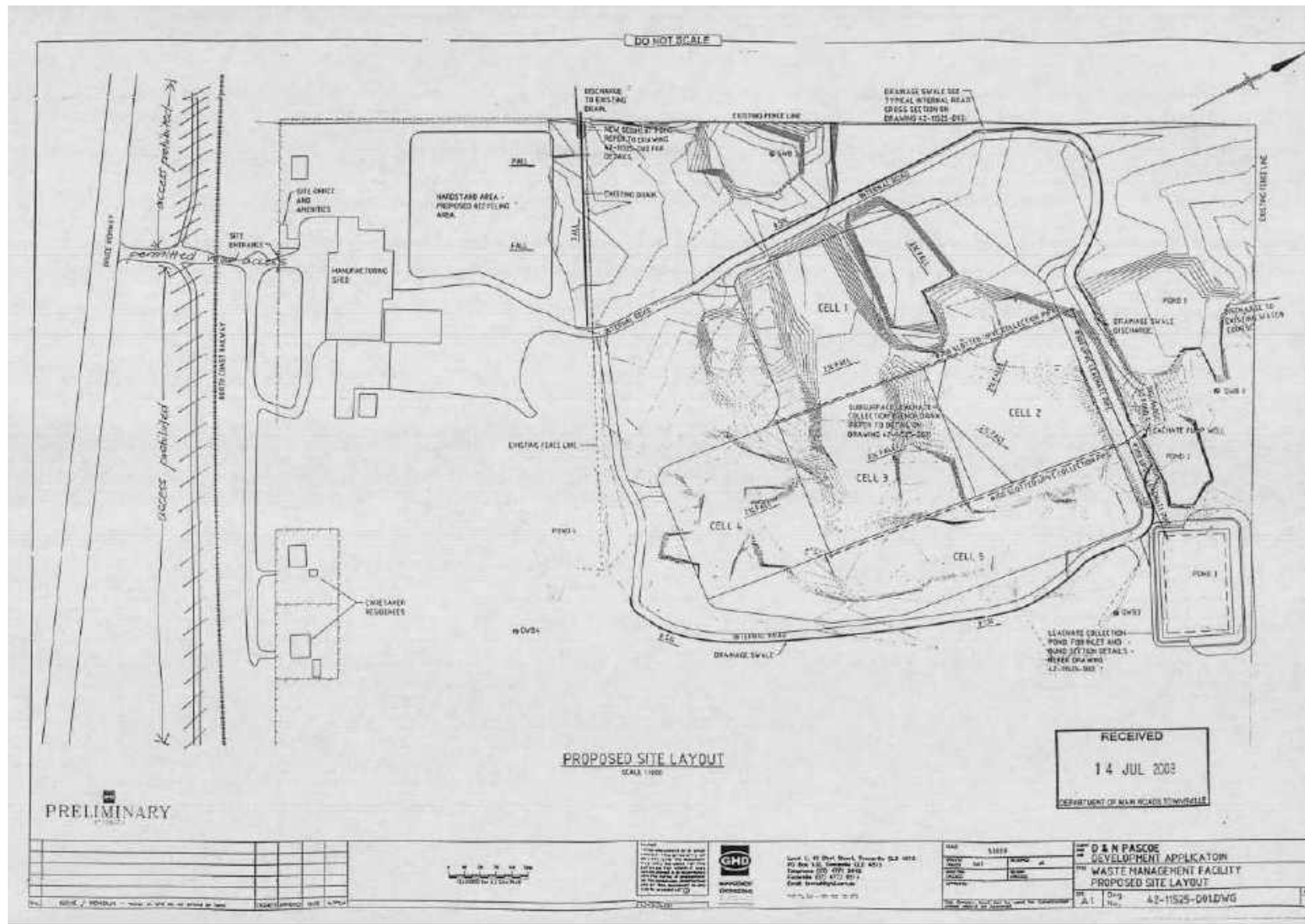


Figure 2: Proposed Site Layout





Appendix B - Additional Tables

Table 2 - Maximum contaminant levels

Contaminant	Maximum contaminant level (mg/kg)
<i>Monocyclic aromatic hydrocarbons (MAH)</i>	
Benzene	10
Ethyl Benzene	500
Toluene	300
Xylene	250
Total MAH	500
<i>Polycyclic aromatic hydrocarbons (PAH)</i>	
Total PAH	500
<i>Phenolic contaminants - Non halogenated compounds</i>	
Phenol	100
m-cresol	250
o-cresol	250
p-cresol	250
Total non-halogenated phenol	250
<i>Phenolic contaminants - Halogenated phenol</i>	
Chlorophenol	1
Pentachlorophenol	5
Trichlorophenol	5
Total halogenated phenol	5
<i>Chlorinated Hydrocarbons - Chlorinated aliphatic compounds</i>	
Carbon tetrachloride	5
1,2 Dichloroethane	10
1,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
Total chlorinated aliphatic compounds	50
<i>Chlorinated Hydrocarbons - Chlorinated aromatic compounds</i>	
Chlorobenzene	100
Hexachlorobenzene	1
Total chlorinated aromatic compounds	100
Non-scheduled solid polychlorinated biphenyls (PCBs)	2
<i>Pesticides (screening)</i>	
Total organochlorine	5
Total herbicides	25

Contaminant	Maximum contaminant level (mg/kg)
Total carbamates	25
Total organophosphorus	10
<i>Petroleum hydrocarbons</i>	
Total petroleum hydrocarbons (C ₆ -C ₉)	500
Total petroleum hydrocarbons (C ₁₀ -C ₁₄)	5,000
Total petroleum hydrocarbons (C ₁₅ -C ₂₈)	10,000
Total petroleum hydrocarbons (C ₂₉ -C ₃₆)	10,000

Table 3 - Allowable leaching contaminant levels

Contaminant	Allowable leaching contaminant levels (TCLP*) (mg/L)
<i>Non-specific contaminants</i>	
Biochemical oxygen demand	20,000
Total organic carbon	10,000
Petroleum hydrocarbons	25
<i>Metals and metalloids</i>	
Antimony	0.5
Arsenic	0.5
Barium	10
Cadmium	0.05
Chromium	0.5
Cobalt	0.5
Copper	10
Lead	0.5
Mercury	0.01
Molybdenum	0.1
Nickel	0.5
Selenium	0.1
Silver	0.5
Thallium	0.1
Tin	0.3
Vanadium	0.5
Zinc	50
<i>Inorganic anions</i>	
Bromide	5
Chloride	6,000
Cyanide (total)	1

Contaminant	Allowable leaching contaminant levels (TCLP*) (mg/L)
Fluoride	15
Nitrate	100
Sulphate	2,500
<i>Monocyclic aromatic hydrocarbons (MAH)</i>	
Benzene	0.1
Ethyl benzene	5
Toluene	3
Xylene	2
Total MAH	5
<i>Polycyclic aromatic hydrocarbons (PAH)</i>	
Anthracene	0.07
Benz (a) anthracene	0.005
Benz (c) phenanthrene	0.005
Benzo (a) pyrene	0.002
Benzo (b) fluoranthene	0.005
Benzo (k) fluoranthene	0.005
Chrysene	0.01
Dibenz (a,h) anthracene	0.002
Dibenz (a,h) pyrene	0.01
Dimethylbenz (a) anthracene	0.005
Fluoranthene	0.02
Indeno (1,2,3-cd) pyrene	0.01
Naphthalene	0.07
Phenanthrene	0.01
Pyrene	0.07
Total PAH	0.1
<i>Phenolic contaminants – Non-halogenated compounds</i>	
Phenol	1
m-cresol	2
o-cresol	2
p-cresol	2
<i>Phenolic contaminants - Halogenated phenols</i>	
Chlorophenol	0.01
Pentachlorophenol	0.1
Trichlorophenol	0.1
<i>Chlorinated hydrocarbons - Chlorinated aliphatic compounds</i>	
Carbon tetrachloride	0.03

Contaminant	Allowable leaching contaminant levels (TCLP*) (mg/L)
1,2 Dichloroethane	0.1
1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
Chlorinated hydrocarbons - Chlorinated aromatic compounds	
Chlorobenzene (total)	1
Hexachlorobenzene	0.002
Pesticides - Organochlorine	
Aldrin	0.001
Chlordane	0.006
Chlorpyrifos	0.01
Dieldrin	0.001
DDT	0.003
Endrin	0.001
Heptachlor	0.003
Lindane	0.1
Methoxychlor	0.1
Toxaphene	0.005
Pesticides - Herbicides	
2,4-D	0.1
2,4-DB	0.2
2,4,5 -T	0.002
MCPA	0.2
Pesticides - Carbamates	
Carbaryl	0.06
Carbofuran	0.03
Pesticides - Organophosphorus	
Diazinon	0.01
Methyl Parathion	0.006
Parathion	0.03
Pesticides - Triazines	
Atrazine	0.01
Simazine	0.01
Fluorinated organic compounds	
Total fluorinated organic compounds (if leachate reused on or off-site) [#]	0.0003
Total fluorinated organic compounds (if leachate not reused on	0.05

Contaminant	Allowable leaching contaminant levels (TCLP*) (mg/L)
or off-site)#	

*Allowable leaching levels to be determined using the **TCLP** procedure mentioned in United States Environmental Protection Agency (USEPA), Washington DC (2008) "Test methods for evaluating solid waste, physical/chemical methods" Document number SW 846. 3rd Edition or more recent editions or supplement to that procedure as they become available.

The standard suite of Total fluorinated organic compounds (PFCs) (including key sulfonates), plus total oxidisable precursor assay reported as the analyses for the resulting perfluorinated carboxylates for C₄ to C₁₄ carbon chain length (refer to the most recent version of the PFAS National Environmental Management Plan).

END OF ENVIRONMENTAL AUTHORITY

Appendix 5

Drawing
Site Plan - Bluewater Waste
Management and Recycling Facility

Property
42386 Bruce Highway, Bluewater
Lot 1 on RP735647

Drawing Number	Issue	Sheet
M2301-SK-03	A	1
Date	Author	Reviewer
15.4.25	HW	SJ

- Legend**
- Cadastre
 - Subject Site
 - Resource Recovery Area
 - Concrete Storage
 - Green waste
 - Landfill Area
 - Laydown/Setdown Pad
 - Fresh Ponds
 - Leachate Pond
 - Leachate Detention Area
 - Concrete Crusing and Sreening
 - Batteries Oils Paint Waste
 - Site Office
 - Access Point
 - Site Access Road

Scale (A3 Original)
1:3,800

0 30 60 90 120 150 m

Sources
Milford Planning GIS (2025)
DCCB extract - State of Queensland (2025)
Aerial imagery - Bing (2025)

Disclaimer
Areas and dimensions are approximate only
and are subject to site survey.



LOT 1
RP735647

BRUCE HIGHWAY

Appendix 6

Bluewater Landfill

Waste Acceptance Policy

Bluewater Waste Disposal Facility



BWL – Waste Acceptance Policy –
ERA 60 – Waste disposal – ERA 62 –
Resource recovery and transfer
station operation – 42386 Bruce
Highway, Bluewater 4818

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1 Abbreviations

ACM	-	Asbestos Containing Material
BWL	-	Bluewater Landfill
C&D	-	Construction and Demolition
EA	-	Environmental Authority
ERA	-	Environmentally Relevant Activity
LWDS	-	Leviable Waste Disposal Site
RRA	-	Resource Recovery Area
WAP	-	Waste Acceptance Policy

2 Policy Scope

This Waste Acceptance Policy (WAP) has been prepared to clearly establish the types of waste that will be accepted at Bluewater Landfill (BWL). BWL operates a commercial and industrial (C&I) waste disposal facility at 42386 Bruce Highway, Bluewater under environmental authority (EA) PEA100698838.

The EA permits the operation of environmentally relevant activity (ERA) 60(2)(c) – Waste disposal, which in the Environmental Protection Regulation 2019 is the waste disposal threshold of 5,000 to 10,000 tonnes per year.

The WAP includes procedures that must be followed when receiving waste at the waste management facility.

The WAP also describes uses of clean earth and road plannings for operational purposes at the facility that improve the stability and safety of the site and contributes to meeting best practice environmental management.

3 Waste Acceptance Criteria

3.1 Disposable waste

The EA prescribes the types of waste that can be landfilled on site. General condition P1G1 specifies the following:

1. *For the landfilling activities:*
 - a) *Only the following waste streams can be received at the site:*
 - i. *Construction and demolition waste; and*
 - ii. *Domestic clean-up waste; and*
 - iii. *Inert commercial and industrial waste; and*
 - iv. *The only regulated waste that can be disposed of at the site is asbestos-containing construction and demolition waste, including disposal items used for the removal of asbestos, if packaged in accordance with all relevant work health and safety legislation requirements; and*
 - v. *The quantity of regulated waste must not exceed 10% of the total amount of waste received at the facility in a year.*
 - b) *In addition to 1(a) above, the following waste streams must not be permitted to be placed at the landfill facility at any time:*
 - i. *Liquid or semiliquid waste, other than:*
 - a. *Liquid or semi-liquid waste that has been produced in the carrying out of the activity;*
 - b. *Liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams.*
 - ii. *Hot ash*
 - iii. *Material that is smouldering or a flame;*
 - iv. *Material containing a substance which is ignitable, corrosive, reactive, or toxic material (other than materials containing a toxic substance from domestic premises);*
 - v. *All radioactive wastes, unless otherwise approved under the Radiation Safety Act 1999 or approved contaminated soil;*
 - vi. *An explosive;*
 - vii. *Ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction.*

C&D waste is defined in the EA as:

- a) *Waste generated from carrying out building work within the meaning of the *Building Act 1975*, section 5; and*
- b) *Without limiting paragraph (a), includes waste generated by building, repairing, altering or demolishing infrastructure for roads, bridges, tunnels, sewerage, water, electricity, telecommunications, airports, docks or rail.*

The following C&D waste is commonly accepted onto site for recycling or disposal:

- Concrete in the form of plain, reinforced and un-reinforced concrete.
- Masonry – both brick and concrete, reinforced and un-reinforced.
- Cellulose-cement materials used as exterior sheeting or pipes.
- Cement-bonded materials used as exterior sheeting or pipes.
- Glass, in the form of glass used in buildings.
- Fibreglass insulation.
- Plastic materials used as electrical fittings.
- Plastic, ceramic and vitreous china materials used as plumbing and drainage fittings.
- Excavated materials including clays, silts, and rock.
- Polystyrene Foam Pods used in waffle pod footing systems.
- Plasterboard products.
- Untreated timber.
- Friable and non-friable asbestos including but not limited to:
 - Asbestos wall and roof sheeting
 - Plumbing pipework
 - Thermal lagging used on steampipes, boilers etc as fire protection
 - Ceiling insulation
 - Asbestos-contaminated soil

The above is not an exhaustive list of acceptable wastes, but examples of the common types of C&D waste accepted for disposal. Other wastes similar in nature to the wastes listed may be suitable for acceptance and disposal.

3.2 Recyclable and reusable waste

The following waste will be accepted onto site in the Resource Recovery Area (RRA), and recycled or disposed of lawfully in the Leivable Waste Disposal Area (LWDA) at the facility:

- Concrete
- Sheet roofing material, generally in the form of galvanised steel, aluminium or zinc pre-formed sheeting, together with flashings.
- Wrought and cast iron.
- Steel in the form of reinforcing rods, tendon and bar used for the pre-stressing of concrete, structural steel sections, pipe and tube.

- Galvanised steel.
- Structural timber members suitable for reuse.

The above is not an exhaustive list of recyclable wastes, but broadly identifies the types of wastes that may be recovered. As opportunities arise, other wastes may be identified as suitable for recycling or reusing.

3.3 Unacceptable waste

The following waste will NOT be accepted onto site:

- Radioactive waste
- Explosives including unexploded ordnance
- Chemical waste in solid or liquid form
- Hot ash
- Waste that is smouldering or burning

4 Procedure for Incoming Loads

Stage 1 – Arrival of the load

- All incoming loads must pass over the weighbridge.
- Establish the source of the load.
- **If any unacceptable waste is detected the load must be rejected (or the unacceptable items removed prior to acceptance).**
- Record details of the load, including:
 - Date and time at arrival;
 - Vehicle registration and carrier (waste transporter);
 - Name of supplier (waste generator);
 - Origin of waste (physical location);
 - Weight of the load.

Stage 2 – Tipping area inspection of the load

- Recyclable waste must be sorted by placing into designated stockpiles within the RRA.
- Disposable waste must be first weighed, the weight must be recorded for the purpose of paying the waste levy, and finally disposed of to the LWDS.
- If unacceptable waste is detected:
 - Where reasonably practicable, attempt to separate unacceptable waste from disposable and recyclable waste, so that these can be managed as usual.
 - Identify the type of unacceptable waste and arrange for lawful disposal.
 - Contact the waste generator to notify of the presence of unacceptable waste in the load.
 - If unacceptable waste is detected that cannot reasonably be removed from the tipping area or disposal area, advice should be sought from a supervisor and an appropriate expert (eg. Terra Solutions). Note that if unacceptable waste is found in a tipping area / RRA or LWDS, contact with QRR management must be contacted.

Stage 3 – Weigh out and recording

- Once unloaded, all outgoing vehicles must pass over the weighbridge for weighing.
- The weight of the vehicle must be recorded.
- The weight of waste delivered to site must be calculated and recorded.

4.1 Disposal of waste asbestos

Asbestos waste that is C&D waste can arrive at a landfill in a range of forms, from lower risk non-friable (bonded) asbestos such as wall or roof sheeting in good condition and properly sealed, to friable asbestos, which even when appropriately contained must still be handled very carefully. This is because of the risk to human health associated with loose asbestos fibres when elevated levels are breathed in.

4.1.1 Regulated waste

Waste asbestos is a regulated waste and in accordance with the EA, asbestos disposal into the landfill at BWL cannot exceed 10% of the total volume of waste disposed in a year. The landfill is licensed under the EA to dispose of up to 10,000 tonnes of C&I waste in year, therefore the maximum quantity of waste asbestos that can be received and disposed of into the landfill in a year is 1,000 tonnes.

4.1.2 Trackable waste

Asbestos waste is also a trackable waste under the Environmental Protection Regulation 2019. This requires that waste tracking documentation is completed by the following:

1. Waste generator
2. Waste transporter
3. Waste receiver

The trackable waste code that must be shown on waste tracking documentation is N220.

BWL must refuse to accept waste asbestos if not satisfied that all obligations in terms of packaging and transport have been met by the waste generator and waste transporter.

4.1.3 Special burial

Asbestos waste must not be accepted at the landfill unless prior arrangements have been made with the landfill. As a licensed asbestos waste disposal facility, BWL has a responsibility to ensure that anyone transporting waste asbestos to the landfill holds a lawful authority to transport this waste. In Queensland, waste transporters need to hold an EA for ERA 57 – *Regulated waste transport*.

The EA prescribes specific conditions for the disposal of asbestos waste, and these must be always complied with.

The EA conditions which relate specifically to disposal of asbestos at the landfill are reproduced

Condition Number	Wording
P2A1	Asbestos disposal must be supervised and managed at all times to avoid any potential release of particulate matter to the atmosphere.
P2W1	Asbestos-containing waste must: 1. be disposed of as a special burial of waste; or 2. disposed and confined to a designated asbestos landfill cell where no excavation takes place following the initial disposal of asbestos waste within that designated asbestos landfill cell.
P2W2	Asbestos-containing waste disposal must be located greater than 2 metres from the sides, and at least 1 metre below the final waste surface of the landfill cell not including the final capping.
P2W3	Prior to compaction, asbestos-containing waste must be covered with: 1. at least 200mm of soil; or 2. 1000mm of waste not including asbestos-containing waste.
P2W4	Record Keeping - asbestos disposal The following information in relation to the burial of asbestos waste must be kept: 1. type of waste; 2. quantity of waste; 3. date of deposition; 4. source of waste; and 5. if the waste is friable asbestos and/or mixed asbestos waste, the accurate location (accuracy not less than 0.5 metre for depth and area coordinates) for the designated asbestos landfill cell(s); and 6. description of waste, including condition of containment and packaging.

4.1.4 Disposal and burial procedure

Stage 1 – Arrival of the load

- All incoming loads of waste asbestos must pass over the weighbridge.
- Establish the source of the load.
- Ask for the EA number and holder of the transporter carrying the regulated waste.
- Ask to sight trackable waste documentation. BWL staff must complete the Waste Receiver section.
- Inspect visible surface of the load:

- If unacceptable waste is not identified, waste asbestos must be taken directly to the LWDS. Instruct the driver to move to vehicle to the dedicated disposal area in the landfill.
- Record details of the load, including:
 - Date and time at arrival;
 - Vehicle registration and carrier (waste transporter);
 - EA number and holder;
 - Name of supplier (waste generator);
 - Origin of waste (physical location);
 - Weight of the load.

Stage 2 – Disposal into landfill cell

- Disposal of ACM into a dedicated area within the landfill cell must be supervised and managed carefully to avoid asbestos packaging being damaged, which may result in the release of asbestos fibres to atmosphere.
- The load must be also be inspected during and after tipping to identify any unacceptable waste.
 - If unacceptable waste is detected:
 - Where reasonably practicable, attempt to separate unacceptable waste from disposable and recyclable waste, so that these can be managed as usual.
 - Identify the type of unacceptable waste and arrange for lawful disposal.
 - Contact the waste generator to notify of the presence of unacceptable waste in the load.

Note the EA requires that prior to compaction of ACM, it must be covered with either:

- At least 200 mm of soil, or
- 1,000 mm off waste that does not contain ACM.

Stage 3 – Weigh out and recording

- Once unloaded, the vehicle that delivered the ACM must pass over the weighbridge for weighing.
- The weight of the vehicle must be recorded.
- The weight of waste delivered to site must be calculated and recorded.
- The calculated weight of the ACM disposed into the landfill must be checked against the weight described by the waste generator in waste tracking documentation.

4.2 Waste used for an on-site operational purpose

4.2.1 Daily cover of deposited C&D waste

C&D waste must be regularly covered to:

1. Prevent windblown litter potentially leaving site and reaching sensitive uses.
2. Prevent the spread of fire in the unlikely event that fire starts within the LWDS.
3. Prevent establishment of birds and other animals seeking refuge or nesting within deposited waste.
4. Minimise the ingress of rainwater.
5. Assist with making the landfill trafficable.
6. Ensure the visual appearance of the LWDS does not adversely impact the amenity of the area.

The EA also prescribes site-specific condition P2G1, which requires BWL to **take all reasonable and practicable measures to contain litter** within the waste operations area. Using appropriate cover material assists with ensuring litter is contained within the active landfill area.

4.2.1.1 *Clean earth*

C&D waste includes a range of wastes, some of which are extremely light in weight. For example, polystyrene and soft plastics are commonly disposed into the landfill as a component of C&D waste, and present a constant challenge to the operator in terms of ensuring these light weight waste materials do not blow out of the landfill cell and potentially onto land in the receiving environment (wind-blown litter). Daily compaction of waste does not guarantee that these light waste materials will remain within the LWDS during windy conditions. The ability to use clean fill as daily cover over C&D waste deposited into the LWDS eliminates the risk of this waste becoming wind-blown litter. Clean earth is routinely used as daily cover once C&D waste has been deposited and compacted in the LWDS.

Clean earth also mixes well with deposited waste when applied prior to compaction. Then, when present among deposited waste, assists in the compaction of the waste when track rolled. This contributes to a much more stable surface over which to deposit additional C&D waste.

4.2.2 Road and pad construction

Road plannings have the advantage of retaining properties suitable for construction of temporary laydown pads for storage of plant, and importantly road construction over unsealed surfaces within the LWDS, and between the RRA and LWDS. Road shavings compact well and form excellent temporary roads at a waste management facility, improving the safety of the operating environment for plant operators and truck drivers. The ability to construct stable pads from this type of waste is extremely important for maintaining a safe working environment for operational staff, especially during wet weather when landfills can become a dangerous working environment where safe and stable working surfaces have not been established.

Bluewater Landfill

Fire Prevention and Contingency Plan

Bluewater Waste Disposal Facility



BWL – Waste Acceptance Policy –
ERA 60 – Waste disposal – ERA 62 –
Resource recovery and transfer
station operation – 42386 Bruce
Highway, Bluewater 4818

1 Introduction to the Plan

This Fire Prevention and Contingency Plan has been prepared to clearly outline the measures taken to prevent, detect and respond to fire incidents at the Bluewater Landfill (BWL). BWL operates a commercial and industrial (C&I) waste disposal facility at 42386 Bruce Highway, Bluewater under environmental authority (EA) PEA100698838.

The plan has been developed in compliance with Queensland's Fire Protection Act 1994, the Work Health and Safety Act 2011, and relevant legislation and fire safety regulations.

These procedures that must be followed when onsite at the waste management facility.

2 Objectives

The objectives of this plan are:

- Prevent the occurrence of fires at the landfill.
- Ensure early detection and rapid response to any fire incidents.
- Minimize environmental, health, and property damage caused by fire.
- Comply with regulatory requirements and industry best practices.

3 Identified Fire Risks and Hazards

Identified potential fire hazards at the landfill site include:

- Decomposing organic waste generating heat
- Methane gas accumulation from the was decomposition
- Flammable was materials (e.g. Paper, plastics, chemicals)
- Equipment of vehicle malfunctions causing sparks or over heating)
- Equipment or vehicle malfunctions causing sparks or overheating.
- Unauthorized burning or arson

4 Fire Prevention Measures

WASTE MANAGEMENT

- Proper compaction and covering of waste to reduce fire risks.
- Prohibition of hot loads (e.g., burning waste, smoldering materials) from being accepted.
- Segregation and safe disposal of hazardous and flammable materials.

GAS MANAGEMENT

- Installation of a landfill gas extraction system to control methane accumulation.
- Regular monitoring of landfill gas levels and vents.

SITE MAINTENANCE

- Maintenance of firebreaks and clear zones around landfill cells.
- Regular inspections of site infrastructure, vehicles, and equipment.

STAFF TRAINING AND AWARENESS

- Fire safety training for all employees.
- Signage and communication of fire prevention policies.

SECURITY AND MONITOR

- Surveillance and site patrols to prevent unauthorized access and illegal dumping.
- Installation of fire detection systems and alarms.

5 Fire Detection and Response

EARLY DETECTION

- Smoke detectors in shed and high-risk areas.
- Regular site inspections and monitoring for signs of spontaneous combustion.

EMERGENCY RESPONSE PROTOCOL

- Immediate reporting of fire incidents to emergency services (000) and site management
- Activation of fire suppression measures (fire extinguishers, hoses, soil cover).
- Evacuation procedures for staff and visitors.

FIRE SUPPRESSION EQUIPMENT

- Fire extinguishers placed at key locations.
- Water supply accessible for firefighting.
- Earthmoving equipment available for fire containment (e.g., soil cover).

6 Contingency Plan for Fire Incidents

COMMUNICATION AND COORDINATION

- Notify Queensland Fire and Emergency Services (QFES) and relevant authorities.
- Implement site emergency response plan.
- Alert neighbouring communities if necessary.

SITE ACCESS AND CONTROL

- Restrict site access to emergency personnel only
- Establish safety zones to protect staff and the public.

POST FIRE ASSESSMENT AND RECOVERY

- Investigation of fire cause and impact assessment.
- Implementation of corrective actions to prevent recurrence.
- Restoration of damaged areas and waste containment measures.

7 Regulatory compliance and Reporting

- Compliance with Queensland Fire Safety Regulations and Environmental Legislation
- Incident reporting to the Department of Environment and Science (DES) and other relevant authorities

8 Reviews and Updates

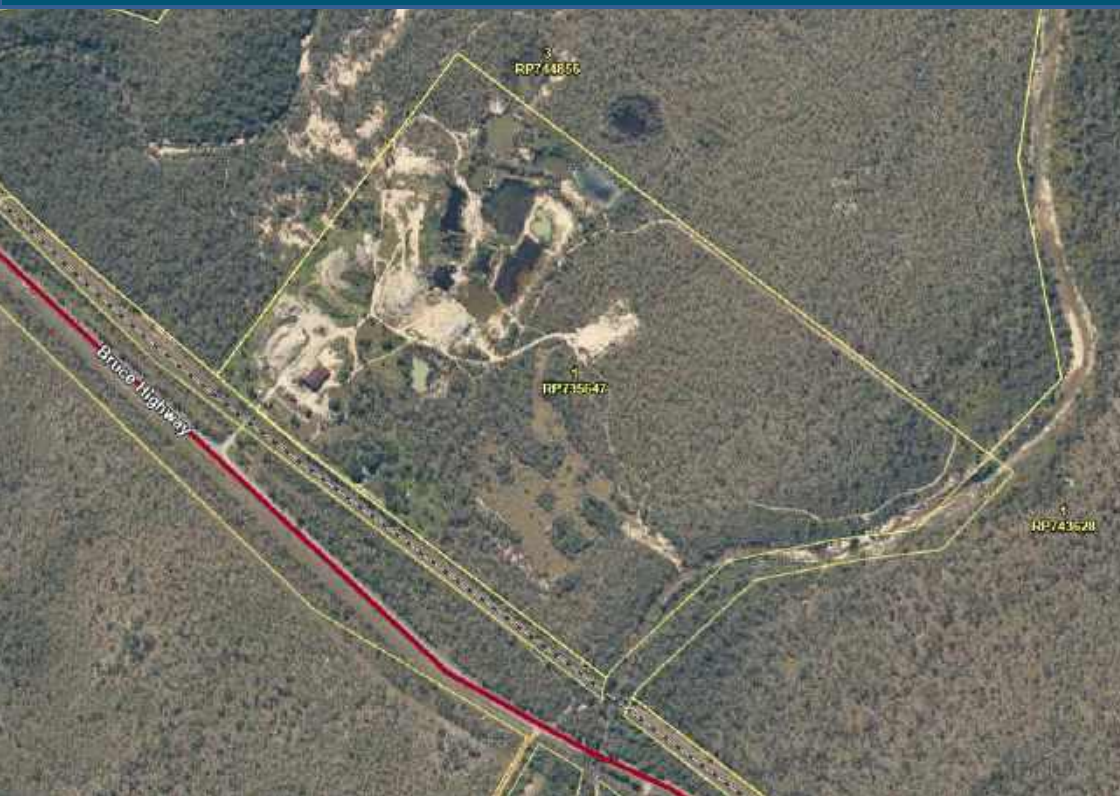
This Fire Prevention and Contingency Plan shall be reviewed annually or after any fire incident to ensure effectiveness and compliance with current regulations.

9 Conclusion

This plan serves as a comprehensive guideline to mitigate fire risks, ensure a safe working environment, and protect the surrounding community and environment from landfill fires. Effective implementation and continuous improvement of fire prevention and response measures are essential for landfill safety in Queensland.

Appendix 7

42386 BRUCE HIGHWAY, BLUEWATER



TRAFFIC IMPACT ASSESSMENT

ABSOLUTE WASTE PTY LTD

LANGTREE CONSULTING

Project No.: 1343

Reference No.: R-NP0328

Date: 08/07/2025

Controlled Copy No.: 1

Revisions: A

Revision Record:

Rev	Review Date	Description	Prepared	Checked	Approved
A	02/06/2025	Issued for Client Comment	Natalie Pham	Brett Langtree	Brett Langtree
A	08/07/2025	Issued for Client Comment	Natalie Pham	Brett Langtree	Brett Langtree

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APPENDICES

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1.0 INTRODUCTION

Langtree Consulting has been engaged by Absolute Waste Pty Ltd to prepare this Traffic Impact Assessment (TIA) in support of a Material Change of Use (MCU) application at 42386 Bruce Highway, Bluewater on land described as Lot 1 on RP735647.

The site is currently an existing waste management facility with a ERA75(a)(iii) permit (Waste disposal – operating a facility for disposing of only general waste or limited regulated waste, if the facility is designed to received waste at a rate of 5,000t or more, but less than 10,000t per year). The development proposes to increase the existing volume of waste received and processed at the facility up to 50,000t per annum.

This TIA report outlines the following:

- Background information for the project and proposed development;
- Existing traffic conditions, proposed development traffic generation and post-development traffic conditions;
- Intersection analysis;
- Assessment of the development impacts including safety at the site accesses; and
- Any recommendations and mitigation measures, if required.

2.0 SITE

The proposed development is located approximately 35km from the township of Townsville at 42386 Bruce Highway, Bluewater on land described as Lot 1 on RP735647 (hereon in referred to as the subject site). The subject site is 54.44ha in area and bound by undeveloped land to the north and west, Sleeper Log Creek to the east and the Bruce Highway and Northern Coast Rail Line to the south. Refer to **Figure 1** for site locality.



Figure 1. Site Locality (Source: Queensland Globe)

3.0 EXISTING ENVIRONMENTS

3.1 LAND USE AND SURROUND AREA

The subject site is located in the Townsville City Council area and zoned rural. Refer to **Figure 2** for Townsville City Council (TCC) zoning map.



Figure 2. Zoning Map (Source: TownsvilleMAPS- Townsville City Plan)

3.2 SITE ACCESS

Existing access to the site is via the Bruce Highway. The current intersection is a channelised short right turn (CHR(s)) arrangement whilst the left is simple left (SL). Refer to **Figure 1** for existing access.



Figure 3. Site Access

3.3 SURROUNDING ROAD NETWORK

Access to the site is via the Bruce Highway with deliveries predominantly from Townsville. No other roads or intersections are anticipated to be affected by the proposed development.

Table 1. Key Roads

Road Name	Jurisdiction	Local Council	Hierarchy	Speed limit
Bruce Highway	TMR	TCC	Arterial Road	100km/h

3.4 KEY INTERSECTIONS / ACCESSES

Only the site access is anticipated to be impacted by the development. General details of the site access are summarised in **Table 2**.

Table 2. Key Intersections / Accesses

ID	Roads	Location	Control
Key Intersection 1	Bruce Highway / Site Access	Bruce Highway CH. 47	Unsignalised

3.5 CRASH HISTORY

Queensland Globe has been utilised to assess crash history in the vicinity of the proposed development. All crash reports in the last 10 years, within 700m of the subject site access has been summarised on **Table 3** and shown in **Figure 4**. Crash reports appear to be isolated incidents and not associated with any particular road deficiency.

Table 3. Crash History Report Summary

Crash Location	Year	Severity	Crash Type	Crash Nature (DCA Code)	Crash Description
1	2016	Medical Treatment	Single Vehicle	Hit Object (704)	Daylight, clear, sealed-dry, straight alignment, No road features, Off path straight – right off carriageway
2	2021	Minor injury	Multi-vehicle	Rear end (301)	Daylight, clear, sealed-dry, straight alignment, Stop sign, Bridge/Causeway, Vehicles same direction – rear end



Figure 4. Crash report locality

4.0 CURRENT APPROVAL

The development is an existing development with a current approval. From available information the development has approval based on original traffic impact reporting which assessed the following conditions:

- Anticipated traffic of up to 50 vehicles per day;
- No public access to the facility; and
- Intersection design vehicle is a 4 tonne rigid body truck.

5.0 PROPOSED DEVELOPMENT

The site is an existing waste management facility and is proposed to remain as such, however, the development proposes to increase the existing volume of waste received and processed at the facility from the current 5,000t or more (but less than 10,000t per year) to 50,000t per annum.

5.1 OPERATING REGIME

The site is anticipated to be operational between 6am and 7pm Monday to Saturday. The waste management site is anticipated to have four (4) staff members.

5.2 FLEET

The fleet will consist of three (3) 2-axle rigid body trucks. Vehicles operate under standard mass limits.



Figure 5. Typical fleet vehicles

5.3 DEVELOPMENT ACCESS

Access to the development is via the Bruce Highway. Crossing of the Great Northern Railway line is required to access the site. The access crossing is currently a passive crossing. The proposed access arrangement is not proposed to change and is proposed to remain at the currently location.



Figure 6. Bruce Highway looking at site access

6.0 BACKGROUND TRAFFIC

Traffic data has been collected for State controlled roads (SCR) from Queensland government, Open data portal. The background traffic data for Gregory Developmental Road has been summarised in **Table 4**. From the available data, the Bruce Highway for this segment peaks only once at 11am to 12pm.

Table 4. Background traffic data for Bruce Highway

Road Details							Base Year (2025)		10 Year Horizon (2035)	
Road	Count Site	Chainage	Direction	AADT (2023)	Weekday Peak Volume	Growth Rate*	AADT	Weekday Peak Volume	AADT	Weekday Peak Volume
Bruce Highway (10M)	92254	41.803 – 112.327	A	2057	183	-4.81	2098	187	2304	205
			G	2048	213	-3.67	2089	217	2294	239
			B	4105	396	-4.25	4187	404	4598	444

* Growth rate from 2023 1-year growth data has been shown as 5 and 10 years was unavailable for 2023 data. Growth for base year and horizon has been assumed to be 1% to be conservative.

6.1 BACKGROUND TRIP DISTRIBUTION

Whilst the development has current approval for up to 50 vehicles per day to access the development site, to be conservative background traffic assumes no vehicles are currently accessing the development. The base year (2025) and 10 year horizon (2035) background traffic distribution is shown in **Figure 7** and **Figure 8**.

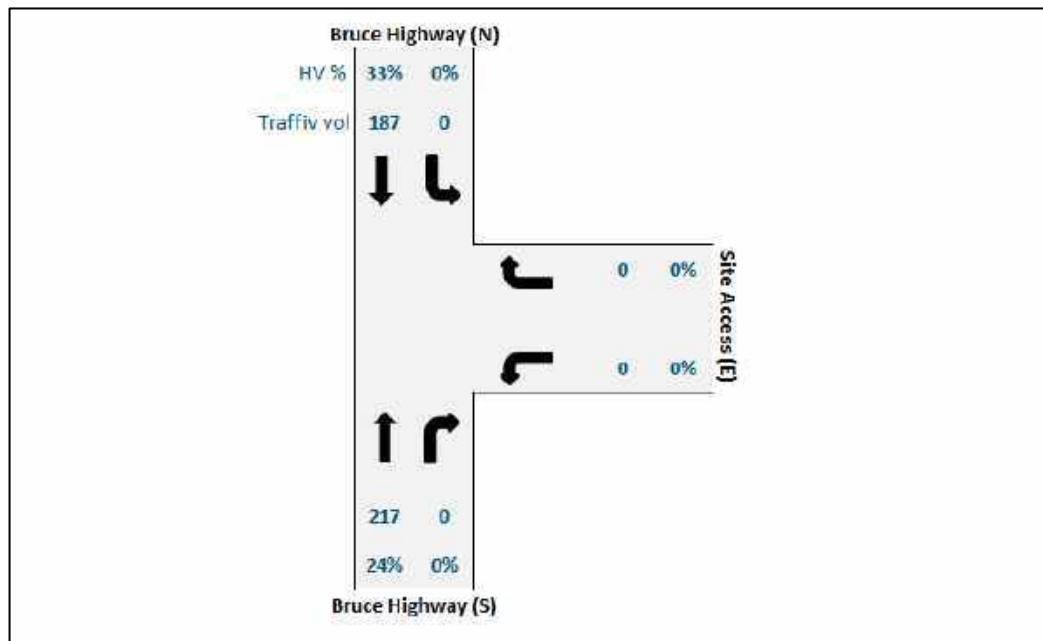


Figure 7. 2025 Base year trip distribution

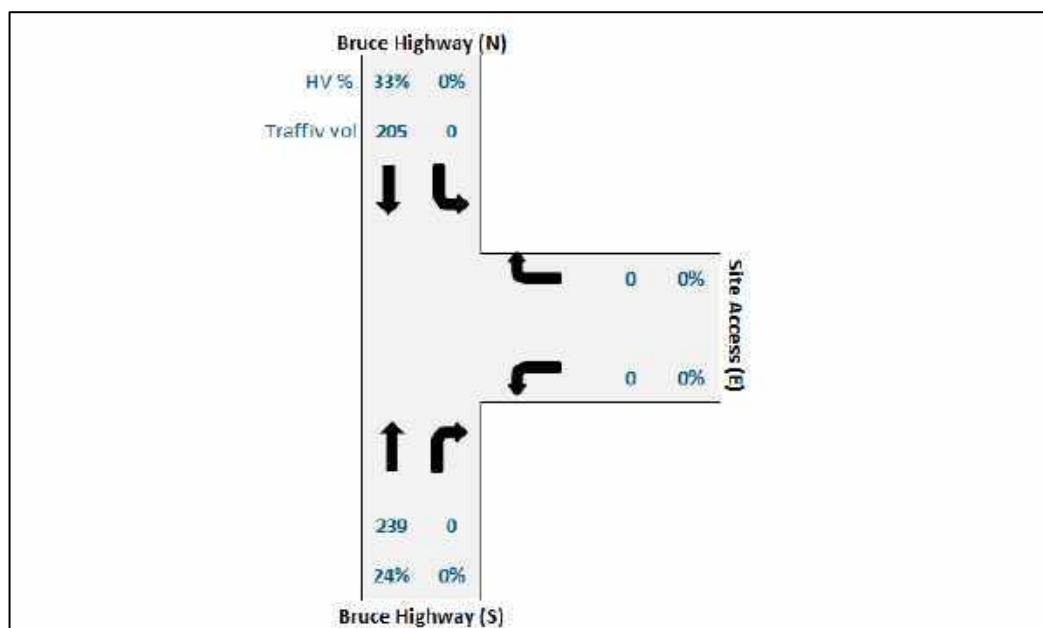


Figure 8. 2035 Horizon year trip distribution

7.0 DEVELOPMENT TRAFFIC

Since the original development approval, Absolute Waste have acquired the site and are seeking to increase the allowable rate of waste disposal from a maximum of 10,000 tonnes to 50,000 tonnes. Whilst the development does not anticipate on reaching the 50,000 tonne limit sought, to be conservative development traffic considers traffic up to the sought 50,000 tonne material disposal limit has been considered.

The site does not allow general public access, and this is not proposed to change. Based on standard loadings, the payload for a 2-axle rigid truck is 6.5 tonnes. Assuming the development will operate 48 weeks per annum, 5.5 days a week, this would equate to 30 loaded vehicles per day or 60 trips per day. Assuming not all vehicles would be fully loaded, development traffic is anticipated to be 60 to 70 vehicles per day in a worst-case scenario. The current maximum traffic anticipated in the current approval is 30 to 50 vehicles trips per day.

Development peak hour traffic is assumed to be 12.5% of the daily traffic with a 30%/70% split north and south respectively. The adopted development peak hour traffic is shown in **Figure 9**.

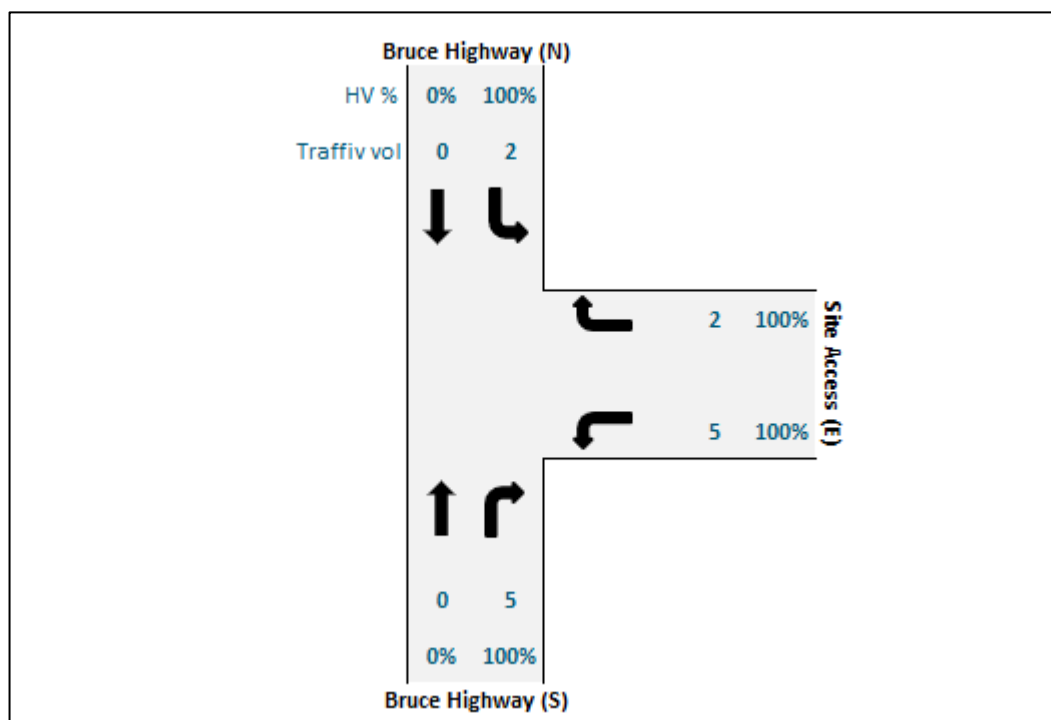


Figure 9. Development traffic trip distribution

8.0 WITH DEVELOPMENT TRAFFIC

The with development scenario (i.e. background plus development traffic) in the base year and at the 10-year horizon is summarised in **Figure 10** and **Figure 11** respectively.

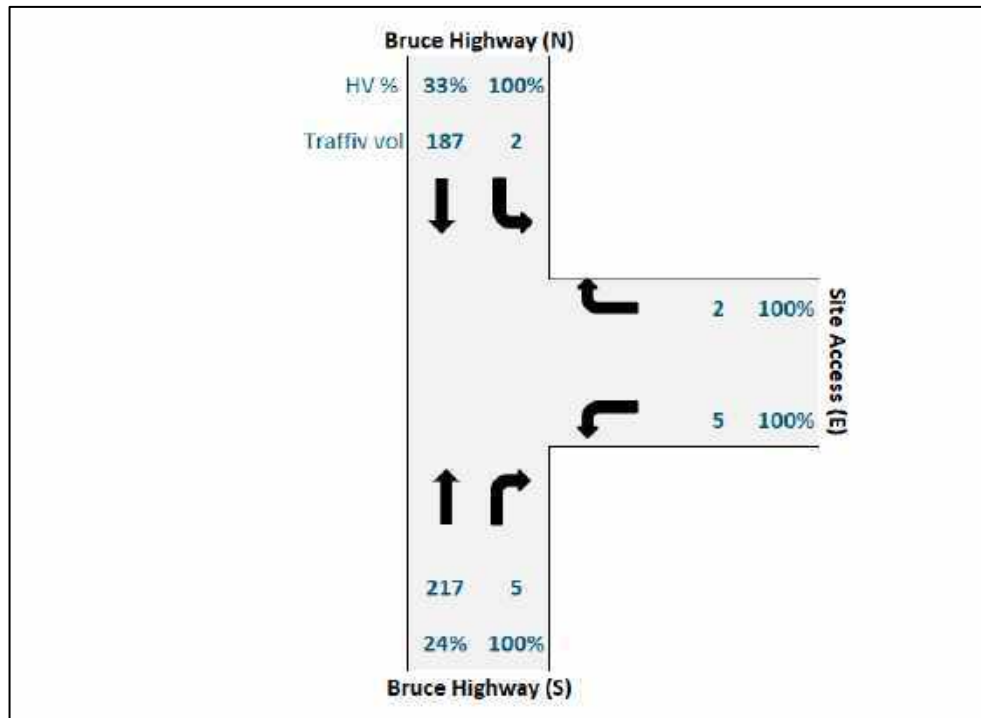


Figure 10. 2025 With Development traffic trip distribution

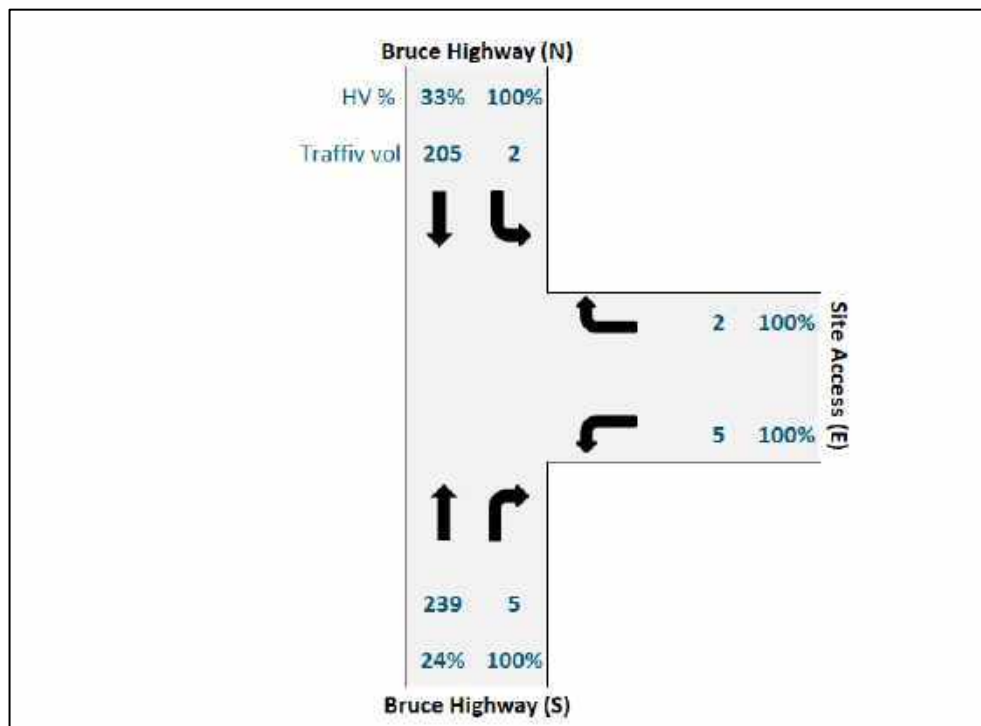


Figure 11. 2035 With Development traffic trip distribution

9.0 TRAFFIC IMPACT ASSESSMENT

9.1 INTERSECTION TURN WARRANT

Assessment of turn treatments have been completed based on 2025 and 2035 weekday volumes indicated in **Figure 10** and **Figure 11**. Refer to **Figure 12** for turn treatment warrant assessment. From turn treatments assessment, a basic right (BAR) and basic left (BAL) arrangement for both the base year (2025) and horizon year (2035) are deemed warranted. The current arrangement is a BAL/CHR(s) type arrangement and is considered to be better than that warranted by the turn treatment warrant. As such, the existing intersection is proposed to remain as it currently is.

Table 5. Turn warrants

Year	Timing	Turn Type	Turn Volume Q_R or Q_L	Q_m
2025 AM	Weekday	Right	6	406
2025 AM	Weekday	Left	3	187
2035 PM	Weekday	Right	6	446
2035 PM	Weekday	Left	3	205

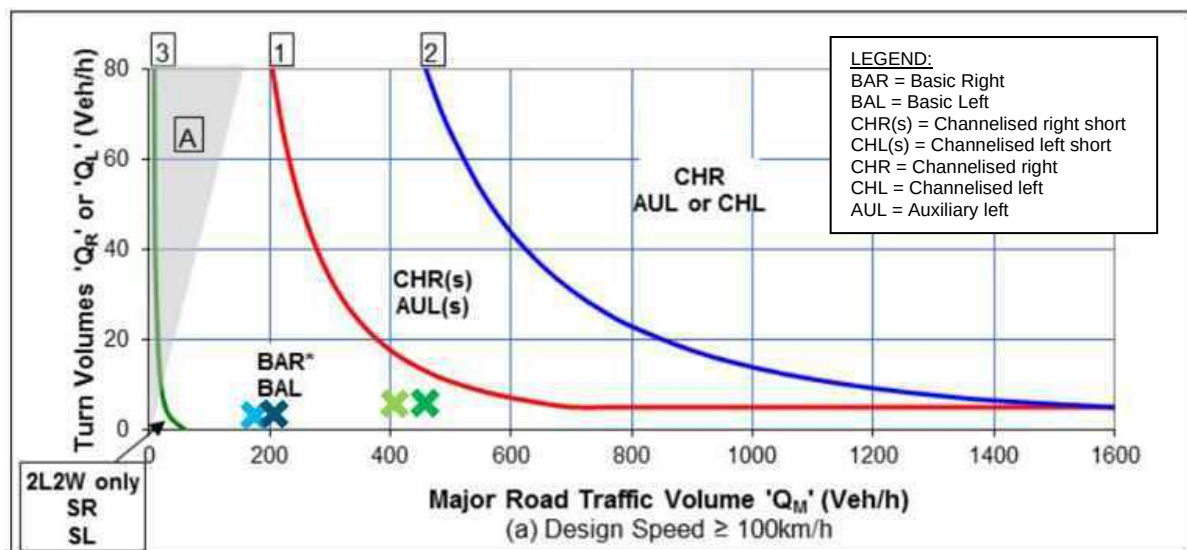


Figure 12. Turn warrant assessment (Source: AGTM Part 6, Figure 3.25)

9.2 SIDRA INTERSECTION ASSESSMENT

SIDRA has been used to assess and describe the capacity and operational performance of the intersections in terms of the parameters as defined below:

- Degree of Saturation (DoS) – is the ratio of demand flow (or number of vehicles) to the physical capacity of the intersection or approach and is usually represented by a value that lies between zero and one. In general, the lower the degree of saturation the better the quality of traffic service. A DoS in excess of 1.0 indicates over saturated conditions and that the intersection will operate above capacity, have long delays and congestion will occur;
- Average Delay – is usually defined as the difference in time between interrupted and uninterrupted travel times through an intersection;
- Queue Length – is the 95th percentile back of queue length. This is the length to the back of the queue for a particular approach which 95% of all observed queue lengths fall below; and
- Level of Service (LOS) – an index of the operational performance of traffic on traffic lane, approach, intersection, route or network, based on measures such as delay, degree of saturation, density, speed, congestion coefficient, speed efficiency or travel time index during a given flow period. This provides a quantitative stratification of a performance measure or measures that represent the quality of service, measured on an A to F scale, with LOS A representing the best operating conditions from the traveller's perspective and LOS F the worst.

9.2.1 Intersection Performance Assessment Criteria

The two key performance measurements adopted to assess the intersections operational conditions were Level of Service (LOS) and Degree of Saturation (DoS). For interrupted two-way-stop intersection the LOS is measured by delay. The Level of Service (LOS) for a two-way-stop unsignalised intersection is defined in below **Table 6**.

Table 6. LOS criteria for two-way stop-controlled intersections (Source: Austroads Guide to Traffic Management, Part 3, Table 7.2)

LOS	Average control delay (s/veh)
A	0–10
B	> 10–15
C	> 15–25
D	> 25–35
E	> 35–50
F	> 50

In accordance with the GTIA, for priority controlled intersections, where average peak hour delays for any turn movement exceeds **42 seconds (LOS C/D threshold)**, then the intersection should be upgraded for safety reasons where it is practical to do so. It is noted that SIDRA (Delay (SIDRA Method) thresholds are as per **Table 6** above, and that the GTIA delay threshold may not coincide with SIDRA LOS threshold. As such, in the updated SIDRA reports Delay (RTA NSW) Method has been adopted for LOS bands in the SIDRA assessment (refer to **Table 7**) as these closer resemble the GTIA requirements. Manual assessment has subsequently been undertaken to ensure 42 second delay time is adhered as opposed to 42.5 seconds as the upgrade threshold.

Table 7. Delay (RTA NSW) method for LOS definitions based on delay (Source: SIDRA 9.1 User Guide, Table 5.14.3)

Level of Service	Control delay per vehicle in seconds (d) (including geometric delay)
	All intersection types
A	$d \leq 14.5$
B	$14.5 < d \leq 28.5$
C	$28.5 < d \leq 42.5$
D	$42.5 < d \leq 56.5$
E	$56.5 < d \leq 70.5$
F	$70.5 < d$

With respect to the intersection capacity DOS, intersections are considered constrained above the following values:

- 0.80 (80%) for un-signalised intersections;
- 0.85 (85%) for roundabouts; and
- 0.90 (90%) for signalised intersections.

9.2.2 SIDRA Intersection Results

The development access has been assessed in SIDRA Intersection 10 with results summarised in

Table 8. From the results the following has been found:

- All approaches of the intersection are a LOS A with delays not more than 14 seconds for any movement;
- The degree of saturation is less than 0.8 for all movements and is thus deemed not saturated; and
- No queuing issues were noted from the results.

As such, the SIDRA assessment has found that the proposed increase in development traffic will not impact the existing intersection, and no mitigation measures are required. Refer to **Appendix A** for SIDRA reports.

Table 8. Summary SIDRA Results

Scenario	Road	Movement	LOS	DOS	Ave. Delay
Base year (2025)	Bruce Highway (S)	Through	LOS A	0.130	0.0
		Right turn	LOS A	0.007	11.7
		Overall	NA	0.130	0.2
	Site Access (E)	Left turn	LOS A	0.017	5.5
		Right turn	LOS A	0.017	12.0
		Overall	LOS A	0.017	7.7
	Bruce Highway (N)	Left turn	LOS A	0.119	10.4
		Through	LOS A	0.119	0.0
		Overall	NA	0.119	0.1
Horizon year (2035)	Bruce Highway (S)	Through	LOS A	0.143	0.0
		Left turn	LOS A	0.007	11.9
		Overall	NA	0.143	0.2
	Site Access (E)	Left turn	LOS A	0.019	5.7
		Right turn	LOS A	0.019	13.3
		Overall	LOS A	0.019	8.2
	Bruce Highway (N)	Through	LOS A	0.130	10.4
		Right turn	LOS A	0.130	0.0
		Overall	NA	0.130	0.1

10.0 SITE ACCESS ASSESSMENT

10.1 SIGHT DISTANCE

10.1.1 Safe Intersection Sight Distance (SISD)

Safe intersection sight distance (SISD) check has been performed in accordance with Austroads Guide to Road Design Part 4A, Equation 2, as shown below.

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

where

SISD = safe intersection sight distance (m)

D_T = decision time (sec) = observation time (3 sec) + reaction time (sec) – refer to AGRD Part 3 (Austroads 2016a) for a guide to values

V = operating (85th percentile) speed (km/h)

d = coefficient of deceleration – refer to Table 3.3 and AGRD Part 3 for a guide to values

a = longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade)

The posted speed limit for the Bruce Highway is 100km/h (design speed 110km/h). The associated SISD required at the intersection is 300m for cars and 370m for trucks.

Available sight distance at the intersection is greater than the minimum SISD for cars and trucks and as such it is considered that there is sufficient sight distance for vehicles on the through road to observe a departing vehicle, react and stop before a collision. Refer to **Appendix B** for SISD sight lines.

10.1.2 Railway Crossing

The railway crossing currently has a passive stop control crossing. Refer to **Figure 13** for view of existing crossing controls.



Figure 13. Existing Railway Crossing with stop sign control

From **Figure 6** above, it can be seen that available sight distance from the site access to the railway line is obstructed by a line of trees. As such sight distance area A in **Figure 14** is not met and passive control at the railway crossing cannot be signed as give way.

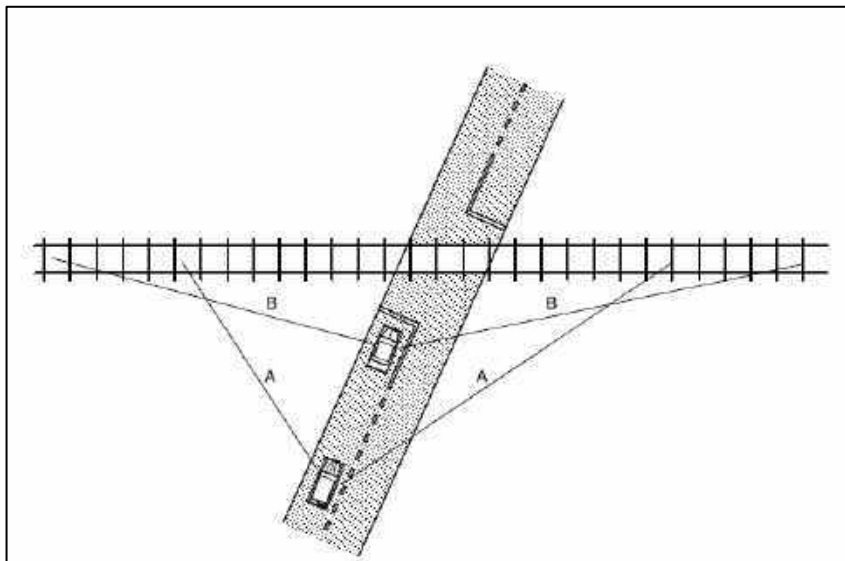


Figure 14. Sight triangles for give way and stop sign control for single track (Source: AS1742.7, Figure 4.1)

Assuming the following assumptions the minimum sight distance (S_3) at which an approaching train from either direction must be seen in order for the design vehicle to start off and clear the crossing by the safety margin is 440m.

- Train speed = 160km/h
- Table D1, Vehicle type = Level 1 (Semi trailer)
- Normal driving behaviour
- Flat grade

From a desktop assessment, the current rail crossing has sufficient sight distance for a stopped vehicle at the crossing to start-up and clear the crossing safely before the arrival of any previously unseen train. A sensitivity checks against QR MD-23-67, Table 3 has also been undertaken. A sight distance of 710m is stipulated for a maximum train speed of 160km/h. The existing at grade crossing has more than 710m of available sight distance in the horizontal plane. Refer to **Appendix B** for available sight distance and AS1742.7 passive crossing stop and start up sight distance calculation.

10.2 SWEPT PATH

Swept path analysis of the existing intersection is available in **Appendix C**. The swept path analysis has found that the current intersection arrangement is able to accommodate the largest proposed development vehicle 3-axle rigid body (12.5m) truck.

11.0 SAFETY ASSESSMENT

11.1 ROAD ENVIRONMENT SAFETY RATING AND ASSESSMENT TYPE

In accordance with the GTIA, Table 9.3.3(a) and Table 9.3.3(b), the Road environment safety rating matrix (level of risk), **Riverway Drive** has a “Medium” risk rating and the type of assessment required is a road safety assessment. Refer to **Table 9** and **Table 10** below.

Table 9. Road environment safety rating matrix (level of risk) (Source: DTMR GTIA, 2018, Table 9.3.3(a))

Traffic volume (AADT)	Speed (km/h)		
	Up to 50 km/h	60 km/h to 70 km/h	80 km/h+
≤ 8000	Low	Medium	Medium
> 8000	Medium	Medium	High

Table 10. Type of road safety assessment based on road environment safety rating (Source: DTMR GTIA, 2018, Table 9.3.3(b))

Development type	Road environment safety rating		
	Low	Medium	High
Major Development	road safety assessment	road safety audit	road safety audit
Planning Act Development	road safety assessment	road safety assessment	road safety audit

11.2 ROAD SAFETY ASSESSMENT

The road safety risk assessment has been performed in accordance with the Safety Risk Score Matrix in accordance with **Table 11** below.

Table 11. Safety risk score matrix (Source: DTMR GTIA, 2018, Table 9.3.2(a))

		Potential consequence				
		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)
Potential likelihood	Almost certain (5)	M	M	H	H	H
	Likely (4)	M	M	M	H	H
	Moderate (3)	L	M	M	M	H
	Unlikely (2)	L	L	M	M	M
	Rare (1)	L	L	L	M	M

L: Low risk
 M: Medium risk
 H: High risk

The safety risks associated with the development are summarised in **Table 12** below.

Table 12. Safety risk assessment

Risk Item	Without Development			With Development			Mitigation Measure	With Development and mitigation		
	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score		Likelihood	Consequence	Risk Score
Short stacking of the intersection	-	-	-	1	5	M	No Action. Refer to Section 11.2.1 below.	-	-	-
Risk of vehicle not seeing oncoming train at site access railway crossing	-	-	-	1	5	M	No Action. Crossing is stop sign controlled with sufficient sight distance in accordance with AS1742.7. Refer to Section 10.1.1.	-	-	-
Risk of vehicles queuing over the railway crossing	-	-	-	1	5	M	No action. Development is anticipated to have low traffic volumes with a maximum of 6 vehicles departing the site during the peak hour. The development will not be open to the public and staff members will be familiar with the site and access arrangements.	-	-	-
Risk of collision between Bruce Highway traffic and development traffic	-	-	-	2	3	M	No Action. Sufficient SISD and SSD available.	-	-	-
Development traffic queuing into the Bruce Highway from the CHR arrangement	-	-	-	2	3	M	No Action. SIDRA has not indicated any queuing issues.	-	-	-

11.2.1 Railway Short stacking

Short stacking is the term used when the distance between the closest rail of the level crossing and a downstream intersection is not long enough to accommodate the design vehicle (plus a safety factor of 5m) stopped at the intersection without fouling the tracks. The design vehicle for the development site is a 12.5m rigid vehicle. The available distance between the intersection give way line and railway crossing is in the order of 55m. Refer to **Figure 15**.



Figure 15. Available distance between intersection give way line and railway track

There is more than sufficient space to accommodate the design vehicle and short stacking of the railway line is not anticipated to be an issue.

12.0 SUMMARY

This report evaluates the impact of the traffic generated by the proposed development on the existing road network including at key intersections and accesses. The impact of the proposed development on the road network has been analysed using procedures set out in Austroads Guide to Road Design, TMR road design supplements and TMR's Guide to Traffic Impact Assessment, with consideration given to operational performance and road safety.

The proposed development has existing approval for the site access. Original impact assessment has anticipated traffic to be between 30 to 50 vehicle movements per day. Whilst the development is unlikely to operate at the upper bounds, the anticipated development traffic is 60 to 70 vehicles per day if the development was to haul up to the disposal limit (50,000t). From the SIDRA assessment, the anticipated increase in traffic from the proposed development is not anticipated to have an impact on the existing intersection and no mitigation is required to accommodate the additional traffic.

The proposed access location has sufficient SISD for both cars and trucks in accordance with AGRD Part 3 and Part 4A. No sight distance issues have been found with regards to the proposed access location. SIDRA modelling has been performed on the intersection. All approaches of the intersection are anticipated to be a LOS A in the base year and at the 10 year horizon.

Assessment of the existing railway level crossing has found no deficiencies or anticipated issues.

In summary, this report has found that the proposed development access to be adequate and to have no significant adverse impact on the operational performance or safety of the surrounding road network. No mitigation measures are anticipated to be required as a result of the proposed increased in material disposal limit with respect to road infrastructure.

13.0 CERTIFICATION

Registered Professional Engineer Queensland

for

Project Title:	42386 Bruce Highway, Bluewater

As a professional engineer registered by the Board of Professional Engineers of Queensland pursuant to the *Professional Engineers Act 2002* as competent in my areas of nominated expertise, I understand and recognise:

- the significant role of engineering as a profession, and that
- the community has a legitimate expectation that my certification affixed to this engineering work can be trusted, and that
- I am responsible for ensuring its preparation has satisfied all necessary standards, conduct and contemporary practice.

As the responsible RPEQ, I certify:

- I am satisfied that all submitted components comprising this traffic impact assessment, listed in the following table, have been completed in accordance with the *Guide to Traffic Impact Assessment* published by the Queensland Department of Transport and Main Roads and using sound engineering principles, and
- where specialised areas of work have not been under my direct supervision, I have reviewed the outcomes of the work and consider the work and its outcomes as suitable for the purposes of this traffic impact assessment, and that
- the outcomes of this traffic impact assessment are a true reflection of results of assessment, and that
- I believe the strategies recommended for mitigating impacts by this traffic impact assessment, embrace contemporary practice initiatives and will deliver the desired outcomes.

Name:	Brett Langtree		
RPEQ competencies:	Civil Engineering	RPEQ No:	11932
Signature:		Date:	08 July 2025
Postal address:	14 Ingham Road, West End QLD 4810		
Email:	brett@langtreeconsulting.com.au		

APPENDIX A

SIDRA REPORTS

MOVEMENT SUMMARY

 **Site: [1] 2025 With Development** (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance													
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Bruce Highway													
2	T1	All MCs	228 19.0	228 19.0	0.130	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.9
3	R2	All MCs	6 100.0	6 100.0	0.007	11.7	LOS A	0.0	0.4	0.39	0.63	0.39	52.8
Approach			235 21.2	235 21.2	0.130	0.3	NA	0.0	0.4	0.01	0.02	0.01	98.5
East: Site Access													
4	L2	All MCs	6 100.0	6 100.0	0.017	5.5	LOS A	0.1	0.8	0.47	0.54	0.47	37.5
6	R2	All MCs	3 100.0	3 100.0	0.017	12.2	LOS A	0.1	0.8	0.47	0.54	0.47	36.6
Approach			9 100.0	9 100.0	0.017	7.7	LOS A	0.1	0.8	0.47	0.54	0.47	37.2
North: Bruce Highway													
7	L2	All MCs	3 100.0	3 100.0	0.119	10.4	LOS A	0.0	0.0	0.00	0.01	0.00	44.3
8	T1	All MCs	197 25.0	197 25.0	0.119	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	99.3
Approach			200 26.2	200 26.2	0.119	0.2	NA	0.0	0.0	0.00	0.01	0.00	98.2
All Vehicles			444 25.1	444 25.1	0.130	0.4	NA	0.1	0.8	0.02	0.03	0.02	96.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (3)] 2035 With Development (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance													
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %	Arrival Flows [Total HV] veh/h %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Bruce Highway													
2	T1	All MCs	252 19.0	252 19.0	0.143	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.9
3	R2	All MCs	6 100.0	6 100.0	0.007	11.9	LOS A	0.0	0.4	0.41	0.63	0.41	52.7
Approach			258 21.0	258 21.0	0.143	0.3	NA	0.0	0.4	0.01	0.02	0.01	98.6
East: Site Access													
4	L2	All MCs	6 100.0	6 100.0	0.019	5.7	LOS A	0.1	0.9	0.50	0.56	0.50	37.2
6	R2	All MCs	3 100.0	3 100.0	0.019	13.5	LOS A	0.1	0.9	0.50	0.56	0.50	36.3
Approach			9 100.0	9 100.0	0.019	8.3	LOS A	0.1	0.9	0.50	0.56	0.50	36.9
North: Bruce Highway													
7	L2	All MCs	3 100.0	3 100.0	0.130	10.4	LOS A	0.0	0.0	0.00	0.01	0.00	44.3
8	T1	All MCs	216 25.0	216 25.0	0.130	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	99.4
Approach			219 26.1	219 26.1	0.130	0.2	NA	0.0	0.0	0.00	0.01	0.00	98.3
All Vehicles			486 24.8	486 24.8	0.143	0.4	NA	0.1	0.9	0.02	0.02	0.02	96.5

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

LANE SUMMARY

Site: [1] 2025 With Development (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Lane Use and Performance																
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.		
	[Total	HV]	[Total	HV]							[Veh	Dist]				
	veh/h	%	veh/h	%		veh/h	v/c	%	sec			m		m	%	%
South: Bruce Highway																
Lane 1	228	19.0	228	19.0	1754	0.130	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0	
Lane 2	6	100.0	6	100.0	879	0.007	100	11.7	LOS A	0.0	0.4	Short	20	0.0	NA	
Approach	235	21.2	235	21.2		0.130		0.3	NA	0.0	0.4					
East: Site Access																
Lane 1	9	100.0	9	100.0	548	0.017	100	7.7	LOS A	0.1	0.8	Full	100	0.0	0.0	
Approach	9	100.0	9	100.0		0.017		7.7	LOS A	0.1	0.8					
North: Bruce Highway																
Lane 1	200	26.2	200	26.2	1680	0.119	100	0.2	LOS A	0.0	0.0	Full	500	0.0	0.0	
Approach	200	26.2	200	26.2		0.119		0.2	NA	0.0	0.0					
All Vehicles	444	25.1	444	25.1		0.130		0.4	NA	0.1	0.8					

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
South: Bruce Highway										
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From S										
To Exit:	N	E								
Lane 1	228	-	228	19.0	1754	0.130	100	NA	NA	
Lane 2	-	6	6	100.0	879	0.007	100	0.0	1	
Approach	228	6	235	21.2		0.130				
East: Site Access										
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From E										
To Exit:	S	N								
Lane 1	6	3	9	100.0	548	0.017	100	NA	NA	

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	LaneCapacity Flow	Deg. Satn	Min. Delay	Merge Delay	Merge [Veh	Queue Dist]
	m	%	veh/h pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec	m

	Initial Queued Demand	Residual Queued Demand	Time for Residual Demand to Clear	Duration of Oversatn
	veh	veh	sec	sec
South: Bruce Highway				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Site Access				
Lane 1	0.0	0.0	0.0	0.0
North: Bruce Highway				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: [1 (3)] 2035 With Development (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Lane Use and Performance																
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.		
	[Total	HV]	[Total	HV]							[Veh	Dist]				
	veh/h	%	veh/h	%		veh/h	v/c	%	sec			m		m	%	%
South: Bruce Highway																
Lane 1	252	19.0	252	19.0	1754	0.143	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0	
Lane 2	6	100.0	6	100.0	851	0.007	100	11.9	LOS A	0.0	0.4	Short	20	0.0	NA	
Approach	258	21.0	258	21.0		0.143		0.3	NA	0.0	0.4					
East: Site Access																
Lane 1	9	100.0	9	100.0	512	0.019	100	8.3	LOS A	0.1	0.9	Full	100	0.0	0.0	
Approach	9	100.0	9	100.0		0.019		8.3	LOS A	0.1	0.9					
North: Bruce Highway																
Lane 1	219	26.1	219	26.1	1682	0.130	100	0.2	LOS A	0.0	0.0	Full	500	0.0	0.0	
Approach	219	26.1	219	26.1		0.130		0.2	NA	0.0	0.0					
All Vehicles	486	24.8	486	24.8		0.143		0.4	NA	0.1	0.9					

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
South: Bruce Highway										
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From S										
To Exit:	N	E								
Lane 1	252	-	252	19.0	1754	0.143	100	NA	NA	
Lane 2	-	6	6	100.0	851	0.007	100	0.0	1	
Approach	252	6	258	21.0		0.143				
East: Site Access										
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From E										
To Exit:	S	N								
Lane 1	6	3	9	100.0	512	0.019	100	NA	NA	

North: Bruce Highway

Merge Analysis

Exit Lane Number	Short Lane Length	Percent Oppng in Flow Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Capacity Flow Rate	Deg. Satn	Min. Delay	Merge Delay	Merge Queue [Veh	Queue Dist]
	m		% veh/h pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec	m

Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec

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 Project: C:\Users\Langtree Consulting\Documents\SIDRA Analysis Projects\42386 Bruce Highway, Bluewater\42386 Bruce Highway, Bluewater 250528.sipx

QUEUE ANALYSIS

▼ Site: [1] 2025 With Development (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Lane Queues (Distance)															
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (m)	Back of Queue (m)		Queue at Start of Gap (m)		Cycle-Average Queue (m)		Queue Storage Ratio		Prob. Block.	Prob. SL Ov.	Ov. Lane No.
v/c					Av.	95%	Av.	95%	Av.	95%	Av.	95%	%	%	
South: Bruce Highway															
Lane 1	Y	0.130	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Lane 2		0.007	1.000	0.0	0.2	0.4	0.2	0.4	0.0	0.1	0.01	0.02	NA	0.0	1
Approach		0.130			0.2	0.4	0.2	0.4	0.0	0.1	0.00	0.00			
East: Site Access															
Lane 1		0.017	1.000	0.0	0.3	0.8	0.3	0.8	0.1	0.2	0.00	0.01	0.0	NA	NA
Approach		0.017			0.3	0.8	0.3	0.8	0.1	0.2	0.00	0.01			
North: Bruce Highway															
Lane 1	Y	0.119	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Approach		0.119			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
Intersection		0.130			0.3	0.8	0.3	0.8	0.1	0.2	0.00	0.01			

Two-Way Sign Control Capacity Model: SIDRA Standard.
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Short Lanes are not included in determining Queue Storage Ratios.

Lane Queues (Vehicles)															
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (veh)	Back of Queue (veh)		Queue at Start of Gap (veh)		Cycle-Average Queue (veh)		Queue Storage Ratio		Prob. Block.	Prob. SL Ov.	Ov. Lane No.
v/c					Av.	95%	Av.	95%	Av.	95%	Av.	95%	%	%	
South: Bruce Highway															
Lane 1	Y	0.130	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Lane 2		0.007	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.02	NA	0.0	1
Approach		0.130			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
East: Site Access															
Lane 1		0.017	1.000	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01	0.0	NA	NA
Approach		0.017			0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01			
North: Bruce Highway															
Lane 1	Y	0.119	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Approach		0.119			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
Intersection		0.130			0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01			

Two-Way Sign Control Capacity Model: SIDRA Standard.

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Short Lanes are not included in determining Queue Storage Ratios.

Continuous Lane Performance													
Lane Number	Deg. Satn	Unint. Speed	Unint. Travel Delay	Hdwy Spacing	Aver. Vehicle Length	Occup. Time	Space Time	Space Occup. Ratio	Time Occup. Ratio	Density	LOS (Density Method)		
	v/c	km/h	sec	sec	m	sec	sec	%	%	veh/km	pc/km		
South: Bruce Highway													
Lane 1	0.130	99.9	0.0	15.76	437.5	5.5	0.27	15.49	1.3	1.7	2.3	2.7	LOS A
North: Bruce Highway													
Lane 1	0.119	99.9	0.0	18.00	499.7	5.9	0.29	17.71	1.2	1.6	2.0	2.5	LOS A

Midblock Effective Detection Zone Length = 2 m

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Organisation: LANGTREE CONSULTING | Licence: NETWORK / 1PC | Processed: Tuesday, 8 July 2025 8:50:51 AM
Project: C:\Users\Langtree Consulting\Documents\SIDRA Analysis Projects\42386 Bruce Highway, Bluewater\42386 Bruce Highway, Bluewater_250528.sipx

QUEUE ANALYSIS

Site: [1 (3)] 2035 With Development (With Development)
Output produced by SIDRA INTERSECTION Version: 10.0.5.217

42386 Bruce Highway, Bluewater
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Lane Queues (Distance)															
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (m)	Back of Queue (m)		Queue at Start of Gap (m)		Cycle-Average Queue (m)		Queue Storage Ratio		Prob. Block.	Prob. SL Ov.	Ov. Lane No.
v/c					Av.	95%	Av.	95%	Av.	95%	Av.	95%	%	%	
South: Bruce Highway															
Lane 1	Y	0.143	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Lane 2		0.007	1.000	0.0	0.2	0.4	0.2	0.4	0.0	0.1	0.01	0.02	NA	0.0	1
Approach		0.143			0.2	0.4	0.2	0.4	0.0	0.1	0.00	0.00			
East: Site Access															
Lane 1		0.019	1.000	0.0	0.4	0.9	0.3	0.9	0.1	0.3	0.00	0.01	0.0	NA	NA
Approach		0.019			0.4	0.9	0.3	0.9	0.1	0.3	0.00	0.01			
North: Bruce Highway															
Lane 1	Y	0.130	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Approach		0.130			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
Intersection		0.143			0.4	0.9	0.3	0.9	0.1	0.3	0.00	0.01			

Two-Way Sign Control Capacity Model: SIDRA Standard.
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Short Lanes are not included in determining Queue Storage Ratios.

Lane Queues (Vehicles)															
Lane Number	Contin. Lane	Deg. Satn	Prog. Factor (Queue)	Overflow Queue (veh)	Back of Queue (veh)		Queue at Start of Gap (veh)		Cycle-Average Queue (veh)		Queue Storage Ratio		Prob. Block.	Prob. SL Ov.	Ov. Lane No.
v/c					Av.	95%	Av.	95%	Av.	95%	Av.	95%	%	%	
South: Bruce Highway															
Lane 1	Y	0.143	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Lane 2		0.007	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.02	NA	0.0	1
Approach		0.143			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
East: Site Access															
Lane 1		0.019	1.000	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01	0.0	NA	NA
Approach		0.019			0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01			
North: Bruce Highway															
Lane 1	Y	0.130	1.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.0	NA	NA
Approach		0.130			0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00			
Intersection		0.143			0.0	0.1	0.0	0.1	0.0	0.0	0.00	0.01			

Two-Way Sign Control Capacity Model: SIDRA Standard.

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Short Lanes are not included in determining Queue Storage Ratios.

Continuous Lane Performance													
Lane Number	Deg. Satn	Unint. Speed	Unint. Travel Delay	Hdwy Spacing	Aver. Vehicle Length	Occup. Time	Space Time	Space Occup. Ratio	Time Occup. Ratio	Density	LOS (Density Method)		
	v/c	km/h	sec	sec	m	sec	sec	%	%	veh/km	pc/km		
South: Bruce Highway													
Lane 1	0.143	99.9	0.0	14.31	397.2	5.5	0.27	14.04	1.4	1.9	2.5	2.9	LOS A
North: Bruce Highway													
Lane 1	0.130	99.9	0.0	16.44	456.4	5.9	0.29	16.16	1.3	1.7	2.2	2.7	LOS A

Midblock Effective Detection Zone Length = 2 m

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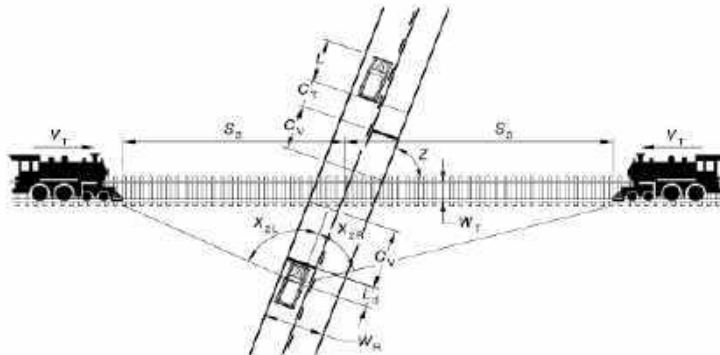
APPENDIX B

SIGHT DISTANCE CHECKS

Passive Crossing - Stop and start up sight distance

Location: 42386 Bruce Highway, Bluewater

Source: AS1742.7 MUTCD Part 7: Railway Crossings



Motorist stopped at crossing requires adequate time to accelerate and safely clear the crossing.

LEGEND: (general case assumptions are shown in brackets)

- S_3 = minimum distance of an approaching train from the centre of the crossing, when the driver of the road vehicle must first see an approaching train in order to safely cross the tracks (metres).
- V_T = the speed of the train approaching the crossing (kilometres/hour).
- L_d = distance from the driver to the front of the vehicle (general case assumption = 1.5 metres).
- C_v = clearance from the vehicle stop line to the nearest rail (general case assumption = 0.5 metres).
- C_T = clearance or safety margin from the vehicle stop line on the departure side of the crossing (general case assumption = 5 metres).
- W_R = width of the travelled way (portion of the roadway allocated for the movement of the vehicles) at the crossing (metres).
- W_T = width, outer rail to outer rail, of the rail tracks at the crossing (metres).
- X_{ZL} = sighting angles measured from the stop line, see Paragraph D4.
- X_{ZR} = angle between the road and the railway at the crossing (degrees).

FIGURE D2 STOP AND START UP VISIBILITY AT PASSIVE CONTROL RAILWAY CROSSINGS

Distance S_3 is the minimum distance at which an approaching train from either direction must be seen in order for the design vehicle to start off and clear the crossing by the safety margin shown in Figure D2. Distance S_3 is given by the following:

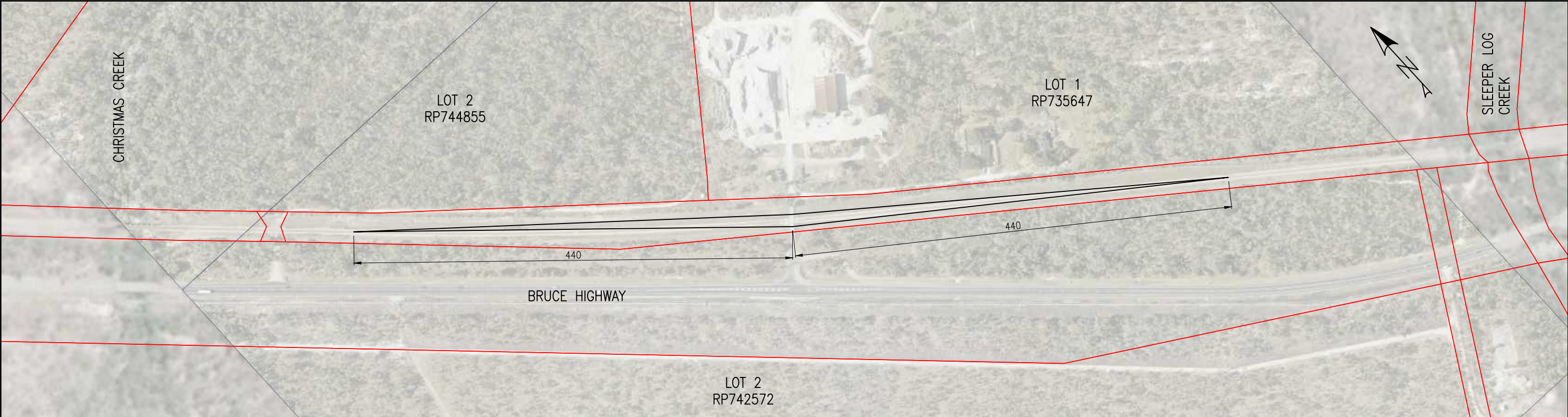
$$S_3 = \frac{V_T}{3.6} \left[J + G_s \left(2 \frac{\frac{W_R}{\tan Z} + \frac{W_T}{\sin Z} + 2C_v + C_T + L}{a} \right)^{1/2} \right] \quad \dots (D1)$$

Notation in Equation D1 is given in Figures D1 and D2 and as follows:

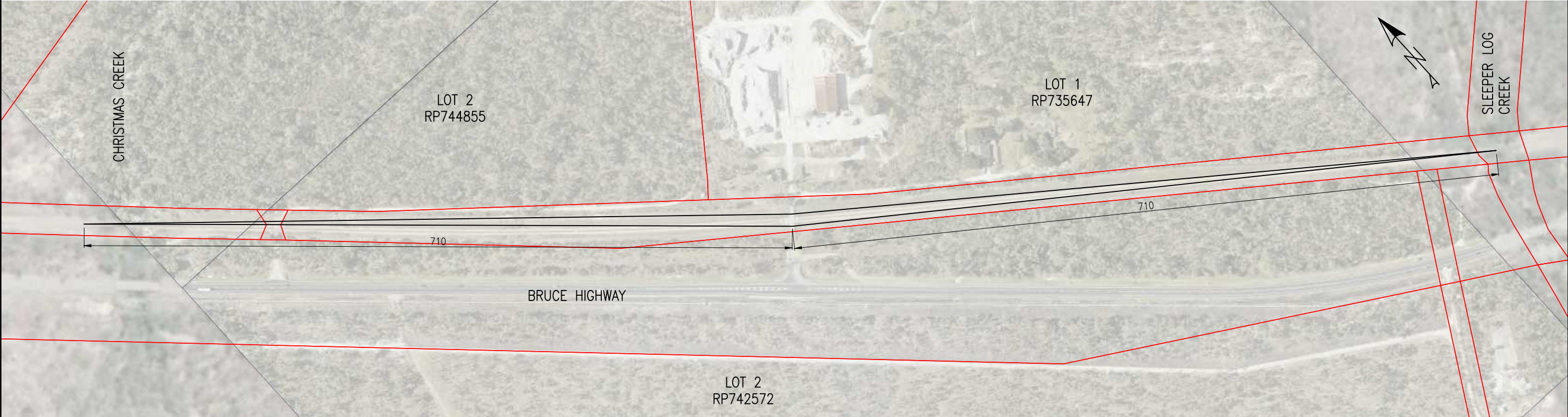
- J = sum of the perception time and time to depress clutch
- L = length of design vehicle, see Table D1
- a = average acceleration of the design vehicle in starting gear (for normal and cautious driving behaviours), see Table D1
- G_s = grade correction factor, see Table D2

V_T =	160	km/h
J =	2	s
G_s =	1	
W_R =	7	m
W_T =	3	m
Z =	90	degrees
C_v =	3.5	m
C_T =	5	m
L =	20	m
a =	0.52	
S_3 =	437	m
	440	m

or
(rounded up to nearest 5m)

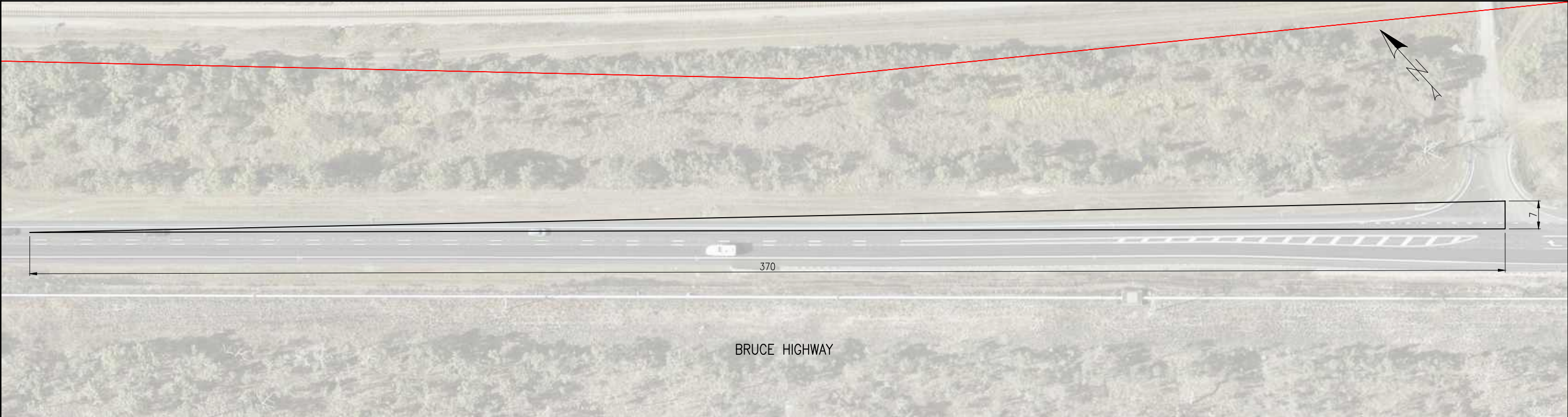


SIGHT DISTANCE (AS1742.7)
SCALE 1:2000

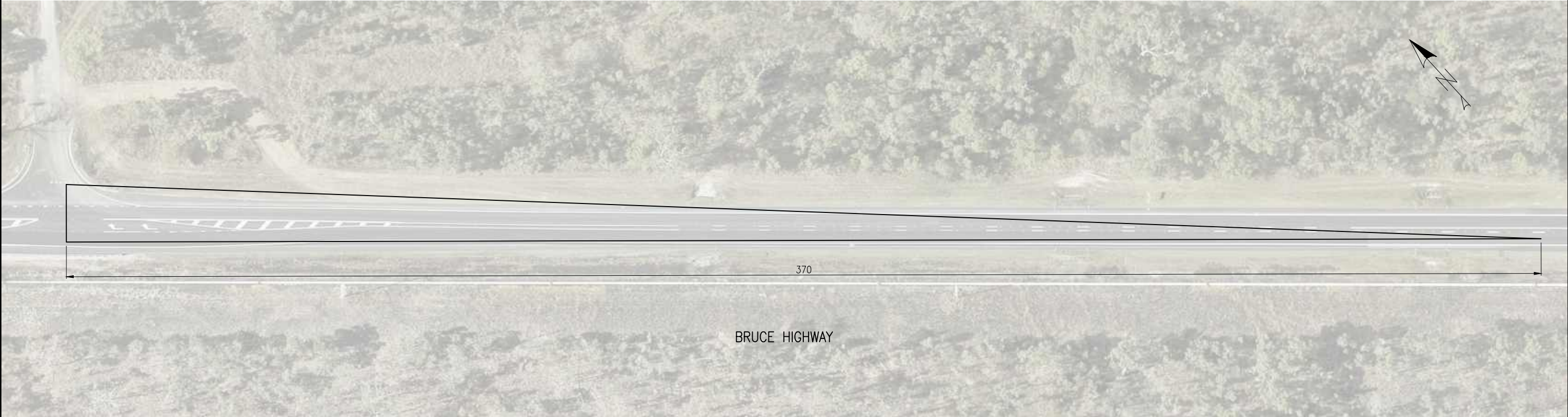


SIGHT DISTANCE (QR MD-23-67)
SCALE 1:2000

REVISIONS					HORIZ. DATUM		CERTIFICATION		 m0400 699 979 e brett@langtreeconsulting.com.au		ABSOLUTE WASTE PTY LTD		SCALE	1:2
					VERT. DATUM						42386 BRUCE HIGHWAY, BLUEWATER		SHEET	SHEET 1 OF 1
					DRG. FILE						DATE	Lot 1 on RP735647		REVISION
	A	N.P	30/05/25	ISSUED FOR TIA REPORT	DESIGN	N.P	02/06/25	These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACH 29 611 388 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.		RAILWAY SIGHT DISTANCE CHECK		DRG No.	1343-SK01	
	No.	BY	DATE	DESCRIPTION	DRAWN	N.P	02/06/25							



SISD FOR SOUTHBOUND TRAFFIC
SCALE 1:500

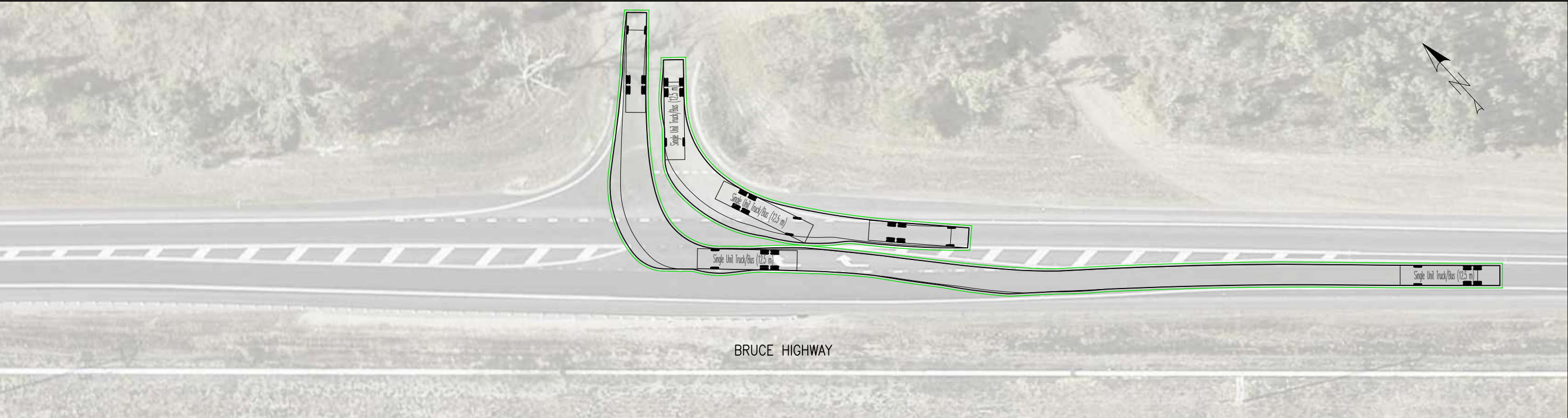


SISD FOR NORTHBOUND TRAFFIC
SCALE 1:500

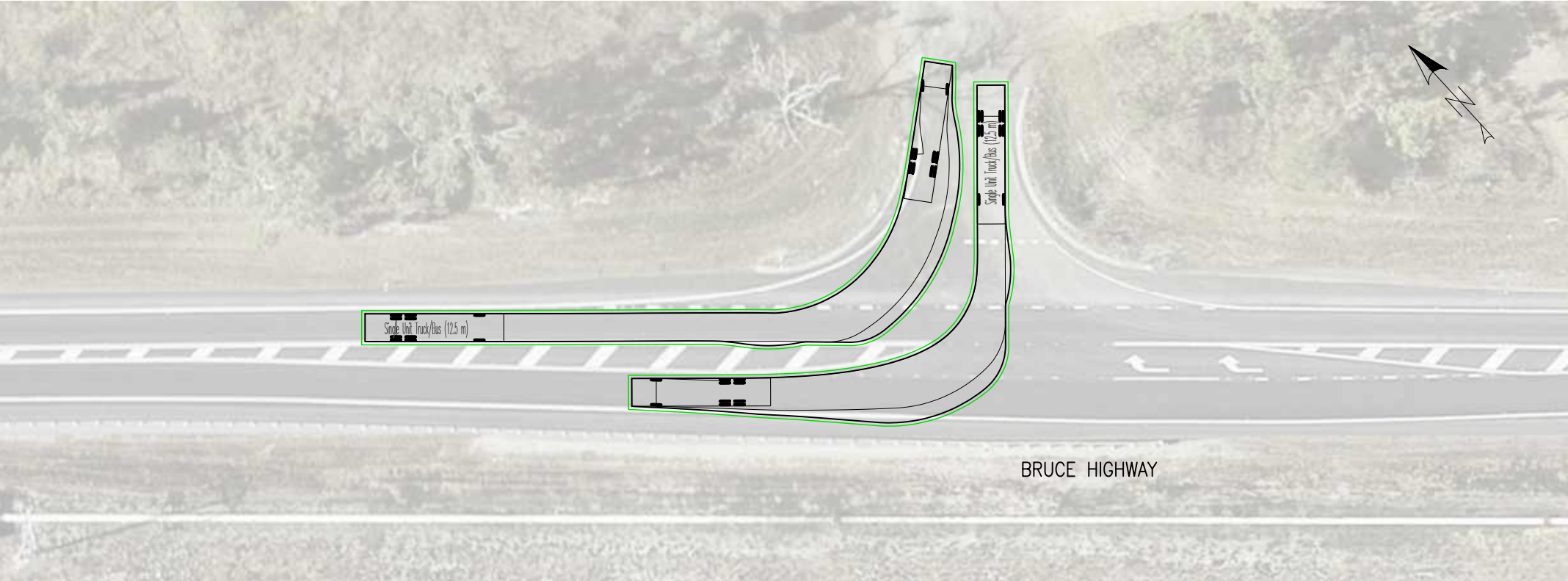
REVISIONS					HORIZ. DATUM		CERTIFICATION		 m e 0400 699 979 brett@langtreeconsulting.com.au	ABSOLUTE WASTE PTY LTD			SCALE	1:2
					VERT. DATUM					42386 BRUCE HIGHWAY, BLUEWATER			SHEET	SHEET 1 OF 1
					DRG. FILE		DATE	COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.		Lot 1 on RP735647			REVISION	A
	A	N.P	30/05/25	ISSUED FOR TIA REPORT	DESIGN	N.P	02/06/25			SISD			DRG No.	1343-SK03
	No.	BY	DATE	DESCRIPTION	DRAWN	N.P	02/06/25							

APPENDIX C

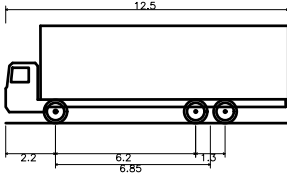
SWEPT PATHS



SWEPT PATH – RIGHT IN, LEFT OUT
SCALE 1:250



SWEPT PATH – LEFT IN, RIGHT OUT
SCALE 1:250

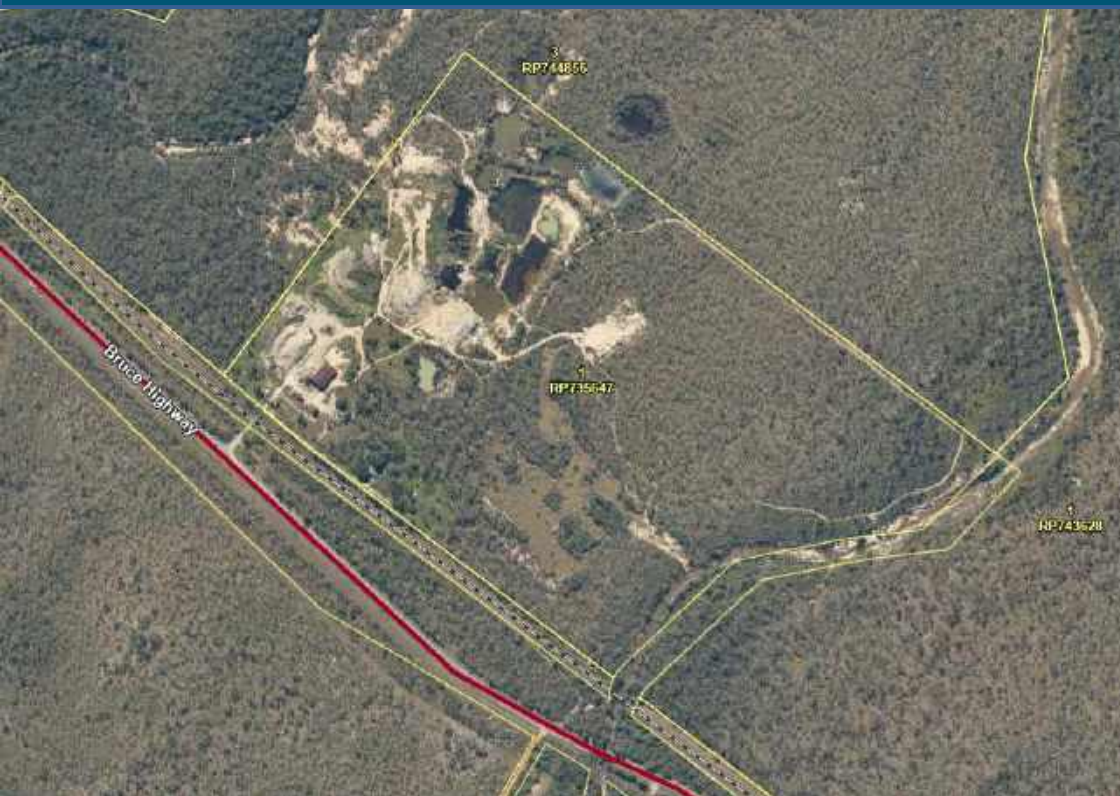


Single Unit Truck/Bus (12.5 m)
Overall Length 12.500m
Overall Width 2.500m
Overall Body Height 4.300m
Min Body Ground Clearance 0.490m
Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 12.500m

REVISIONS					HORIZ. DATUM				CERTIFICATION	 m 0400 699 979 e brett@langtreeconsulting.com.au	ABSOLUTE WASTE PTY LTD			SCALE	1:2	
					VERT. DATUM						42386 BRUCE HIGHWAY, BLUEWATER			SHEET	SHEET 1 OF 1	
					DRG. FILE	DATE		COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 358 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.			Lot 1 on RP735647			REVISION	A	
	A	N.P	30/05/25	ISSUED FOR TIA REPORT	DESIGN	N.P	02/06/25				SWEPT PATHS			DRG No.	1343-SK03	
	No.	BY	DATE	DESCRIPTION	DRAWN	N.P	02/06/25									

Appendix 8

42386 BRUCE HIGHWAY, BLUEWATER



STORMWATER MANAGEMENT PLAN

Absolute Waste Pty Ltd

LANGTREE CONSULTING

Project No.: 1343

Reference No.: R-NP0340

Date: 22/08/2025

Controlled Copy No.: 1

Revisions: B

Revision Record:

Rev	Review Date	Description	Prepared	Checked	Approved
A	31/07/2025	Issued for Client Comment	Natalie Pham	Brett Langtree	Brett Langtree
B	22/08/2025	Minor Amendments	Natalie Pham	Brett Langtree	Brett Langtree

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SEDIMENT BASIN PERFORMANCE REPORT**

1.0 INTRODUCTION

Langtree Consulting has been engaged by Absolute Waste Pty Ltd to prepare this Stormwater Management Plan in support of a Material Change of Use (MCU) application at 42386 Bruce Highway, Bluewater on land described as Lot 1 on RP735647.

The site is currently an existing waste management facility with a ERA75(a)(iii) permit (Waste disposal – operating a facility for disposing of only general waste or limited regulated waste, if the facility is designed to received waste at a rate of 5,000t or more, but less than 10,000t per year). The development proposes to increase the existing volume of waste received and processed at the facility up to 50,000t per annum.

This report addresses the following objectives:

- Identify site stormwater catchments and assess in stormwater discharge from the site;
- Evaluate potential impact on downstream properties or Council's stormwater drainage system with regards to stormwater quantity and quality in terms of soil erosion and sediment control; and
- Determine if any mitigation measures may be required to manage or offset those impacts with regards.

2.0 BACKGROUND

The proposed development is located approximately 35km from the township of Townsville at 42386 Bruce Highway, Bluewater on land described as Lot 1 on RP735647 (hereon in referred to as the subject site). The subject site is 54.44ha in area and bound by undeveloped land to the north and west, Sleeper Log Creek to the east and the Bruce Highway and Northern Coast Rail Line to the south. Refer to **Figure 1** for site locality.



Figure 1. Site Locality (Source: Queensland Globe)

3.0 STORMWATER MANAGEMENT STRATEGY

3.1 TYPES OF STORMWATER GENERATION

Stormwater at the site is considered to be categorised as follows:

- Clean stormwater – Stormwater runoff from undisturbed or rehabilitated areas are considered to produce clean stormwater runoff which is safe to discharge to the environment.
- Sediment laden stormwater – Stormwater runoff from non-rehabilitated areas of the site typically has poor ground cover which results in transportation of sediments during rainfall events.
- Leachate – Rainfall that has come into contact with the active face of the land fill or green waste stockpiles are considered as leachate and is managed in accordance with the Leachate Management Plan and EA Permit.

Management of onsite stormwater is based on the following principles:

- Diversion of clean water from entering working areas to minimise volume of stormwater required to be treated.
- Capture of stormwater from operating areas for storage and treatment in leachate ponds or sediment ponds as required.

3.2 STORMWATER MANAGEMENT AND COLLECTION

Landfill area management will typically involve the following practices:

- Revegetation of any permanent surface (with final capping).
- Revegetation or mulching of any surfaces to be left unused for more than one month.
- Trapping of sediments in sediment basins.
- Re-use of the water from sediment basins for on-site purposes such as dust suppression.
- Stormwater that has come into contact with waste is considered leachate and shall not be sent to sediment ponds.

4.0 EXISTING STORMWATER REGIME

4.1 SURROUNDING WATERCOURSES

Four watercourses exist near the subject site as follows:

- Christmas Creek (Stream order 3) to the northwest;
- Unnamed watercourse (Stream order 1) to the north;
- Unnamed watercourse (Stream order 1) to the northeast; and
- Sleeper Log Creek (Stream order 4) to the east.

Contours indicate that stormwater from the site either discharges as overland sheet flow, via natural streams to Christmas Creek or Sleeper Log Creek. Refer to **Figure 2** for watercourses.



Figure 2. Existing watercourses near the subject site

Christmas Creek and Sleeper Log Creek are part of the Black River Basin and is considered lowland fresh water. Water Quality Objectives (WQO) for the site have been derived from the Queensland Government Black River Basin. Refer to **Figure 3** for surface water mapping and **Table 1** for water quality objectives.

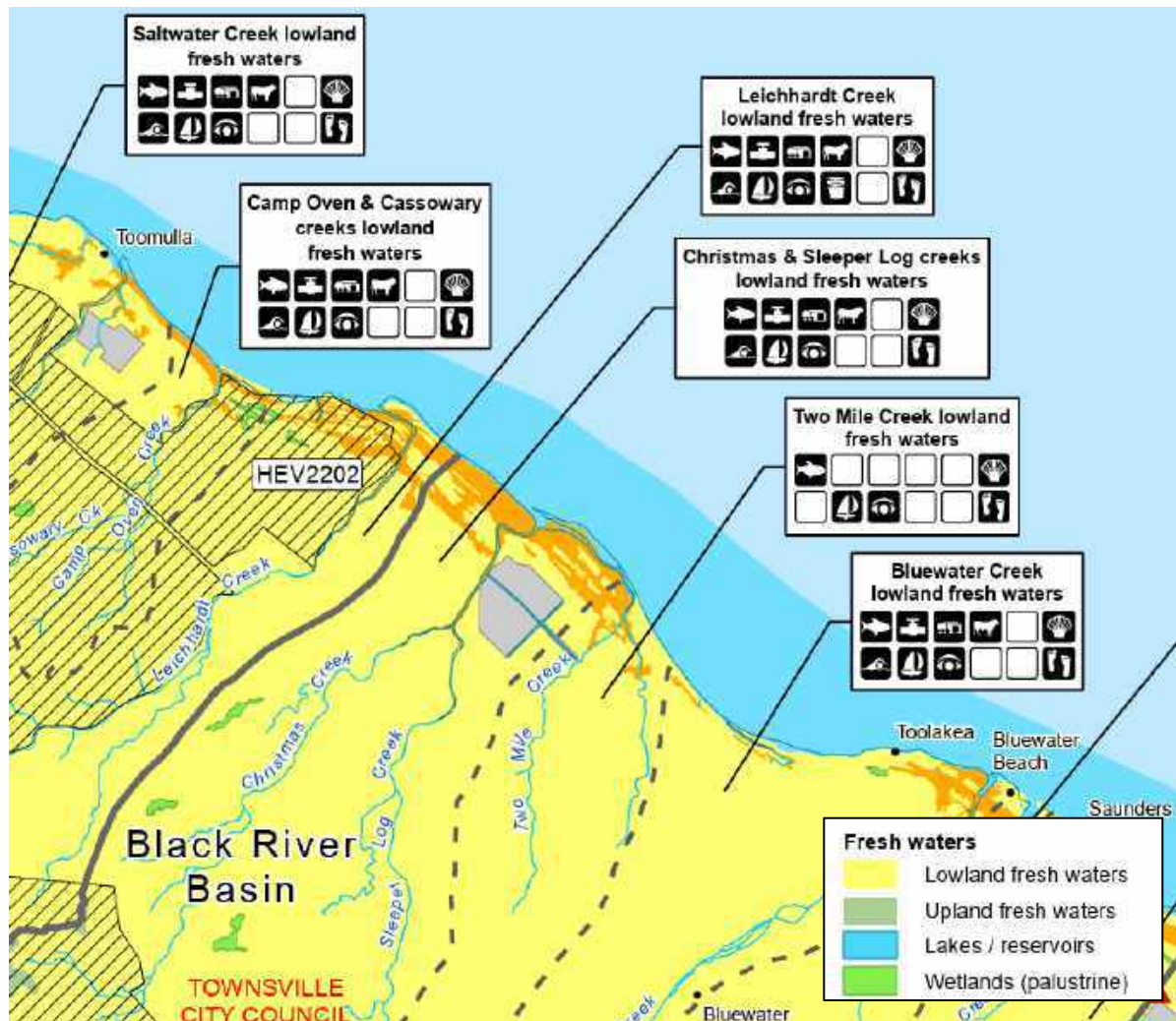


Figure 3. Christmas Creek and Sleeper Log Creek Surface water Schedule 1 Plan (Source: Queensland Government, Environmental Protection (Water) Policy 2009, WQ1171 – Black River Basin (Basin 117))

Table 1. Water Quality Objectives for Black River Catchment - other lowland fresh waters (Source: Queensland Government, (2013), Environmental Protection (Water) Policy 2009, Black River Basin Environmental Values and Water Quality Objectives, Basin No. 117, Table 2 excerpt)

Black River catchment - other lowland fresh waters	Aquatic ecosystem—moderately disturbed (MD)	• ammonia N: <20 µg/L^{b, c, k} • oxidised N: <60 µg/L^{b, c, d, k} • dissolved inorganic N (DIN): <80 µg/L^{b, c, k, l} • organic N: <420 µg/L^{b, c, k} • total N: <500 µg/L^{b, c, k} • filterable reactive phosphorus (FRP): <20 µg/L^{b, k} • total P: <50 µg/L^{b, k} • chlorophyll a: <5 µg/L^k • dissolved oxygen: 85%–110% saturation^{e, k} • turbidity: <50 NTU^k • suspended solids: <10 mg/L^k • pH: 6.5–8.0^{f, k} • temperature: nd^{h, l} • macroinvertebrates: nd^l • fish: nd^l • toxicants: refer to toxicants row later in this table • sodium (Na): <11 mg/L^f • calcium (Ca): <5 mg/L^f • magnesium (Mg): <4 mg/L^f • bicarbonate (HCO₃): <40 mg/L^f • chloride (Cl): <14 mg/L^f • sulfate (SO₄): <2 mg/L^f • electrical conductivity (EC): <98µS/cm (75th percentile)^{g, f} • hardness: <29 mg/L^f • alkalinity: <33 mg/L^f • silica (SiO₂): <21.1mg/L^f • fluoride (F): <0.110 mg/L^f • sodium adsorption ratio (SAR): 0.60–0.95^f

4.2 TOPOGRAPHY

Site contours have been obtained from Elvis Spatial in addition to site commissioned LiDAR. Overland flow for the site and surrounding area is shown in and **Figure 4**.

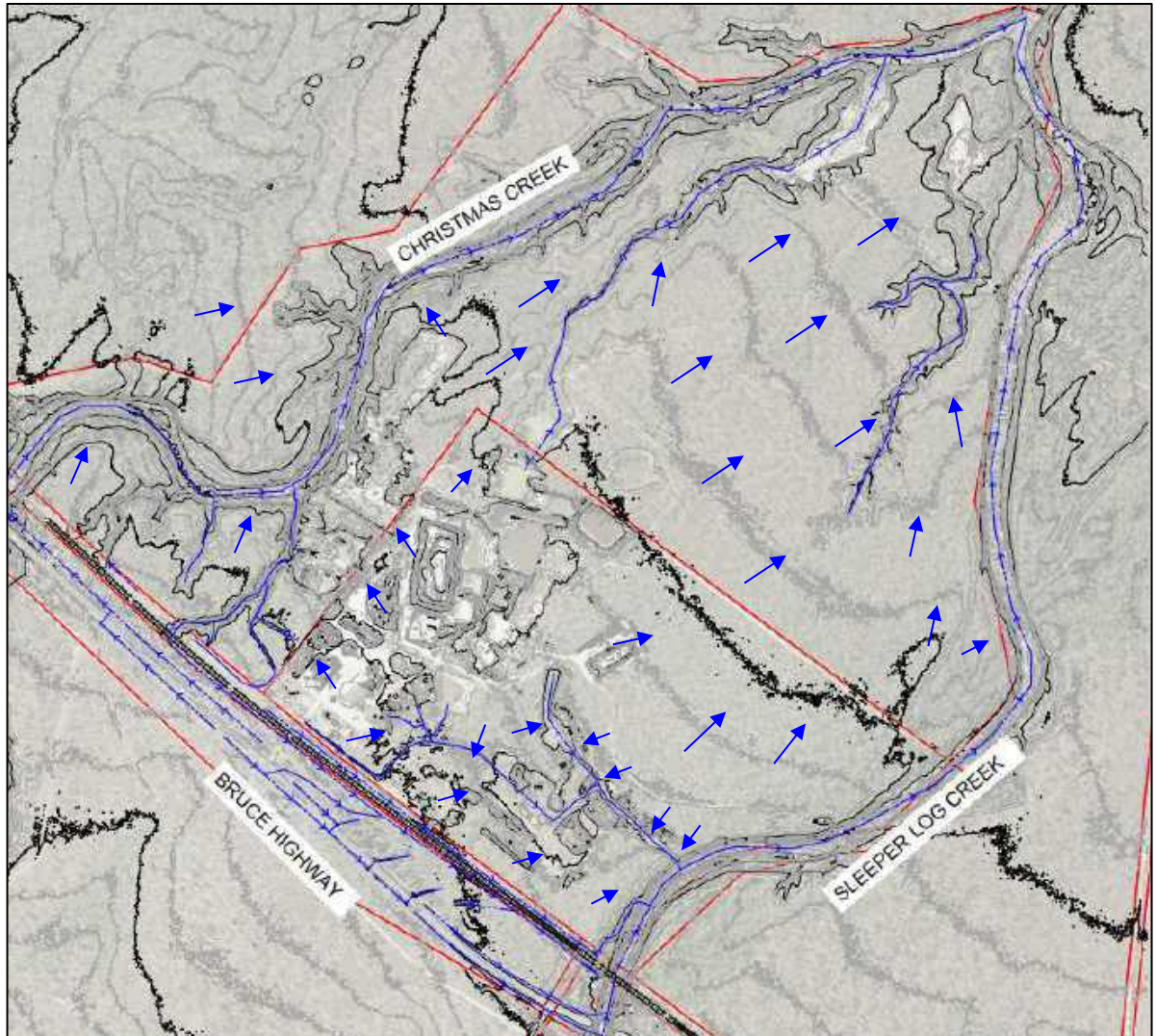


Figure 4. Existing overland flow directions

4.3 EXISTING STORMWATER PONDS

From previous Development Application reporting documents, stormwater catchments areas and ponds are as shown in **Figure 5**. Ponds 1, 2 and 4 are freshwater ponds whilst pond 3 is a leachate pond. Ponds indicated on the plans are still located on site and generally as shown. Stormwater is collected into ponds via drains which discharge into the ponds. Refer to **Figure 6** for existing swale drain locations.

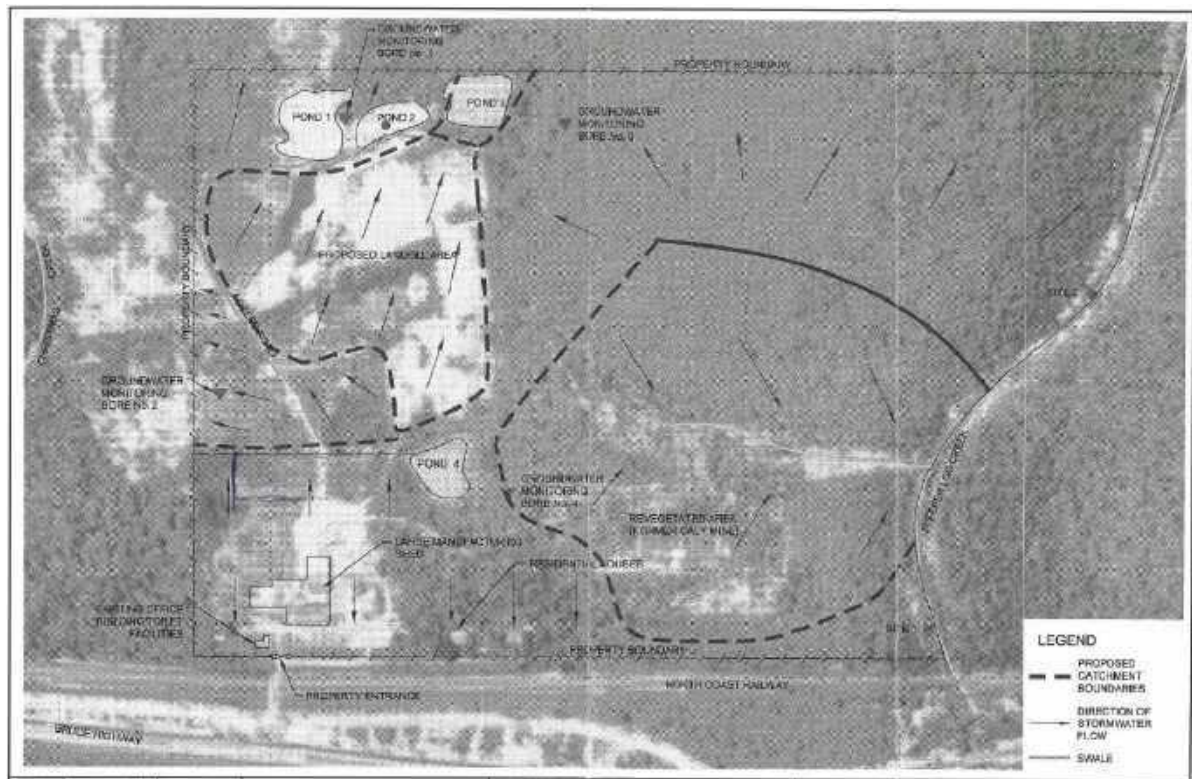


Figure 5. Existing stormwater catchments (Source: GHD Development Application Report (2003), Figure B4)

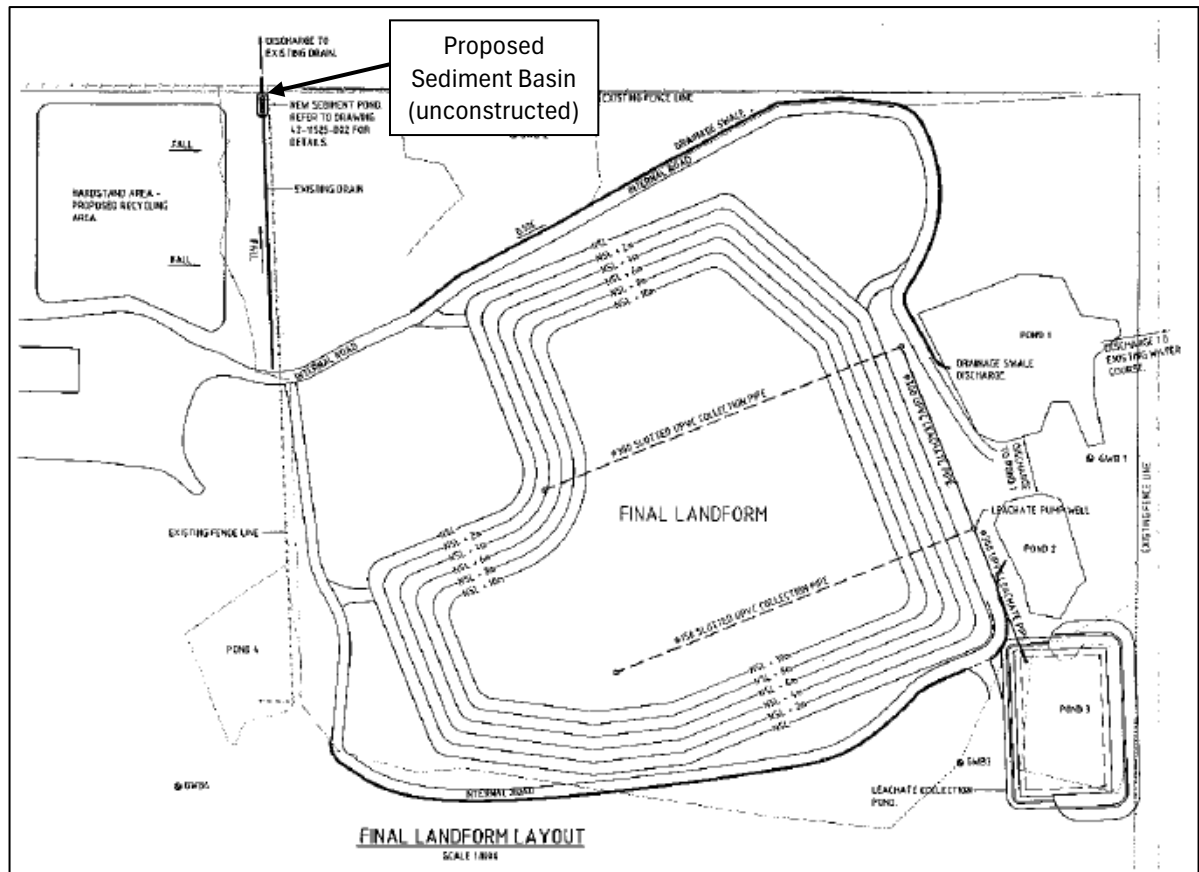


Figure 6. Final Landform layout (Source: GHD Development Application Report (2003), DRG 42-11525-D03)

From the final landform layout it is noted that a sediment basin was proposed along the northwestern site boundary. It is noted from aerial imaging and information provided by the applicant the proposed the sediment basin along the northwestern boundary has not been constructed.

4.4 EXISTING CATCHMENTS

From available Lidar of the site, concentrated stormwater from the working areas of the site discharge from the site at three different locations as follows:

- Pond 1 & 2 (88,953m²)– Northern boundary to Christmas Creek via unnamed order 1 Stream
- Pond 3 (157,116 m²) – Eastern boundary to Sleeper Log Creek

Refer to **Figure 7** or **Appendix A** for catchment areas and for larger view of watercourses.

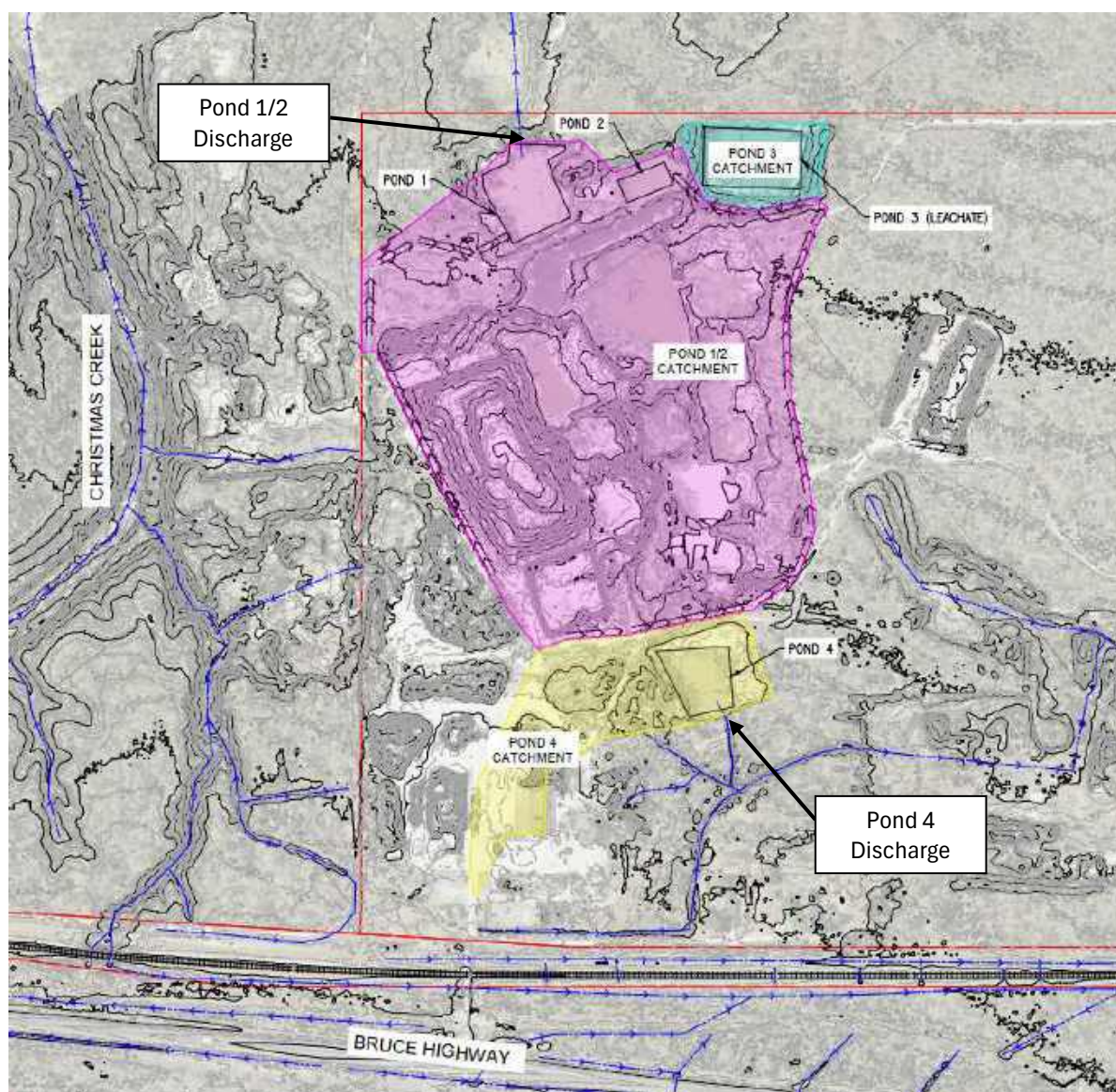


Figure 7. Existing stormwater catchments

Four ponds currently exist on the site as shown in **Figure 7**. Two ponds are located in the northwestern area of the site (Pond 1 & 2) and captures runoff from the landfill area which has not come into contact with waste material (i.e. from capped fill and road areas). Pond 3 acts as a leachate pond, whilst Pond 4 collects runoff from the road and battery storage area near the site access. The battery storage area is roofed and stormwater does not come into contact with any waste in the area.

4.5 FLOODING

From the Townsville Flood Information Map the site is affected by the 1% AEP. The flooding is primarily contained within existing ponds and watercourses /flood plains. Refer to **Figure 8** for flood depths.

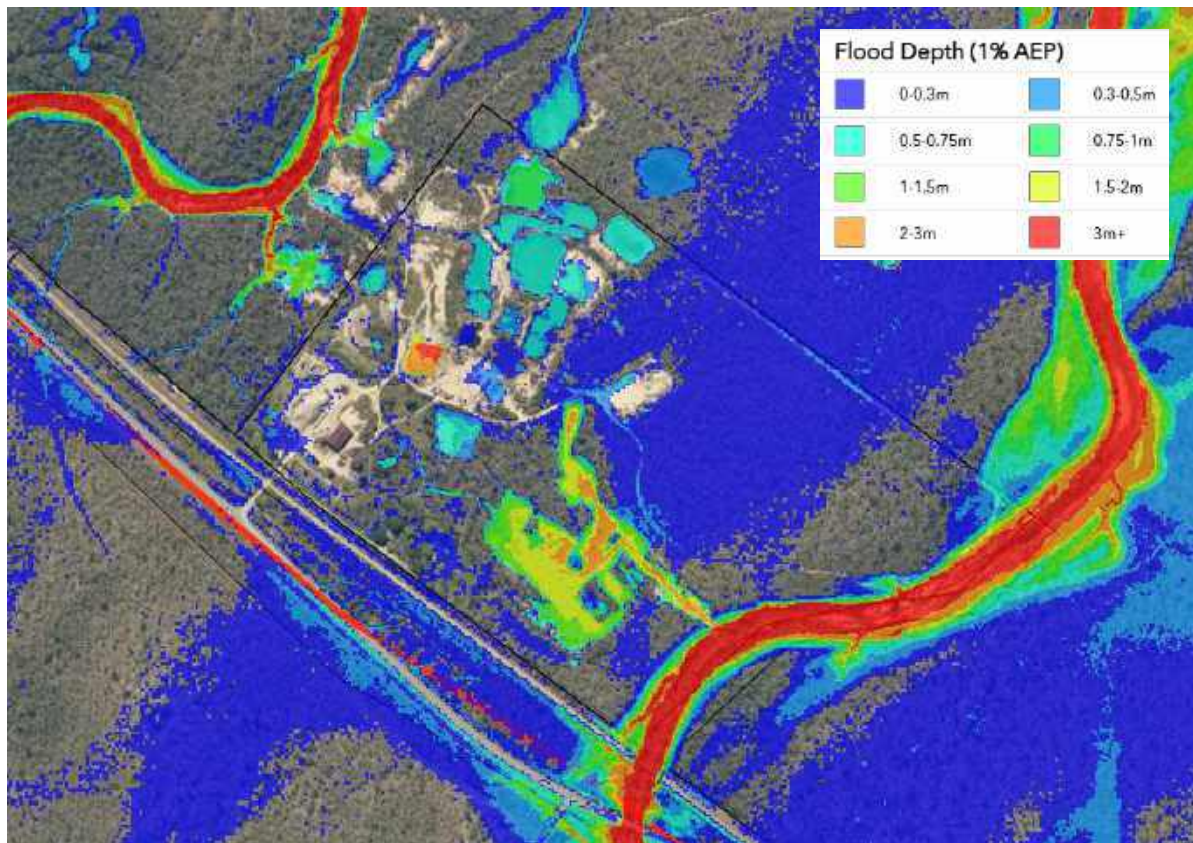


Figure 8. 1% AEP Flood depth (Source: Townsville Flood Information Portal)

5.0 PROPOSED DEVELOPMENT

5.1 PROPOSED SITE DRAINAGE AND CATCHMENTS

The working area of the subject site is proposed with remain relatively the same. Proposed catchment areas are shown in **Figure 7**. Catchments for the working area will be treated by a sediment basin before leaving the site. Existing Pond 1 will become Sediment Basin 1 to treat the landfill area, a new sediment basin (Sediment Basin 2) will be constructed to treat the processing area located in the southwestern region of the subject site and Pond 4 will become Sediment Basin 3. The location of sediment basin 2 is proposed to change to accommodate the size of the basin required and take advantage of a natural depression area on the site. All release points shall be monitoring points to ensure any stormwater release complies with water quality objectives.

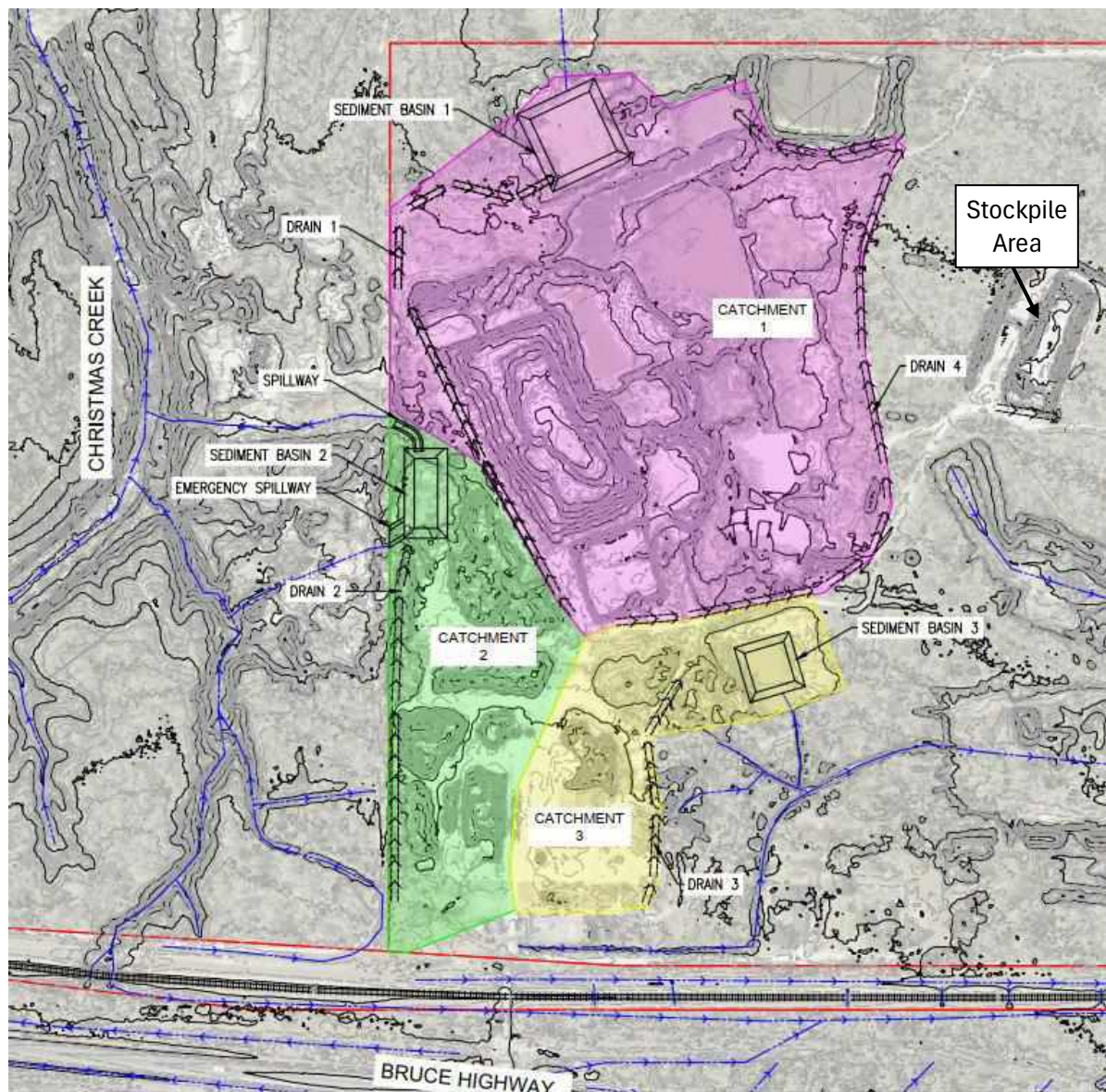


Figure 9. Proposed site plan

Sediment Basin calculations are provided in **Appendix B**. Indicative sediment basin sizes required to meet storage volume requirements is shown in **Figure 9** and is available in **Appendix A**. Existing ponds which are to become Sediment Basin 1 and 3 will likely require little to no amendment with regards to volume capacity. Basin volumes shall be verified to confirm. All basins shall be provided with a 1:6 vehicle access for clean out and a rock lined spillway for discharge. Due to shape of existing basins it is recommended that internal baffles are utilised to increase the effective length to with ratio. Refer to **Figure 10** for example of flow length extension with the use of baffles.

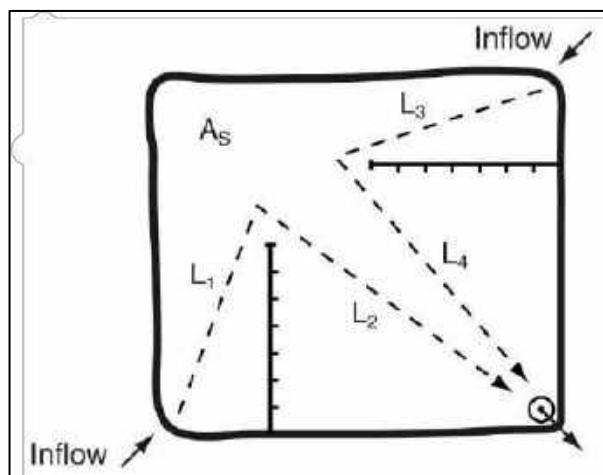


Figure 10. Example of use of baffles to extend effective sediment basin length to with ratio (Source: IECA, *Best Practice Erosion and Sediment Control*, Appendix A, Figure B12 except)

A stockpile area exists to the east of the landfill area. Stormwater from the area generally travels north as overland flow for 150m before departing the site property boundary and does not enter a watercourse for over 400m. Clean water is diverted around the stockpile area. Dirty water from the stockpile area is primarily treated through woven sediment fence and or mulch bund.

5.2 DEVELOPMENT STORMWATER QUANTITY

The working area of the site is proposed to remain relatively the same as previously shown in the existing development application. As such, the site does not proposed increase in stormwater run-off from the subject site. The site discharges to Christmas Creek and Sleeper Log Creek via existing streams and no changes are proposed to discharge locations.

6.0 SITE STORMWATER MANAGEMENT

The subject site is a landfill. The subject site has ongoing risk of contamination of stormwater with sediment from capped unvegetated landfill area, earth stockpiling and unsealed roads. This stormwater management plan has been designed to minimise the disturbance area outside of the active working area, divert clean water around the site and dirty water to sediment basins. Sediment laden water from the operational area will be treated by sediment traps in the form of sediment basins before being discharged from the site.

Stormwater run-off at the site will be managed by:

1. Retain existing release points from the site, with catchments to the discharge locations remaining similar to pre-development conditions. No additional or relocated discharge points are proposed;
2. Stormwater management systems so that little to no run-off from outside the working areas enters the areas and no run-off is released from the area prior to treatment;
3. Maintaining a stormwater management system that is suited to the ongoing development of the site;
4. Constructing and maintenance of all the required structures to capture and treat the onsite stormwater (e.g. diversion channels, catch drains, sediment basins and spillways);
5. Minimising disturbed areas that contain materials prone to erosion;
6. Installing sediment and erosion structures that will control the movement of sediment in areas prone to erosion;
7. Regular maintenance inspections of all the associated structures;
8. Using the stormwater captured in the sediment basins for dust suppression;
9. Recycling the water from the sediment basins in the composting process; and
10. Retaining spill kits on site and training of all staff in the use of the kits.

6.1 STORMWATER MANAGEMENT SYSTEM DESIGN

Any upstream stormwater from disturbed areas will be directed to the proposed sediment basins via diversions channels and bunds. The sediment basins will act as a sediment trap for all runoff and will be allowed to settle before releasing the treated water through the spillways and into the downstream Hutchinson Creek. Sediment will be allowed to settle in the sediment basins before being removed and de-watered.

The design of the stormwater management system includes one sediment basin to capture the runoff from a 24 hour, ARI 5 rainfall event. The sediment basin will discharge via spillway which is designed for an ARI 50 rainfall event.

Design of the spillway, catch drains and diversion channels on the site have been analysed using the Rational Method. The guideline utilised for the calculation of the rational method is as per the Queensland Urban Drainage Manual (QUDM) 2017.

$$Q_y = (C_y \cdot t_y \cdot A) / 360$$

Where: Q_y = peak flow rate (m³/s) for average recurrence interval (ARI) of 'y' years
 C_y = coefficient of discharge (dimensionless) for ARI of 'y' years
 A = area of catchment (Hectares)
 t_y = average rainfall intensity (mm/h) for a design duration of 't' hours and an ARI of 'y' years
 t = the nominal design storm duration as defined by the time of concentration

The design ARI rainfall event for the spillway is an ARI 50 and ARI 5 for diversion channels.

The following steps have been undertaken for calculation of peak flow rates:

- a) Analysis of possible flow paths based on available contours;
- b) Determination of the time of concentration of each flow path;
- c) Adoption of the flow path with the longest time of concentration (t_c) for design;
- d) Determination of the runoff coefficients; and
- e) Calculation of peak flow rate for structure.

For rural creek catchments, the t_c for the flow path has been estimated using Bransby-Williams' equation as given in QUDM 2017 equation 4.9, as follows:

$$t_c = 58 L / (A^{0.1} \cdot S_e^{0.2})$$

Where: t_c = the time of concentration (min)
 L = Length (km) of flow path from catchment divide to outlet
 A = Catchment Area (ha)
 S_e = equal-area slope of stream flow path (%)

The soil erosion and sediment control design has been based on the following constraints:

1. All runoff will be captured and diverted into a system of drains and banks;
2. All runoff from outside the disturbed areas will be diverted around the site where practicable;
3. Runoff from areas where soil and weathered rock are exposed, will pass through sediment basins prior to entering the stormwater management system;
4. Disturbed soil or extremely weathered rock surfaces will be minimised within the catchment area for the stormwater management system;
5. All sediment basins will be **Type D** sediment basins;
6. The stormwater storage capacity on site will be greater than a 24 hour, ARI 10-year event in alignment with Queensland Government, Stormwater Guidelines for Environmentally relevant activities (ESR/2015/1653);
7. Settling zone has been calculated from the following formula:

$$V_s = A \cdot C_v \cdot R_{(1 \text{ in } 10 \text{ year ARI})}$$

8. The sediment storage zone is equal to 50% of the upper settling volume;
9. The release from the catchment basin will be through its respective spillway into the existing table drain;
10. The emergency spillway structure has been designed with a capacity to control an ARI 50 peak flow rate;
11. The subject site has been assumed to be impervious as a worst-case due to the site being heavily trafficked/compacted; and
12. The water level in the basins will be controlled so that at the end of the dry season, the available capacity of the basins is greater than the runoff calculated for a 24 hour, ARI 5 rainfall event.

6.2 WATER QUALITY TESTING

As the use of chemicals, outside of hydrocarbons is limited, exposed soils are the main source of pollutant and as such, water quality testing of release will be restricted to:

1. Total Suspended Solids (TSS) and/or Turbidity; and
2. pH.

All sampling will be conducted in accordance with the Department of Environment and Science's "Monitoring and Sampling Manual" (2018). Sampling will be conducted at the nominated release point/s.

Refer to **Section 8.2** below for Water Quality Objectives (WQO) for the site.

7.0 SOIL EROSION AND SEDIMENT CONTROL MEASURES

All sediment basins, catch drains, diversion channels and diversion bunds are to be constructed and maintained as outlined in Soil Erosion and Sediment Plan drawing attached in **Appendix A**. The measures outlined within the plans are consider the minimum requirements for the site and are subject to on-going maintenance and performance criteria's (i.e. WQO).

7.1 WATER REUSE

Water from the sediment basins storage area may be used for dust suppression etc. within the extraction area, however, must be operated as per the maintenance requirements.

7.2 MONITORING AND MAINTENANCE

Regular monitoring and maintenance of the sediment basin and associated systems (which prevent clean water entry into the catchment and deliver soil laden water to the sediment basins) are required to ensure compliance with the Environmental Authority, Development Approval. Compliance assessments are the responsibility of the Site Environmental Officer or delegate.

Appendix C contains a "Site Inspection checklist" that requires completion at the following times:

- Monthly during operational periods;
- After each weather event where the rainfall registered at the office exceeds **60 millimetres** (30-minute ARI 1 rainfall event);
- At the cessation of activities at the beginning of each wet season; and
- At the commence of work after the wet season.

8.0 SEDIMENT BASINS OPERATING PROCEDURES

In general, all basins onsite have been designed as **Type D** basins and must be operated with the following parameters:

- The water level in the basins will be controlled so that at the end of the dry season, the available capacity of the basins is greater than the runoff calculated for a 24 hour, ARI 5 rainfall event;
- Within **120 hours** of the most recent rainfall event the **upper settling volume** of all sediment basins must be made available to capture and store stormwater runoff from the next rainfall event;
- Prior to a rainfall event the sediment basin should be fully drained; and
- In between storm events the basin may retain but must be de-watered prior to any storm that is likely to produce runoff.

The following sections outline procedures for review the basin performances and appropriate actions to improve the basins performance should they be necessary. This includes:

- De-watering procedures;
- Decant water quality objectives;
- Sediment basin performance assessment procedures;
- Corrective measures: coagulants and flocculants;
- Sediment basin de-silting procedure; and
- Sediment basin maintenance.

8.1 DE-WATERING PROCEDURES

Type D basins are able to retain water within the basins for use on site, but the basins must be drained prior to any storm that is likely to produce significant (i.e. measurable) basin inflows.

All the primary sediment basins require cleaning out so that their capacity is at the design level, prior to the wet season. Drains that are overgrown with vegetation or silted up require maintenance so that their design capacity is realised. Eroded areas require treatments or the construction of control devices that will prevent that level of erosion occurring again.

8.2 DECAN T WATER QUALITY OBJECTIVES

Before water can be discharged from the basin, the water quality being released must comply with all regulatory WQO and requirements. Total Suspended Solids (TSS), water pH, and turbidity have been outlined below in **Table 2**. For details on all other objectives refer to **Table 1** of this report.

Table 2. *Water Quality Objectives*

	Water Quality Objective	Source
Total suspended solids (TSS)	50mg/L	Queensland Government Guideline: Stormwater and Environmentally Relevant Activities
pH	6.5 - 8.0	Queensland Government, Black River Basin Environmental Values and Water Quality Objectives, Fresh waters (WQ1171).
Turbidity	50 NTU	Queensland Government, Black River Basin Environmental Values and Water Quality Objectives, Fresh waters (WQ1171).

8.3 SEDIMENT BASIN PERFORMANCE ASSESSMENT PROCEDURES

A performance review should be carried out on all basins. Although it is desirable for sediment basins to achieve the desired water quality standard during every storm, circumstances can exist that will cause uncontrolled discharges to exceed these standards.

Sediment basin is not designed to achieve specific water quality; rather, designed to either capture and treat a specific volume of runoff, or to treat discharges up to a specified peak flow.

Sediment basin shall be monitored by the Site Environmental Officer or a suitably trained site personnel member. The operator shall regularly inspect the critical design features of the basin and review the basin's performance against its design expectations. If a water quality failure is observed, then the operator should endeavour to take multiple samples during these releases to document the durations of such exceedances. Adjustments to the basin, and the basins operations, should occur after each observed failure. The use of such adaptive management practices is critical

to achieving the optimum performance of any sediment basin. **Figure 11** below outlines the sediment basin performance assessment process.

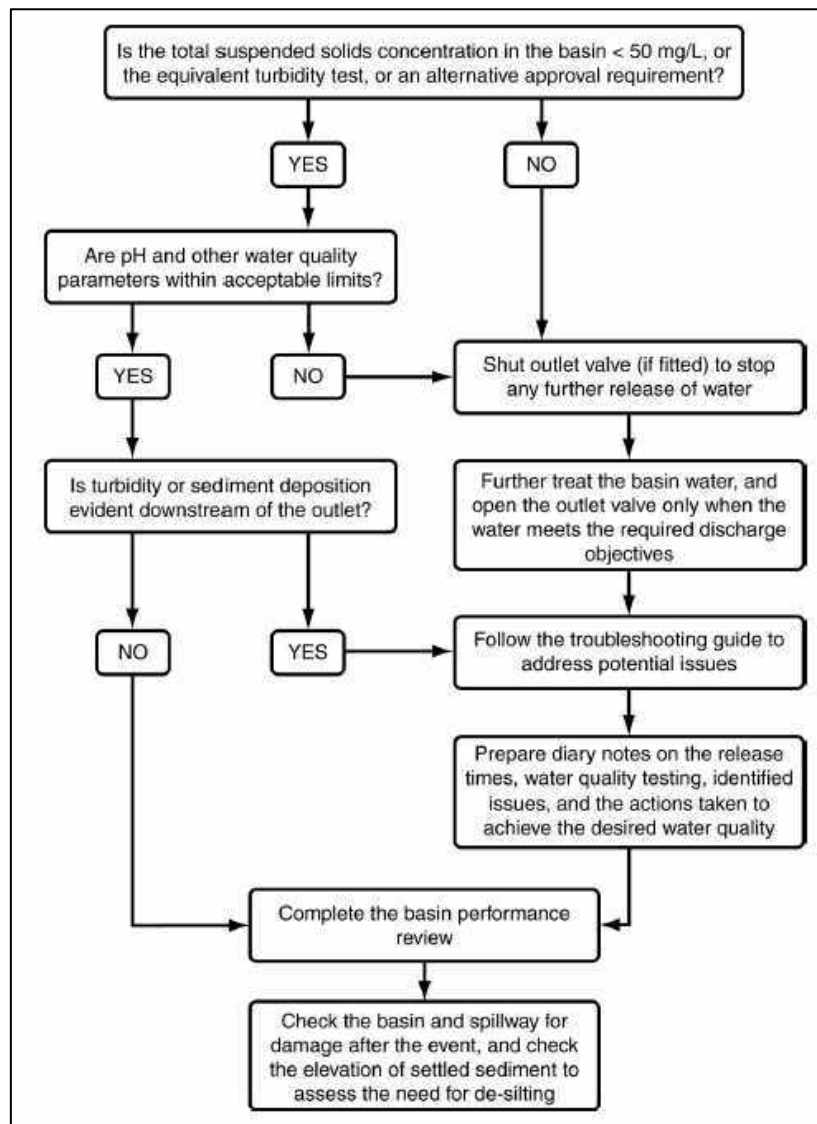


Figure 11. Basin performance assessment process

8.4 CORRECTIVE MEASURES: COAGULANTS AND FLOCCULANTS

If the water being discharged does not satisfy the specified water quality objectives, chemical treatments may be used as a means of promoting settling within the sediment basin.

8.4.1 *Coagulation*

Clay is the predominant particle type found in suspension within runoff captured by sediment basin. Clay particles are extremely small (less than 0.002 mm in size) and will not settle readily, if at all, even in still water.

When negatively charged clay articles and other colloids are suspended in water, they tend to repulse each other. The cumulative effects of the repulsion of a vast number of small particles prevents their aggregation into larger, heavier particles that would settle more readily.

A coagulant is utilised to neutralise or destabilise the charge on clay or colloidal particles. Most clay particles in water are negatively charged and therefore a positive ion (cation) can be used as a coagulant.

Charge neutralisation in water can occur very rapidly; therefore, mixing is important for effective treatment of turbid water. After a short time, the ions form hydroxide gels which trap particles, or bridge between particles, to create a floc that may settle.

There is possibility of overdosing with coagulants and building up excess positive charge, hence complying within the optimum dosage range is critical. When a cationic coagulant is overdosed, the clay and colloidal particles will take on positive charge and repel each other and limit any settling.

The dosage range of a coagulant will vary depending on the site water chemistry. Different coagulants also have an optimum pH range over which they are effective and pH buffering may be required depending on the coagulant and water chemistry.

The flocs generated by coagulation are generally small and compact. They can also be broken down under high velocity or high shear conditions.

8.4.2 *Flocculation*

Flocculation is a process of contact and adhesion whereby the particles of a dispersion form larger-size clusters. Flocculation can occur through the use of coagulant, flocculant, or both. Coagulants achieve flocculation through charge neutralization whereas flocculants physically bind clay and colloidal particles together.

The use of natural and synthetic polymeric flocculants can be used to generate larger more stable flocs and may reduce treatment times. This is achieved by brining dispersed particles together increasing the effective particle size. Flocculants can be used alone, or in combination with coagulants.

It is also noted that, at lower pH, the toxicity increases with an effect of possible major concern being the coagulation of mucus on the gills of fish. Please note, from the Australian and New Zealand Environmental and Conservation council (ANZECC) guideline to protect 99% of species which applies to HEV waters, aluminium must be less than **2.1µg/m**.

8.4.3 *Selection of coagulants and/or flocculants - Jar testing*

The purpose of jar testing is to select appropriate coagulants and/or flocculants along with determining their optimum dose rates. The recommended testing procedure is described below.

Jar tests are conducted on a four or six-place gang stirrer. Jars (beakers) with different treatment programs or the same product at different dosages are run side by side, and the results compared to an untreated beaker. Where access to a laboratory is not practicable, field test can be undertaken following a similar process to that described in the procedure with stirring and settling timeframes in different beakers. Testing should be undertaken by a suitably qualified person in the use of coagulants and flocculants.

Preference is given to the use of raw water collected on site which is representative of runoff (including water temperature, which affects settlement characteristics) during the life cycle of the sediment basin. Where raw water is not available, representative soil from the site can be mixed with water to create indicative runoff water chemistry. To create a water sample from soil, a water/soil solution procedure is provided in **Appendix D**.

Sometimes both a coagulant and flocculant are required to achieve the desired treatment efficiencies. In these situations, the coagulant should be tested first, followed by the flocculant.

For the sediment basin, a Floc Performance Report should be prepared to determine a suitable chemical and dose rate for the sediment basin. A Floc Performance Report template is provided in **Appendix D**. A single floc report for multiple sediment basin on a site should only be undertaken when soil properties are uniform for all basins.

8.4.4 *Application of coagulants and flocculants*

Mixing of coagulants and flocculants is critical to the successful treatment of turbid water. Guidance from chemical suppliers or a suitably qualified sediment basin operator shall be sought for appropriate application methods including safety precautions.

8.5 DE-SILTING PROCEDURES

An appropriately marked (e.g. painted) **de-silting marker post must be installed in the basin to indicate the top of the sediment storage zone.**

The basin must be de-silted if:

- the next storm is likely to cause the settled sediment to rise above this marker point; or
- settled sediment has exceeded 90% of the total nominated sediment storage volume; or
- the settled sediment is already above this marker point.

8.6 SEDIMENT BASIN MAINTENANCE

Sediment basin maintenance shall be carried out as follows:

1. Inspect the sediment basin during the following periods:
 - i. During construction to determine whether machinery, falling trees, or construction activity has damaged any components of the sediment basin. If damage has occurred, damaged is to be repaired;
 - ii. After each runoff event. Inspect the erosion damage at flow entry and exit points. If damage has occurred, make the necessary repairs;
 - iii. At least weekly during the wet season (**January to March**) otherwise at least fortnightly; and
 - iv. Prior to, and immediately after, periods of 'stop work' or site 'shut down'.
 2. Clean out accumulated sediment when it reaches the marker board/post and resort the original storage volume. Place sediment in a disposal area or, if appropriate, mix with dry soil on the site.
 3. Do not dispose of sediment in a manner that will create an erosion or pollution hazard;
 4. Check all visible pipe connections for leaks and repair as necessary;
 5. Check fill material in the dam for excess settlement, slumping of the slopes or piping between the conduit and the embankment; make all necessary repairs;
 6. Remove all trash and other debris from the basin and rise; and
- Submerged in flow pipes must be inspected and de-silted (as required) after each inflow event.

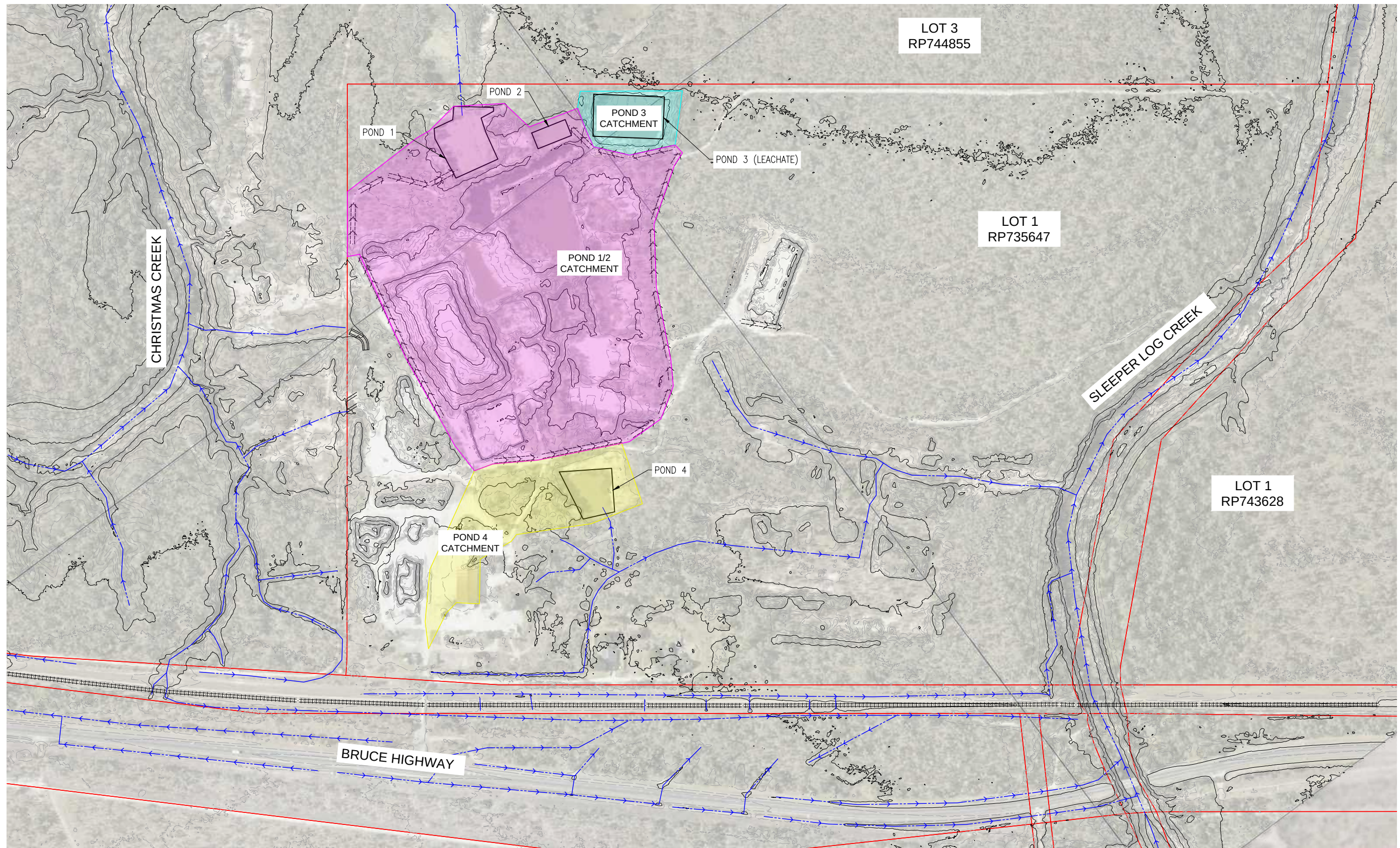
9.0 SUMMARY

The subject site has been assessed for stormwater impacts and has found the following:

- The working area of the site is proposed to remain relatively the same as previously shown in the existing development application.
- Subject site does not propose to significantly increase stormwater run-off from the subject site.
- Stormwater discharges to Christmas Creek and Sleeper Log Creek via existing streams and no changes are proposed to discharge locations.
- Three sediment basins are required to treat run-off for sediment prior to discharge from the subject site.
 - o Existing Ponds 1 and 4 shall be modified and utilised as the sediment basins for catchments 1 and 3.
 - o A new sediment basin, previously approved under the original Development Application but not yet built, shall be constructed for treatment the southwestern area of the subject site.

APPENDIX A

EROSION AND SEDIMENT CONTROL PLANS

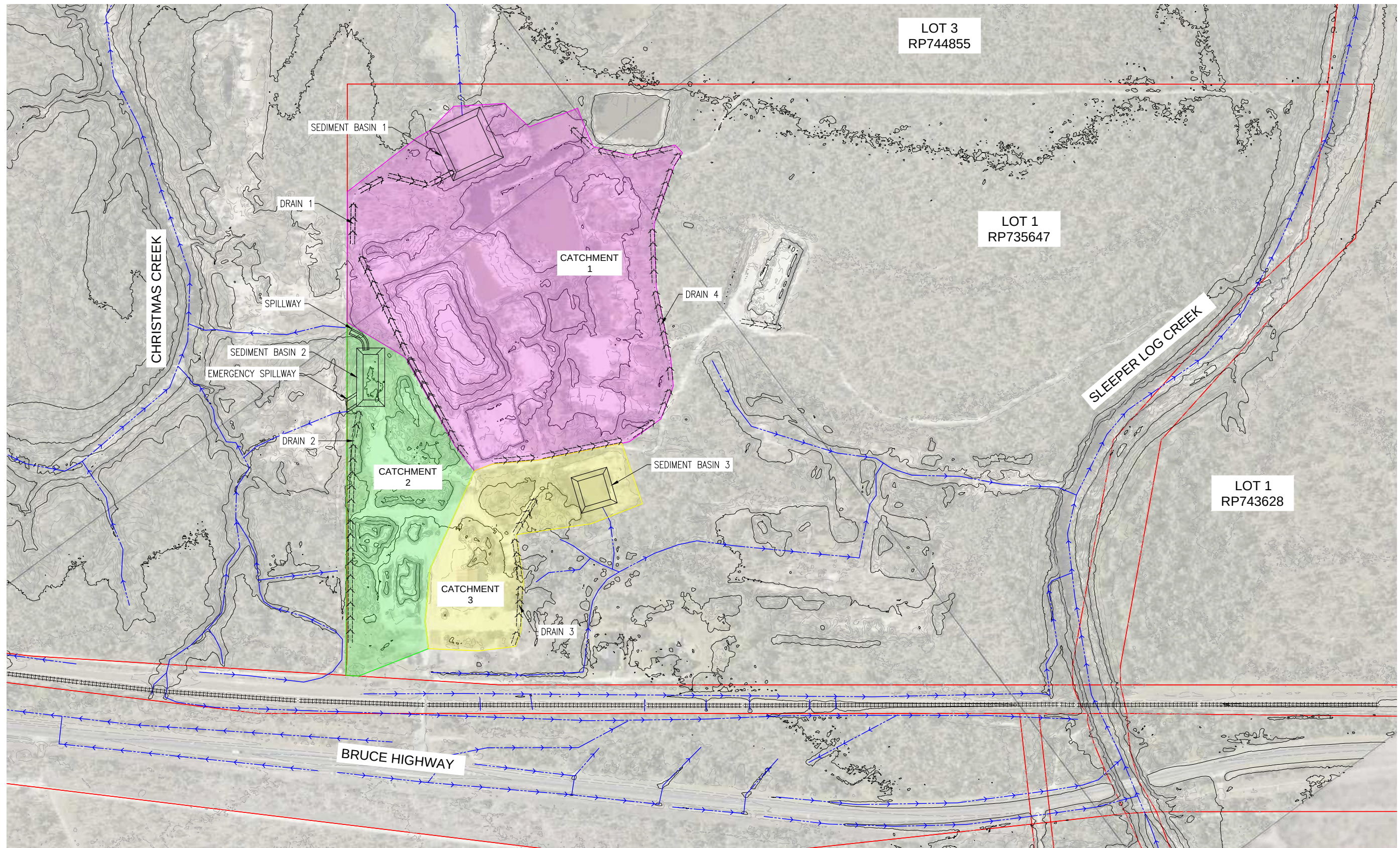


EXISTING STORMWATER CATCHMENT PLAN
SCALE 1:2000

REVISIONS					HORIZ. DATUM		CERTIFICATION		ABSOLUTE WASTE PTY LTD		SCALE	AS SHOWN
					VERT. DATUM		BRET LANGTREE MIEAust, NER, RPEQ 11932		42386 BRUCE HIGHWAY, BLUEWATER		SHEET	SHEET 1 OF 4
					DRG. FILE		COPYRIGHT ©		LOT 1 on RP735647		REVISION	A
	No.	BY	DATE	DESCRIPTION	DRAWN	N.P	31/07/25	These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.	EXISTING STORMWATER CATCHMENT PLAN		DRG No.	1343-SMP-001
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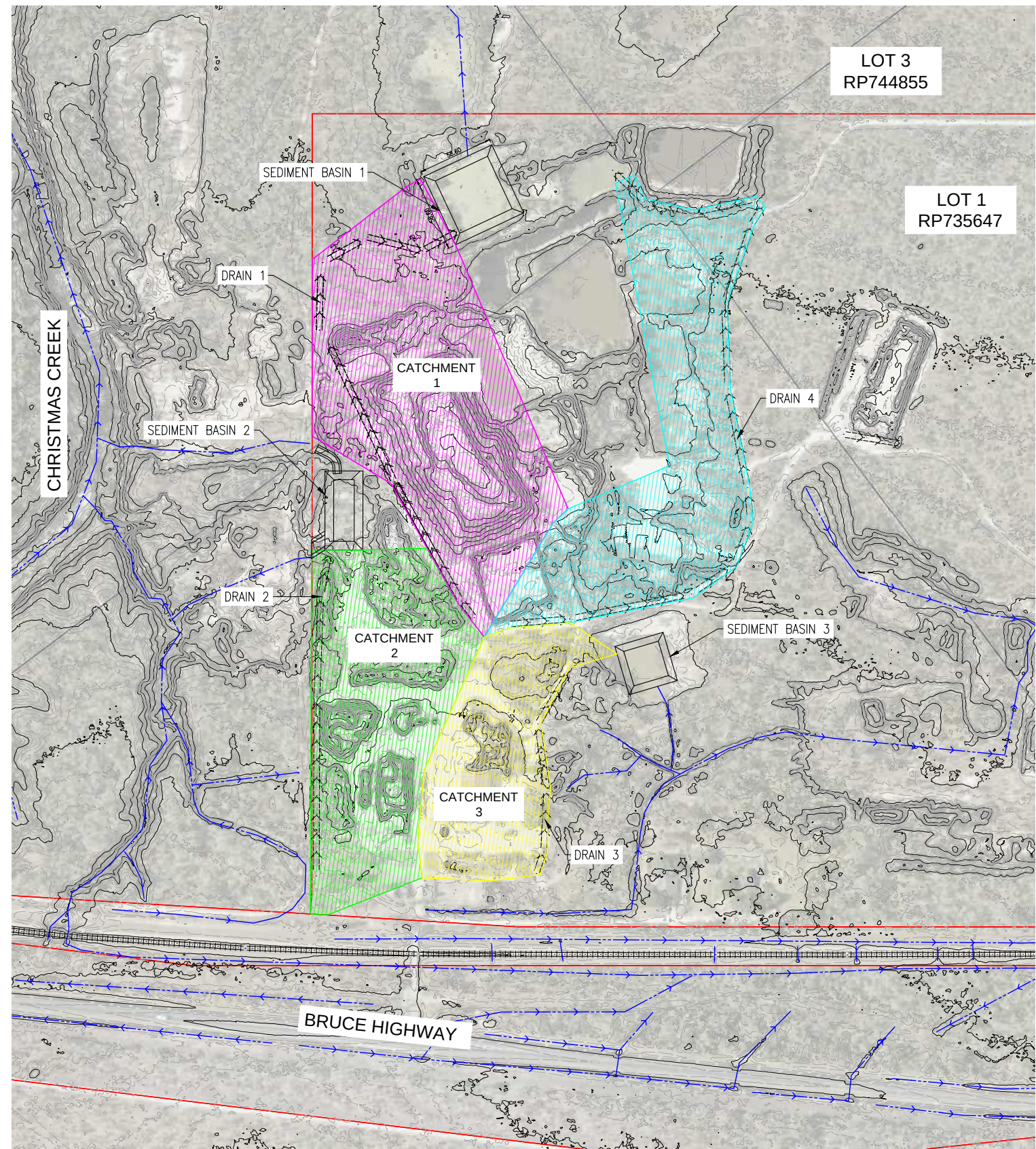


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e brett@langtreeconsulting.com.au

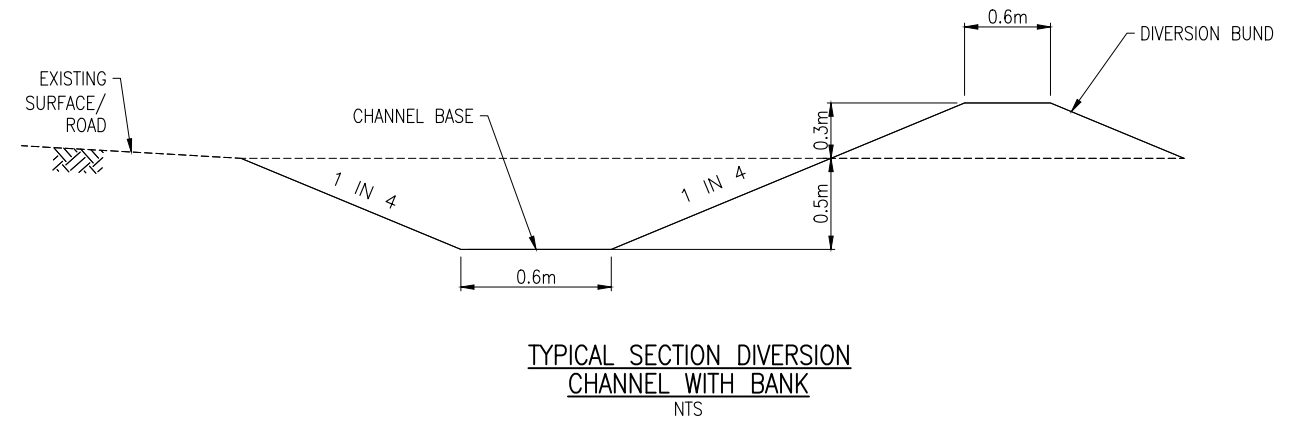


PROPOSED STORMWATER CATCHMENT PLAN
SCALE 1:2000

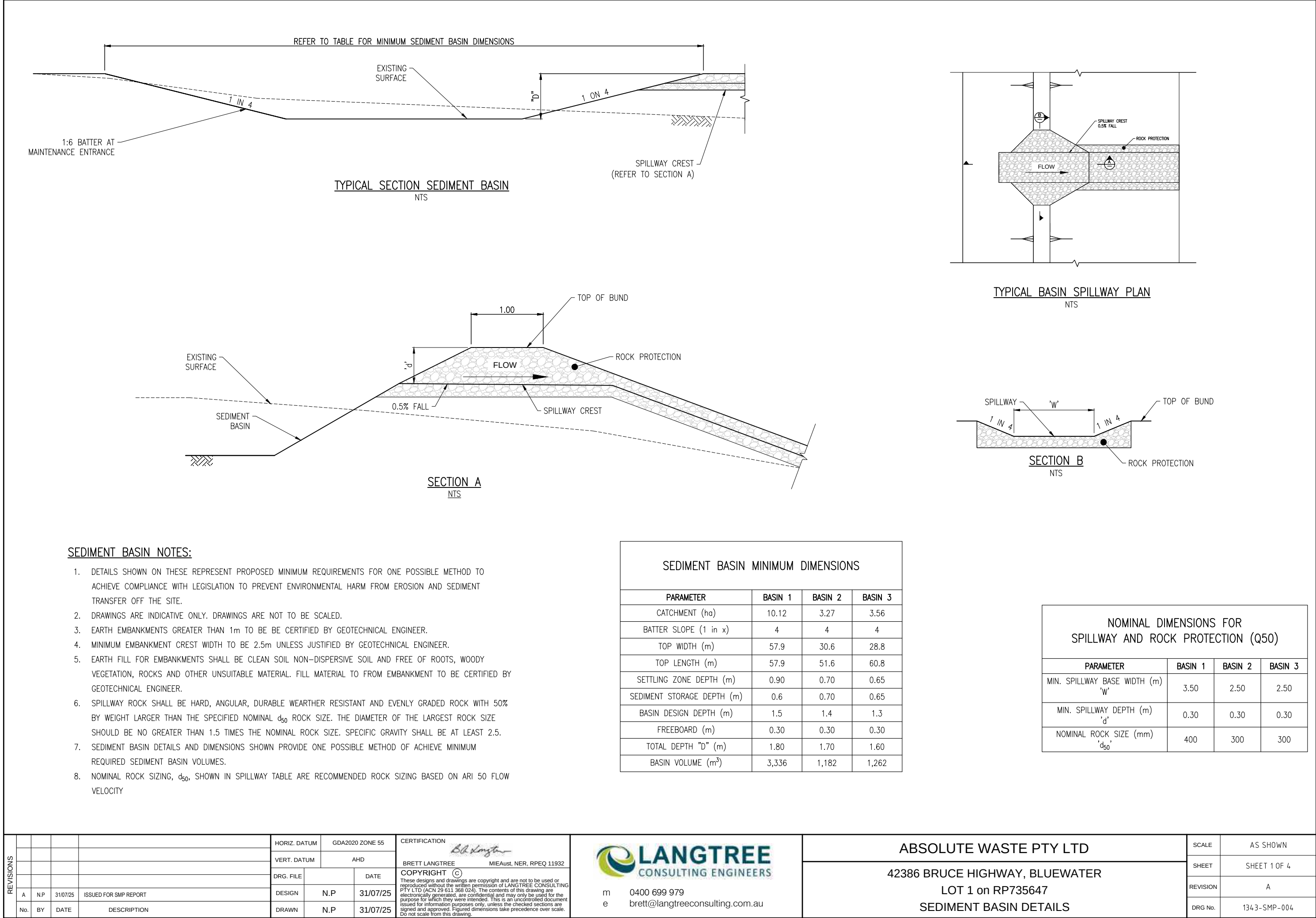
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					DRG. FILE	DATE		COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.		LOT 1 on RP735647		REVISION	A	
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	No.	BY	DATE	DESCRIPTION	DRAWN	N.P	31/07/25							



DRAIN CATCHMENT AREA PLAN
SCALE 1:2000



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					VERT. DATUM	AHD	BRETT LANGTREE MIEAust, NER, RPEQ 11932		42386 BRUCE HIGHWAY, BLUEWATER		SHEET	SHEET 3 OF 4
					DRG. FILE	DATE	COPYRIGHT © These designs and drawings are copyright and are not to be used or reproduced without the written permission of LANGTREE CONSULTING PTY LTD (ACN 29 611 368 024). The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing.		LOT 1 on RP735647		REVISION	A
	No.	BY	DATE	DESCRIPTION	DESIGN	N.P	31/07/25		DRAIN CATCHMENTS		DRG No.	1343-SMP-003



APPENDIX B

STORMWATER ASSESMENT

42386 Bruce Highway, Bluewater

Hydrologic & Hydraulic Assessment

Hydrology Assessment - Time of Concentration, t_c

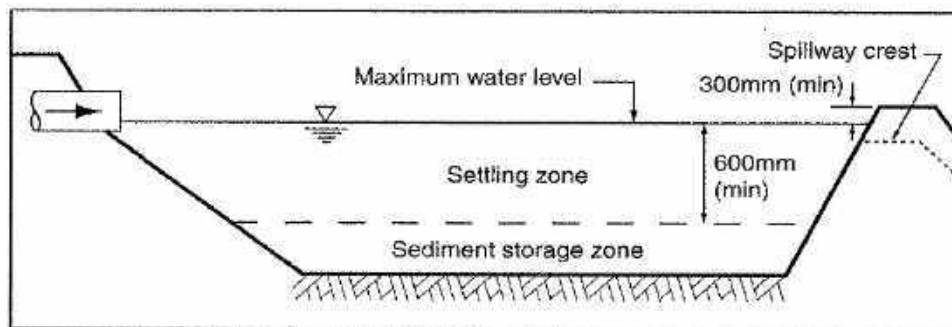
Structure Type	Location ID	Catchment Area	Time of Concentration		
			Bransby Williams Eqt.		
			Flow Path	Slope	t_c
		(ha)	km	(%)	(min)
Spillway SB1	SB1	10.12	0.680	0.05	57.0
Spillway SB2	SB2	3.28	0.537	0.05	50.4
Spillway SB3	SB3	3.56	0.250	0.05	23.3
Diversion Channel 1	DC1	3.53	0.680	0.05	63.3
Diversion Channel 2	DC2	2.78	0.323	0.05	30.8
Diversion Channel 3	DC3	1.69	0.217	0.05	21.7
Diversion Channel 4	DC4	3.20	0.560	0.05	52.6

Hydrology Assessment - Design Flow, Q

Structure Type	Location ID	Design Flow								
		Design ARI	t_c	Rainfall	I_{10}	Fraction	Frequency	C_{10}	C_y	Flow Rate
		y	(min)	(mm/hr)	(mm/hr)					(m ³ /s)
Spillway SB1	SB	50	57.0	110.0	78.86	1	1.15	0.90	1.00	3.096
Spillway SB2	SB	50	50.4	110.0	78.86	1	1.15	0.90	1.00	1.003
Spillway SB3	SB	50	23.3	110.0	78.86	1	1.15	0.90	1.00	1.089
Diversion Channel 1	DC1	5	63.3	76.6	78.86	1	0.95	0.70	0.67	0.500
Diversion Channel 2	DC2	5	30.8	111.0	78.86	1	0.95	0.70	0.67	0.571
Diversion Channel 3	DC3	5	21.7	67.6	78.86	1	0.95	0.70	0.67	0.211
Diversion Channel 4	DC4	5	52.6	97.8	78.86	0	0.95	0.70	0.67	0.579

42386 Bruce Highway, Bluewater

Sediment Basin Design



INPUT

Catchment (SB1)

1) Proposed Sediment Basin Dimensions

Parameter	Value	Comments
Basin Type	D	To be confirmed upon receive of geotechnical results
Catchment (ha)	10.12	
Batter Slope (1 on x)	4	Assumed batter slope
Top Length (m)	57.9	IECA Min. desirable length to width ratio 3:1 or install baffles
Bottom Width (m)	43.5	Assumed dimension
Bottom Length (m)	43.5	
Design Water Depth (m)	1.50	
Freeboard (m)	0.3	IECA minimum freeboard;
Total Basin Depth (m)	1.80	Overall depth including freeboard

2) Settling Zone & Sediment Storage Zone

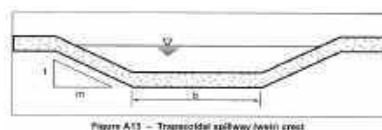
Parameter	Units	Value	Comments
Batter slope	m/m	0.250	
Volumetric runoff coefficient, C_v	-	1.00	Assumed worse case compacted clay
Catchment area, A	ha	10.12	
Constant, K_1	-	17	IECA Appendix B - Table B4 (2008)
Constant, K_2	-	11.2	$y\% = 80\%$ - Basins with a design life >6 months
Average rainfall intensity, $I_{(10yr,24hr)}$	mm/hr	12.05	Refer IFD
Rainfall depth, $R_{(y\%,1-day)}$	-	216.0	$R = K_1 \cdot I_{(10yr,24hr)} + K_2$
Settling volume, V_s	m ³	2186	DETSI Stormwater and environmentally relevant activities $V_s = R \cdot C_v \cdot A$
Sediment storage volume	m ³	1093	DETSI Stormwater and environmentally relevant activities, IECA Table B8 - 50% of settling volume
Total Sediment Basin Volume required	m ³	3279	

3) Proposed Sediment Basin Dimension Checks

Parameter	Units	Value	Comments
Basin Design Depth	m	1.50	
Top Width	m	55.5	
Top Length	m	55.5	
Bottom Width	m	43.5	
Bottom Length	m	43.5	
Proposed Sediment Basin Volume	m ³	3336	OK: Equal or greater than total volume required

4) Proposed Settling Zone volume and depth

Parameter	Units	Value	Comments
Proposed Settling Depth	m	0.9	Iterate
Top Width	m	55.5	
Top Length	m	55.5	
Bottom Width	m	48.3	
Bottom Length	m	48.3	
Proposed Settling Volume	m ³	2291	OK: Equal or greater than Settling Volume required



5) Trapezoidal Spillway Wier Crest

Parameter	Units	Value	Comments
ARI 50 Flow	m ³ /s	3.10	
Water Depth	m	0.19	Water depth at ARI 50 flow
Spillway Slope (1 on x)	m	4	
Spillway Base Width	m	3.5	
Flow (Q)	m ³ /s	2.10	WARNING: Lesser than ARI 50 Flow

6) Minimum Sediment Basin Sizing

Batter Slope (1 on x)	4	
Basin Top of Bank Width	57.90	m
Basin Top of Bank Length	57.90	m
Settling Zone Depth	0.90	m
Sediment Storage Depth	0.60	m
Basin Design Depth	1.50	m
Freeboard	0.30	m
Overall Basin Depth incl. freeboard	1.80	m
Sediment Basin Storage Capacity	3336	m ³

7) Rock Size

SF	1.50	
k ₁	1	
k ₂	1.05	
S _O	0.263	m/m
q	0.885	m ³ /s/m
Sr	2.600	
d ₅₀	0.486	m
Adopted d ₅₀	400	mm
Minimum thickness	0.777	m

Safety Factor (high risk)
 Correction factor for rock grading (angular)
 Correction factor for rock grading (well graded)
 Bed slope
 flow per unit width
 Specific gravity of rock (granite)
 Mean Rock size of which 50% are smaller
 Adopted d₅₀
 Size distribution d50/d90 = 0.8

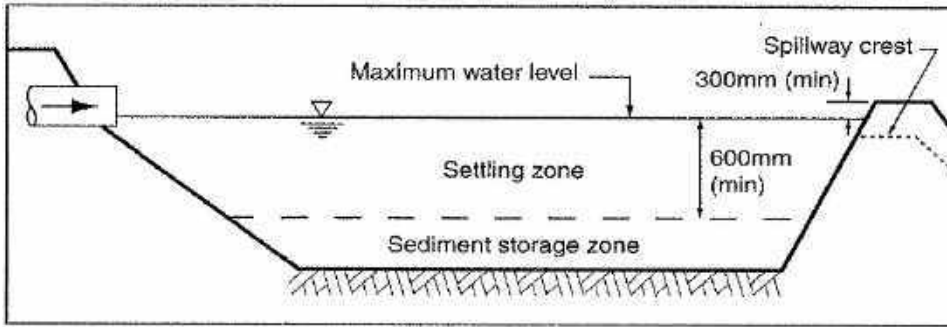
8) Dissapator Length

Min. length of dissipator	3.86	m
Recess depth	0.414	m

Catchment and Creeks, Energy Dissipators, Table 1 - Energy Dissipators
 Catchment and Creeks, Energy Dissipators, Table 2

42386 Bruce Highway, Bluewater

Sediment Basin Design



INPUT

Catchment (SB1)

1) Proposed Sediment Basin Dimensions

Parameter	Value	Comments
Basin Type	D	To be confirmed upon receive of geotechnical results
Catchment (ha)	3.28	
Batter Slope (1 on x)	4	Assumed batter slope
Top Length (m)	51.6	IECA Min. desirable length to width ratio 3:1 or install baffles
Bottom Width (m)	17	Assumed dimension
Bottom Length (m)	38	
Design Water Depth (m)	1.40	
Freeboard (m)	0.3	IECA minimum freeboard;
Total Basin Depth (m)	1.70	Overall depth including freeboard

2) Settling Zone & Sediment Storage Zone

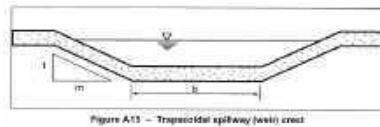
Parameter	Units	Value	Comments
Batter slope	m/m	0.250	
Volumetric runoff coefficient, C_v	-	1.00	Assumed worse case compacted clay
Catchment area, A	ha	3.28	
Constant, K_1	-	17	IECA Appendix B - Table B4 (2008)
Constant, K_2	-	11.2	$y\% = 80\%$ - Basins with a design life >6 months
Average rainfall intensity, $I_{(10yr,24hr)}$	mm/hr	12.05	Refer IFD
Rainfall depth, $R_{(y\%,1-day)}$	-	216.0	$R = K_1 \cdot I_{(10yr,24hr)} + K_2$
Settling volume, V_s	m ³	708	DETSI Stormwater and environmentally relevant activities $V_s = R \cdot C_v \cdot A$
Sediment storage volume	m ³	354	DETSI Stormwater and environmentally relevant activities, IECA Table B8 - 50% of settling volume
Total Sediment Basin Volume required	m ³	1063	

3) Proposed Sediment Basin Dimension Checks

Parameter	Units	Value	Comments
Basin Design Depth	m	1.40	
Top Width	m	28.2	
Top Length	m	49.2	
Bottom Width	m	17	
Bottom Length	m	38	
Proposed Sediment Basin Volume	m ³	1182	OK: Equal or greater than total volume required

4) Proposed Settling Zone volume and depth

Parameter	Units	Value	Comments
Proposed Settling Depth	m	0.7	Iterate
Top Width	m	28.2	
Top Length	m	49.2	
Bottom Width	m	22.6	
Bottom Length	m	43.6	
Proposed Settling Volume	m ³	767	OK: Equal or greater than Settling Volume required



5) Trapezoidal Spillway Wier Crest

Parameter	Units	Value	Comments
ARI 50 Flow	m ³ /s	1.00	
Water Depth	m	0.15	Water depth at ARI 50 flow
Spillway Slope (1 on x)	m	4	
Spillway Base Width	m	2.5	
Flow (Q)	m ³ /s	1.01	OK: Equal or greater than ARI 50 Flow

6) Minimum Sediment Basin Sizing

Batter Slope (1 on x)	4	
Basin Top of Bank Width	30.60	m
Basin Top of Bank Length	51.60	m
Settling Zone Depth	0.70	m
Sediment Storage Depth	0.70	m
Basin Design Depth	1.40	m
Freeboard	0.30	m
Overall Basin Depth incl. freeboard	1.70	m
Sediment Basin Storage Capacity	1182	m ³

7) Rock Size

SF	1.50	
k ₁	1	
k ₂	1.05	
S _O	0.263	m/m
q	0.401	m ³ /s/m
Sr	2.600	
d ₅₀	0.293	m
Adopted d ₅₀	300	mm
Minimum thickness	0.469	m

Safety Factor (high risk)
 Correction factor for rock grading (angular)
 Correction factor for rock grading (well graded)
 Bed slope
 flow per unit width
 Specific gravity of rock (granite)
 Mean Rock size of which 50% are smaller
 Adopted d₅₀
 Size distribution d50/d90 = 0.8

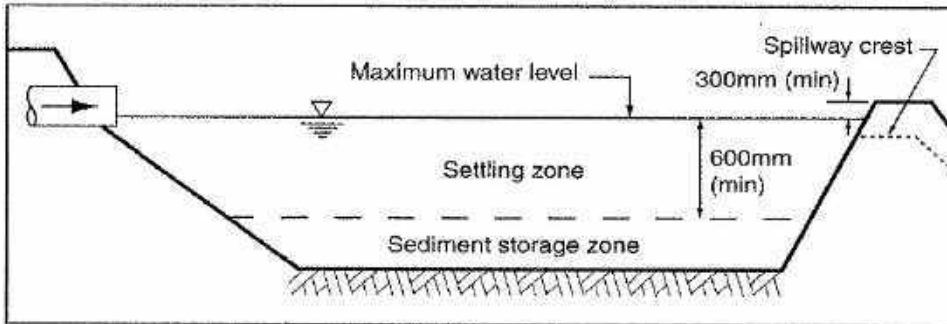
8) Dissapator Length

Min. length of dissipator	3.86	m
Recess depth	0.414	m

Catchment and Creeks, Energy Dissipators, Table 1 - Energy Dissipators
 Catchment and Creeks, Energy Dissipators, Table 2

42386 Bruce Highway, Bluewater

Sediment Basin Design



INPUT

Catchment (SB1)

1) Proposed Sediment Basin Dimensions

Parameter	Value	Comments
Basin Type	D	To be confirmed upon receive of geotechnical results
Catchment (ha)	3.56	
Batter Slope (1 on x)	4	Assumed batter slope
Top Length (m)	60.8	IECA Min. desirable length to width ratio 3:1 or install baffles
Bottom Width (m)	16	Assumed dimension
Bottom Length (m)	48	
Design Water Depth (m)	1.30	
Freeboard (m)	0.3	IECA minimum freeboard;
Total Basin Depth (m)	1.60	Overall depth including freeboard

2) Settling Zone & Sediment Storage Zone

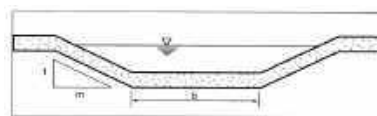
Parameter	Units	Value	Comments
Batter slope	m/m	0.250	
Volumetric runoff coefficient, C_v	-	1.00	Assumed worse case compacted clay
Catchment area, A	ha	3.56	
Constant, K_1	-	17	IECA Appendix B - Table B4 (2008)
Constant, K_2	-	11.2	$y\% = 80\%$ - Basins with a design life >6 months
Average rainfall intensity, $I_{(10yr,24hr)}$	mm/hr	12.05	Refer IFD
Rainfall depth, $R_{(y\%,1-day)}$	-	216.0	$R = K_1 \cdot I_{(10yr,24hr)} + K_2$
Settling volume, V_s	m ³	769	DETSI Stormwater and environmentally relevant activities $V_s = R \cdot C_v \cdot A$
Sediment storage volume	m ³	384	DETSI Stormwater and environmentally relevant activities, IECA Table B8 - 50% of settling volume
Total Sediment Basin Volume required	m ³	1153	

3) Proposed Sediment Basin Dimension Checks

Parameter	Units	Value	Comments
Basin Design Depth	m	1.30	
Top Width	m	26.4	
Top Length	m	58.4	
Bottom Width	m	16	
Bottom Length	m	48	
Proposed Sediment Basin Volume	m ³	1262	OK: Equal or greater than total volume required

4) Proposed Settling Zone volume and depth

Parameter	Units	Value	Comments
Proposed Settling Depth	m	0.65	Iterate
Top Width	m	26.4	
Top Length	m	58.4	
Bottom Width	m	21.2	
Bottom Length	m	53.2	
Proposed Settling Volume	m ³	805	OK: Equal or greater than Settling Volume required



5) Trapezoidal Spillway Wier Crest

Parameter	Units	Value	Comments
ARI 50 Flow	m ³ /s	1.09	
Water Depth	m	0.16	Water depth at ARI 50 flow
Spillway Slope (1 on m)	m	4	
Spillway Base Width	m	2.5	
Flow (Q)	m ³ /s	1.14	OK: Equal or greater than ARI 50 Flow

6) Minimum Sediment Basin Sizing

Batter Slope (1 on x)	4	
Basin Top of Bank Width	28.80	m
Basin Top of Bank Length	60.80	m
Settling Zone Depth	0.65	m
Sediment Storage Depth	0.65	m
Basin Design Depth	1.30	m
Freeboard	0.30	m
Overall Basin Depth incl. freeboard	1.60	m
Sediment Basin Storage Capacity	1262	m ³

7) Rock Size

SF	1.50	
k ₁	1	
k ₂	1.05	
S _O	0.263	m/m
q	0.436	m ³ /s/m
Sr	2.600	
d ₅₀	0.309	m
Adopted d ₅₀	300	mm
Minimum thickness	0.494	m

Safety Factor (high risk)
 Correction factor for rock grading (angular)
 Correction factor for rock grading (well graded)
 Bed slope
 flow per unit width
 Specific gravity of rock (granite)
 Mean Rock size of which 50% are smaller
 Adopted d₅₀
 Size distribution d50/d90 = 0.8

8) Dissapator Length

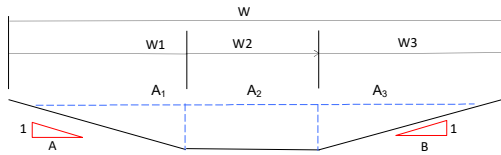
Min. length of dissipator	3.86	m
Recess depth	0.414	m

Catchment and Creeks, Energy Dissipators, Table 1 - Energy Dissipators
 Catchment and Creeks, Energy Dissipators, Table 2

42386 Bruce Highway, Bluewater

Open drain - Trapezoidal Shaped

Mannings



Location ID	Channel Flow Properties								Flow Properties						Overall Drain Dimensions					
	Design flow rate Q_{des} (m ³ /s)	LHS Slope A (m)	RHS Slope B (m)	Base width (m)	Material	Manning's n	Channel Slope S (m/m)	Flow depth H (m)	Flow Area A (m ²)	Wetted perimeter P (m)	Hydraulic Radius R (m)	Capacity Q (m ³ /s)	Velocity V (m/s)	$D_{50} \times V_{ave}$	Freeboard (m)	Drain Depth D (m)	LHS Batter width W1 (m)	Base width W2 (m)	RHS Batter width W3 (m)	Total width W (m)
DC1	0.50	4.0	4.0	0.6	Excavated earth channel	0.025	0.050	0.20	0.280	2.249	0.100	0.540	1.927	0.385	0.150	0.350	1.400	0.600	1.400	3.400
DC2	0.57	4.0	4.0	0.6	Excavated earth channel	0.025	0.050	0.21	0.302	2.332	0.100	0.583	1.927	0.405	0.150	0.360	1.440	0.600	1.440	3.480
DC3	0.21	4.0	4.0	0.6	Excavated earth channel	0.025	0.050	0.20	0.280	2.249	0.100	0.540	1.927	0.385	0.150	0.350	1.400	0.600	1.400	3.400
DC4	0.58	4.0	4.0	0.6	Excavated earth channel	0.025	0.050	0.22	0.326	2.414	0.100	0.627	1.927	0.424	0.150	0.370	1.480	0.600	1.480	3.560

Note: All channels are to have min 0.15 freeboard. Overall dimensions does not include any required earth bunds

Input
Output

APPENDIX C

INSPECTION CHECK LIST

Site Inspection Checklist

Inspection Date:	Inspection by:		Location: Absolute Waste Bluewater	
Structure	Status W – Working R – Requires repairs M – Requires maintenance D – Requires redesign N – Not applicable	Urgency U – Urgent M – Maintenance Y – Yearly shutdown	Action required	Action completion date/ details
Drain 1 (D1) Catchment				
Diversion bank and channel around the perimeter				
Diversion bank around the stockpile area/processing area				
Clean water diversion drain at bottom of haul road				
Internal road				
Rubbish/waste around the site				

Structure	Status	Urgency	Action required	Action completion date/ details
Drain 2 (D2) Catchment				
Diversion bank and channel around the perimeter				
Diversion bank around the stockpile area/processing area				
Internal Road				
Rubbish/waste around the site				
Drain 3 (D3) Catchment				
Diversion bank and channel around the perimeter				
Diversion bank around the stockpile area/processing area				
Clean water diversion at top of catchment				
Internal Road				
Rubbish/waste around the site				

Structure	Status	Urgency	Action required	Action completion date/ details
Stockpile Area				
Diversion channel/bank for clean water diversion around stockpile area				
Sediment fence and/or mulch row down stream of stockpile area				
Stockpile cover				
Rubbish/waste around the site				

Structure	Status	Urgency	Action required	Action completion date/ details
Sediment Basin (SB1)				
Sediment basin				
Release structures (Spillway, emergency spillway, outlet dissipation)				
Visual quality of water in pond: a. Other comments b. Colour c. Smell d. Volume (%) e. Flora Present f. Fauna Present				
Perimeter bank				
Clean water diversion around basin				
Rubbish/waste around the site				
Maintenance track				

Structure	Status	Urgency	Action required	Action completion date/ details
Sediment Basin (SB2)				
Sediment basin				
Release structures (Spillway, emergency spillway, outlet dissipation)				
Visual quality of water in pond: a. Other comments b. Colour c. Smell d. Volume (%) e. Flora Present f. Fauna Present				
Perimeter bank				
Clean water diversion around basin				
Rubbish/waste around the site				
Maintenance track				

Structure	Status	Urgency	Action required	Action completion date/ details
Sediment Basin (SB3)				
Sediment basin				
Release structures (Spillway, emergency spillway, outlet dissipation)				
Visual quality of water in pond: a. Other comments b. Colour c. Smell d. Volume (%) e. Flora Present f. Fauna Present				
Perimeter bank				
Clean water diversion around basin				
Rubbish/waste around the site				
Maintenance track				

Structure	Status	Urgency	Action required	Action completion date/ details
General				
Weeds infestations or unidentified plants				
Waste volumes on site: a. used oil b. used tyres c. steel d. general waste				
Evidence of unauthorised entry onto site				
Signage at entrance				
Other Comments				

APPENDIX D

SOIL/WATER SOLUTION PROCEDURE, JAR TEST
PROCEDURE, FLOC PERFORMANCE REPORT,
SEDIMENT BASIN PERFORMANCE REPORT

Soil / water solution procedure

1. Obtain a soil sample from representative soils to be exposed during the life cycle of the sediment basin. Where multiple soil types are likely to be encountered within the life cycle of the basin, jar test should be undertaken for the range of soil types.
2. Crush the soil (id dry) and shake through a 2mm sieve to remove any excess coarse material.
3. Place approximately 100 grams of soil into 10 litres of water. Ensure the water has the same temperature as the expected water temperature within the sediment basin during the settling phase.
4. Stir rapidly until soil particles are suspended.
5. Leave solution for 10 minutes.
6. Stir rapidly to resuspend any settled material.
7. Decant into beaker.

Jar testing procedure

1. Fill the appropriate number of (matched) 1000mL transparent beakers with well mixed test water, using a 1000mL graduate. Adjust the water temperature to an appropriate value representative of the expected sediment basin water temperature. Record starting pH, temperature and turbidity.
2. Place the filled beaker on the gang stirrer, with the paddles positioned identically in each beaker.
3. Mix the beakers at 40-50 rpm for 30 seconds. Discontinue mixing until coagulant or flocculant addition is completed.
4. Leave the first beaker as a control and add increasing dosages of the first coagulant/ flocculant to subsequent beakers. Inject coagulant/ flocculant solution as quickly as possible, below the liquid level and about halfway between the stirrer shaft and the beaker wall.
5. Increase the mixing speed to 100-125 rpm for 15-30 seconds (rapid mix).
6. Reduce the mixing to 40 rpm and continue the slow mix for up to 5 minutes.
7. Turn the mixer off and allow settling to occur.
8. After settling for a period of time, note clarity and record on Floc Performance Report. Record pH and turbidity.
9. Remove the jars from the gang stirrer, empty the contents and thoroughly clean the beakers.
10. Repeat the procedure as required for different chemicals, dose rates or soil/water mixtures.

Floc Performance Report

BASIN IDENTIFICATION CODE/NUMBER:

SITE / PROJECT:

PREPARED BY: DATE:

Chemical name:		Soil description:				
Dose rate:	0.00 Control					
Starting pH						
Starting turbidity						
Clarity ^[1] after 5 mins (mm)						
Clarity ^[1] after 15 mins (mm)						
Clarity ^[1] after 30 mins (mm)						
Clarity ^[1] after 60 mins (mm)						
Final pH						
Final turbidity						

Chemical name:		Soil description:				
Dose rate:	0.00 Control					
Starting pH						
Starting turbidity						
Clarity ^[1] after 5 mins (mm)						
Clarity ^[1] after 15 mins (mm)						
Clarity ^[1] after 30 mins (mm)						
Clarity ^[1] after 60 mins (mm)						
Final pH						
Final turbidity						

Note:

[1] For the purposes of a floc report, 'clarity' is defined as a level of turbidity that is likely to meet discharge requirements at a depth from the water level surface in the beaker. Clarity can be estimated visually or with the use of a turbidity meter.

BASIN PERFORMANCE REPORT

Site / basin identification: _____

Inspector: _____

Date / time: _____

Recent rainfall: _____

Water quality in basin: NTU: _____ pH: _____

Water level in basin: _____

Issue Item		Potential Issue / Action Required (Y/N)	Comments/Action Undertaken
Inflow channel	Channel/pipe overtopped		
	Scour in channel		
	Chemical not mixing with inflow runoff		
	Catchment bypassing channel		
	Lateral inflow to main basin cell		
	Other		
Chemical & dosing	Chemical not working		
	No dosing		
	Incorrect dose rate		
	Other		
Fore bay	Sediment re-suspension		
	Other		
Level spreader	Concentrated flow over level spreader		
	Scour on backside of level spreader		
	Other		

Issue Item		Potential Issue / Action Required (Y/N)	Comments/Action Undertaken
Settling pond	Flow short circuiting in main basin		
	Erosion on side of basin batters		
	Other		
In-line baffles	Flow concentrating to one side of baffle		
	Flow conveyed over the top of the baffle		
	Flow restricted through baffle too much		
	Flow passes through baffle too quickly		
	Other		
Decant system	Decant sinks below surface		
	Decant raised above water level		
	Decant dropped on one side		
	Decant blocked		
	Decants concentrating flow in basin		
	Other		
Emergency spillway	Concentrated flow on spillway		
	Spillway too low		
	Spillway too high		
	Other		
Other General Comments			

Refer to troubleshooting guide (Table B43) for details on potential remediation for issue items.

Appendix 9

Application form

Environmental Protection Act 1994

Application to amend an environmental authority

This approved form is to be used when applying to amend an environmental authority under sections 222 to 227A of the Environmental Protection Act 1994 (EP Act) for an environmentally relevant activity (ERA).

If you are applying to amend a progressive rehabilitation and closure plan (PRCP) schedule and or applying for a joint PRCP schedule and EA amendment do not use this form. You should instead use the [Application to amend a PRCP Schedule or joint PRCP Schedule and environmental form \(ESR/2019/4956\)](#).

IMPORTANT NOTE:

For applications to the Department of the Environment, Tourism, Science and Innovation, you can apply through Online Services at: <https://www.business.qld.gov.au/running-business/environment/online-services>.

It is recommended that prior to making an amendment application, you read the information on what to provide with an application. This information is located on the Business Queensland website at www.business.qld.gov.au (use the search term “Environmental licence”). This website includes a diagnostic tool called a “Forms and fees finder” which will help identify fees and supporting information you need to make an application.

You are encouraged to have a pre-lodgement meeting before applying to amend your environmental authority (EA). If you would like to have a pre-lodgement meeting:

- for intensive animal industry ERAs (prescribed ERAs 2, 3 and 4)—contact the Department of Primary Industries by email at livestockregulator@dpi.qld.gov.au or by phone on 13 25 23.
- for any other ERAs —prior to lodging this application form, please fill and lodge the form [Application for pre-lodgement services \(ESR/2015/1664\)](#) with the Department of the Environment, Tourism, Science and Innovation.

If you require assistance in answering any part of this form or have any questions about your application, please contact the relevant department. Contact details are at the end of this form (Section 33).

Privacy statement

The Department of the Environment, Tourism, Science and Innovation (the department) is collecting the information on this form in accordance with and as authorised by Chapter 5 of the Environmental Protection Act 1994 (EP Act). Some of the information may be disclosed to the Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development and Queensland Treasury for the purpose of processing this application.

Pursuant to section 540 of the EP Act, the department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able to take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the department to withhold documents or information required to be kept on the public register. For more information on the department’s public register, search ‘public register’ at www.qld.gov.au. For queries about privacy matters please email privacy@detsi.qld.gov.au or telephone 13 74 68.



**Queensland
Government**

Application to amend an environmental authority

Section 1 – Environmental authority number

EA number for this application

P-EA-100698838

Section 2 – Applicant details

Details of the applicant are to be provided in this section.

NAME / COMPANY NAME

Queensland Resource and Recovery Pty Ltd

TRADING NAME (IF An organisation)

A.C.N. 677 037 268 PTY LTD

REGISTERED BUSINESS ADDRESS / RESIDENTIAL ADDRESS
(NOT A POST OFFICE BOX)

96 Artillery Road, MULARA QLD 4703

POSTAL ADDRESS (WHERE DIFFERENT)

ABN / ACN (IF An organisation)

As Above

NAME OF APPLICATION CONTACT

Clint Miles

EMAIL

clint@absolutewaste.com.au

TELEPHONE

0429 773 102

☒ INDICATE IF YOU WANT TO RECEIVE CORRESPONDENCE VIA EMAIL☐ INDICATE IF THERE ARE JOINT HOLDERS OF THE ENVIRONMENTAL AUTHORITY. IF THERE ARE JOINT HOLDERS, PROVIDE THE ADDITIONAL CONTACT DETAILS AS AN ATTACHMENT.

Section 2.1 – Agent details

If there is an agent acting on behalf of the applicant, details of the agent are to be provided. An agent could be a consultant or contactor for the applicant.

Is this form being completed by an agent for the applicant? *

NOTE: If an agent is nominated, please provide evidence of appointment by the authority holder/s.

☒ Yes – Provide details below☐ No – Go to next section

NAME / COMPANY NAME

Milford Planning

TRADING NAME

Milford Planning PTY LTD

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Section 3 – Checklist questions

Application to amend an environmental authority

An application to amend an EA is not appropriate in all circumstances. If you answer **Yes** to any of the preliminary questions below, you cannot use this application form. If you answer **No** to all of the preliminary questions, you may continue to use this application form.

Is the amendment to correct a clerical or formal error?

☐ Yes ☒ No

If yes, you cannot use this form. This request should be made in writing directly to the administering authority (no fees apply).

Is the amendment to add an ERA to an amalgamated project authority and the proposed activity does not form part of the single integrated operation conducted under the authority?

☐ Yes ☒ No

If yes, you cannot use this form. You will need to apply for a new EA.

Is the amendment to add an ERA to the environmental authority and the addition of the ERA would result in the environmental authority not meeting the definition of an 'ERA project'?

☐ Yes ☒ No

If yes, you cannot use this form. You will need to apply for a new EA.

Is the amendment to amalgamate two or more EA's?

☐ Yes ☒ No

If yes, you cannot use this form. Please use either the form [Application to amalgamate two or more environmental authorities into an amalgamated corporate authority \(ESR/2015/1734\)](#), or [Application to amalgamate two or more environmental authorities into an amalgamated project or local government authority \(ESR/2015/1735\)](#).

Is the amendment to add an ERA to an amalgamated local government authority and there is not an appropriate degree of integration between the proposed activity and the existing activities on the authority?

☐ Yes ☒ No

If yes, you cannot use this form. You will need to apply for a new EA.

Is the amendment to amend the financial assurance or estimated rehabilitation cost only?

☐ Yes ☒ No

If yes, you cannot use this form. Please use the form [Application to amend or discharge financial assurance held for an environmental authority \(ESR/2015/1752\)](#) or [Application for a decision on the estimated rehabilitation cost \(ESR/2018/4426\)](#).

Is the proposed amendment to add a resource activity to an EA for a prescribed ERA project?

☐ Yes ☒ No

If yes, you cannot add the resource activity to the EA. You will need to apply for a new EA.

Is the proposed amendment to add a prescribed ERA, other than an ancillary activity, to an EA for a resource project?

☐ Yes ☒ No

If yes, you cannot use this form. You can apply using the standard, variation or site-specific application forms.

Are you applying to extend the term of an EA that was issued to conduct research into, or test, technology or processes relating to an ERA, and for which information mentioned in section 125(1)(l)(i) and (ii) of the EP Act was not available at the time the authority was applied for?

☐ Yes ☒ No

If yes, you cannot use this form. You will need to apply for a new EA.

Application to amend an environmental authority

Section 4 – Checklist questions for prescribed ERAs Does the application relate to an EA that is only for prescribed ERAs?		☒ Yes – Answer the questions in this section ☐ No – Go to next section
Does the proposed amendment involve changes to the relevant activity that require a new development application to be lodged under the <i>Planning Act 2016</i> and the application for the development application has not been lodged.		☐ Yes ☒ No
If yes, the development application must be lodged before an EA amendment application can be made. Under the EP Act, a development application for a material change of use of premises for an ERA is deemed to be also an application for an environmental authority. In this case, an EA amendment application should not be lodged.		
Is the proposed amendment solely to add or remove vehicles for ERA 57 (Regulated waste transport)?		☐ Yes ☒ No
If yes, you do not need to submit this application form. You can update vehicle details online through Online Services or use the form Details of regulated waste vehicles (ESR/2015/1851) .		
Is the amendment for the holder of the EA to transfer all or part of the EA to a person?		☐ Yes ☒ No
If yes, you cannot use this form. Please use the form Request to transfer all or part of an environmental authority (prescribed environmentally relevant activities) (ESR/2015/1718) .		
Is the amendment for the surrender of an EA?		☐ Yes ☒ No
If yes, you cannot use this form. Please use the form Application to surrender an environmental authority for a prescribed ERA (ESR/2015/1719) .		

Section 5 – Checklist for resource activities Is the application to amend an EA for a resource activity?		☐ Yes - Answer the questions in this section ☒ No – Go to next section
Is the amendment for a partial surrender of an EA for a mining, geothermal or petroleum resource activity?		☐ Yes ☐ No
If yes, you cannot use this form. Please use the form Application for surrender or partial surrender of an environmental authority (resource activity) (ESR/2015/1751) .		
Is the amendment for an EA that has a PRCP schedule and approval of the amendment application would result in the EA to which the application relates being inconsistent with the relevant PRCP schedule?		☐ Yes ☐ No
If yes, you cannot use this form. The amendment to the EA must not be inconsistent with the PRCP Schedule otherwise you must apply to amend your PRCP Schedule. Please use the form Application to amend a progressive rehabilitation and closure plan schedule (PRCP schedule) or joint PRCP schedule and environmental authority (ESR/2019/4956) .		

Section 6 – Major or minor amendment Is the application for a major or minor amendment?	
Your application is a minor amendment (condition conversion) if you want to convert all conditions of your EA to the standard conditions for the ERA to which the EA relates. By selecting this amendment type you are certifying that you have a complete and thorough understanding of, and can comply with, the ERA Standard (eligibility criteria and standard conditions).	

Application to amend an environmental authority

For applications other than a minor amendment (condition conversion), the administering authority decides if an application is a minor amendment (threshold) or a major amendment and will send you a notice of the decision.

If the application is a major amendment, an assessment fee of 30% of the annual fee for your EA is required to be paid. The assessment of your amendment application will not proceed until the assessment fee is paid.

No additional assessment fees apply if your application is determined to be a minor amendment.

By considering what type of amendment your application is likely to be, you will have a better idea of whether the assessment fee will be payable.

For further information see the [Guideline - Major and minor amendments \(ESR/2015/1684\)](#) and s223 of the EP Act. If you have questions regarding whether your amendment will be a minor or major amendment you are encouraged to arrange a pre-lodgement meeting with the administering authority. Only an indication can be given as to whether the proposed changes are likely to be a minor or major amendment, at a pre-lodgement meeting as this decision can only be made when the actual application is submitted.

☒ Major amendment

☐ Minor amendment (threshold)

☐ Minor amendment (condition conversion)

For minor amendment (condition conversion) go to Section 31 (Payment of fees).

Section 7 – Amendment options

Complete this section for all applications, tick all that apply

I would like to amend the EA:

☒ Activities – includes changes to thresholds

☐ Locations – removal/addition of activity locations

☐ Conditions – includes conversions to standard conditions and variations

Section 8 – Describe the proposed amendment

Provide a detailed description of your proposed amendment.

Include justification of how your proposed amendment meets the criteria for a major or minor amendment and attach any supporting information to this application.

If the amendment is to add or delete a location, tenure or activity, or to change the threshold of an activity, provide details below.

Application to amend an environmental authority

Change ERA60(2(c)) of EA P-EA100698838 to ERA60(2(e)) - refer to the report prepared by Milford Planning.

☒ I HAVE ATTACHED ADDITIONAL DETAILS FOR THIS SECTION.

Application to amend an environmental authority

Section 9 – Describe the land that will be affected by the proposed amendment

Describe if the activity will be carried out within the existing designated areas of the environmental authority, a new area, or if the activity is mobile or temporary.

The proposed amendment will be contained to the existing designated area of the EA permit - refer to the report prepared by Milford Planning.

☒ I HAVE ATTACHED ADDITIONAL DETAILS FOR THIS SECTION.

Section 10 – Development permits and other land use approvals (*Prescribed ERAs only*)

Does the EA only include a prescribed ERA/s?

- ☐ No – Go to next section
☒ Yes – Provide details below

Are there any development permits or other land use approvals in effect or have any development applications been made under the *Planning Act 2016* to carry out the proposed amendment?

- ☐ No – Go to next section
☒ Yes – Provide details below

Provide a list of applicable development permits or applications below.

Development permit / application number	Development permit / application name	Assessment manager	Date of application or approval	Expiry date
D33/03	D and N Pascoe	Former Thuringowa City Council	3/2/2025	N/A
-	Absolute Waste PTY LTD	Townsville City Council	24/9/2025	-

If a land use approval other than a development permit is in effect, provide details below.

Application to amend an environmental authority



I HAVE ATTACHED ADDITIONAL DETAILS FOR THIS SECTION.

Application to amend an environmental authority

Section 11 – Amend activities

Do you wish to amend activities under the EA, including removing ERAs, adding ERAs or changes to threshold(s)?

- ☐ No – Go to next section
☒ Yes – Provide details below

Section 11.1 – Removing ERA(s)

Does the proposed amendment remove an ERA from the EA?

- ☒ No – Go to section 11.2
☐ Yes – Continue on below

Provide a list of all the ERAs that are to be removed from the EA and identify whether the ERA has commenced.

ERA number	Threshold	Name of ERA	Has the ERA commenced?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

☐ I HAVE ATTACHED DETAILS OF ADDITIONAL ERA(s) TO BE REMOVED.

Does your EA contain any rehabilitation conditions that are applicable to the ERA(s) that are requested to be removed from the EA?

- ☐ No – Go to section 11.2
☐ Yes – Provide details below

A statement addressing compliance with EA conditions is to be completed by, or on behalf of, the EA holder. Attach a separate document to this application form which states the extent to which:

1. The ERAs being removed from the EA have complied with each relevant condition of approval; and
2. The final rehabilitation report is accurate (include the date of the final rehabilitation report).

PROVIDE DETAILS OF THE DATE, METHOD AND EVIDENCE USED TO VERIFY COMPLIANCE:

PROVIDE DETAILS OF THE NAME, POSITION AND CONTACT NUMBER OF THE PERSON SIGNING THE STATEMENT:

DESCRIBE THE QUALIFICATIONS AND EXPERIENCE OF THE PERSON SIGNING THE STATEMENT:

☐ I HAVE ATTACHED THE REQUIRED STATEMENT ADDRESSING COMPLIANCE WITH CONDITIONS.

For guidance on what a rehabilitation report should contain you may use the [Final rehabilitation report with landowner statement \(ESR/2015/1616\)](#). Methods to verify compliance may include a desktop assessment of documentation, an interview with the landowner/holder or a field operator or a site inspection. Evidence used may include photographs, statements and other documents such as maps, plans, approvals, monitoring results etc.

Application to amend an environmental authority

Section 11.2 – Adding ERA(s)

Does the proposed amendment add an ERA to the EA?

☐ No – Go to next section☒ Yes – Continue on below

Provide details of which ERA(s) you wish to add. If the ERA has eligibility criteria and standard conditions¹, identify whether you can comply with them. Select “N/A” where there are no eligibility criteria and standard conditions for that ERA. If you cannot comply with all of the applicable standard conditions, select “no” and attach details of the standard conditions you cannot comply with.

ERA number	Threshold	Name of ERA	I can comply with the eligibility criteria	I can comply with all the standard conditions
ERA60	2e	Waste Disposal	☐ Yes ☒ N/A ☐ No	☐ Yes ☒ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No
			☐ Yes ☐ N/A ☐ No	☐ Yes ☐ No

☐ I HAVE ATTACHED DETAILS OF ADDITIONAL ERA(s) TO BE ADDED.☐ I HAVE ATTACHED DETAILS OF THE STANDARD CONDITIONS THAT I CANNOT COMPLY WITH.

If you cannot comply with the eligibility criteria as a result of the proposed amendment, then an amendment to the relevant eligibility criteria condition will also be required. The department will only approve an amendment of the eligibility criteria condition if it is a result of factors beyond your control such as residential encroachment, rather than a change to the activity.

¹ ERAs with eligibility criteria and standard conditions are listed at: www.business.qld.gov.au (use the search term “eligibility criteria”).

Application to amend an environmental authority

Section 12 – Single integrated operation confirmation

Will the activities be undertaken as a single integrated operation?

- ☐ No – Go to next section
☒ Yes – Provide details below

PROVIDE DETAILS OF THE ACTIVITIES THAT WILL BE OPERATED AS A SINGLE INTEGRATED OPERATION AND SUPPORTING INFORMATION SHOWING THEY ARE A SINGLE INTEGRATED OPERATION:

The change simply involves a change in threshold from ERA60(2(c)) to ERA60(2(d))

Single integrated operation occurs when all of the below criteria are met:

- (a) the activities are carried out under the day-to-day management of a single responsible individual, for example, a site or operations manager;
 (b) the activities are operationally interrelated;
 (c) the activities are, or will be, carried out at one or more places; and
 (d) the places where the activities are carried out are separated by distances short enough to make feasible the integrated day-to-day management of the activities.

Section 13– Amend location(s)

Does the proposed amendment relate to the location where the ERA(s) are undertaken, including adding a location, removing a location or changing a location?

This section is not applicable to changes in monitoring locations, infrastructure locations ect. unless the new location is outside the currently authorised area for the environmental authority. Amendments to change the location of monitoring or infrastructure where the monitoring or infrastructure location is still within the currently authorised area are considered amendments to vary conditions.

- ☒ No – Go to Section 14
☐ Yes – Provide details below

ERA number and threshold	Location (lot on plan(s), tenure(s) or mobile and temporary)	Add or remove
		☐
		☐
		☐
		☐
		☐
		☐
		☐
☐ I HAVE ATTACHED DETAILS OF ADDITIONAL LOCATIONS FOR THIS SECTION.		

Application to amend an environmental authority

Section 13.1 - Rehabilitation conditions	
<i>Are you proposing to remove locations from the EA?</i>	☒ No – Go to next section ☐ Yes – Continue on below
Does your EA contain any rehabilitation conditions that are applicable to the locations that are requested to be removed from the EA?	☐ No – Go to next section ☐ Yes – Continue on below
Has a statement addressing compliance with EA rehabilitation conditions been attached as per section 11.1?	☐ No – Go to next section ☐ Yes – Continue on below
PROVIDE DETAILS OF THE DATE, METHOD AND EVIDENCE USED TO VERIFY COMPLIANCE:	
PROVIDE DETAILS OF THE NAME, POSITION AND CONTACT NUMBER OF THE PERSON SIGNING THE STATEMENT:	
DESCRIBE THE QUALIFICATIONS AND EXPERIENCE OF THE PERSON SIGNING THE STATEMENT:	
☐ I HAVE ATTACHED THE REQUIRED STATEMENT ADDRESSING COMPLIANCE WITH CONDITIONS.	
For guidance on what a rehabilitation report should contain you may use the Final rehabilitation report with landowner statement (ESR/2015/1616) . Methods to verify compliance may include a desktop assessment of documentation, an interview with the landowner/holder or a field operator or a site inspection. Evidence used may include photographs, statements and other documents such as maps, plans, approvals, monitoring results etc.	

Section 14 – Seek to vary conditions	
Are you looking to vary the condition(s) of the EA?	☒ No – Go to next section ☐ Yes – Provide details below
IMPORTANT NOTE: The administering authority considers what is necessary or desirable when setting the conditions of an EA. Seeking to vary the conditions is likely to change the environmental risk of an activity and will require an assessment of the environmental values. If this is not provided, the application may not be valid.	
Provide details of: (a) condition number(s); (b) proposed change; and (c) justification for the change.	
☐ I HAVE ATTACHED ADDITIONAL DETAILS FOR THIS SECTION.	
If the activities were assessed as part of a coordinated project declared under the State Development and Public Works Organisation Act 1971, you are only able to amend Coordinator General conditions if the Coordinator General's evaluation report for the project has lapsed. If you are unsure if the Coordinator General's evaluation report has lapsed, contact the Department of State Development, Infrastructure and Planning for more information.	

Application to amend an environmental authority

Section 15 – Compliance with any eligibility criteria

Are there any eligibility criteria for the activity(s)?

☒ No – Go to next section☐ Yes – Provide details below

State whether each relevant activity will, if the amendment is made, comply with any eligibility criteria for the activity.

Include a declaration (below) that the above statement is correct

I Sarah Jones Senior Town Planner Milford Planning

(INSERT NAME, POSITION AND COMPANY NAME OF PERSON MAKING THE STATEMENT)

- make the statement by or for the holder of the EA;
- confirm that, to the best of my knowledge, all information provided as part of this statement, including attachments, is true, correct and complete.
- understand that under section 480 of the EP Act, it is an offence to give the administering authority or an authorised person a document that contains information that I know, or ought reasonably know, to be false or misleading in a material particular.
- understand that under section 480A of the EP Act, if I am required to give a document to the administering authority, it is an offence to give a document that I know, or ought reasonably to know, contains incomplete information in a material particular.
- confirm that, to the best of my knowledge, this statement, including attachments, does not include false, misleading or incomplete information;
- confirm that, to the best of my knowledge, I have not knowingly failed to reveal any relevant information or document to the administering authority;
- confirm that, to the best of my knowledge, all information provided in this statement, including attachments, address the relevant matters and are factually correct;
- confirm that the opinions expressed in this statement, including attachments, are honestly and reasonably held; and
- understand that all information supplied as part of this statement, including attachments, can be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

SIGNATURE

DATE

29/9/2025

Only a person with appropriate environmental expertise and/or experience in planning and executing site operations should sign this statement. This person may be the EA holder, a full time employee of the EA holder or a consultant to the EA holder.

Application to amend an environmental authority

Section 16 – Environmental values

Attach a document that provides an assessment of the likely impact of the proposed amendment on environmental values (EVs). Note: All fields below are mandatory, therefore a statement is required where there are no likely impacts to an EV.

Environmental Values

☐ Water	☐ Wetlands	☐ Land use	☐ Acoustic
☐ Groundwater	☐ Land	☐ Air	☐ Waste

☒ I HAVE ATTACHED A DOCUMENT THAT PROVIDES AN ASSESSMENT OF LIKELY IMPACTS ON EVs.

Note that the EP Act, s226A(1)(f) states the information required relating to impacts on EVs which include:

- a description of the environmental values likely to be affected by the proposed amendment; and
- details of any emissions or releases likely to be generated by the proposed amendment; and
- a description of the risk and likely magnitude of impacts on the environmental values; and
- details of the management practices proposed to be implemented to prevent or minimise adverse impacts; and
- if a PRCP schedule does not apply for each relevant activity - details of how the land the subject of the application will be rehabilitated after each relevant activity ceases.

Section 17 – Environmental offsets

Will the ERA(s) being applied for cause, or be likely to cause, a significant residual impact to a prescribed environmental matter (other than a matter of local environmental significance)?

- ☒ No – Go to next section
☐ Yes – Provide details below

☐ Yes - Attach supporting information that:

- details the magnitude and duration of the likely significant residual impact on each prescribed environmental matter (other than matters of local environmental significance) for the entire activity;
- demonstrates that all reasonable measures to avoid and minimise impacts on each of those matters will be undertaken;
- includes a notice of election, if it has not already been submitted; and
- if the activity is to be staged, details of how the activity is proposed to be staged.

An environmental offset may be required for an ERA where despite all reasonable measures to avoid and minimise impacts on certain environmental matters, there is still likely to be a significant residual impact on one or more of those matters. You must verify the presence, whether temporary or permanent, of those environmental matters. For more information refer to the State Significant Impact Guideline at the Queensland Government website, at: www.qld.gov.au/environment/pollution/management/offsets/index.html.

Application to amend an environmental authority

Section 18 – Matters of national environmental significance

Would the carrying out of the proposed ERA, or where relevant the ERA project, be likely to have a significant impact on any matters of national environmental significance?

- ☒ No – Go to next section
☐ Yes – Provide details below

Are the impacts covered by transitional provisions for the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act)?

- ☐ No – Go to next section
☐ Yes – Provide details in an attachment

Has the proposal been referred to the Federal Government Environment Minister or a delegate for formal assessment and approval?

- ☐ No – Go to next section
☐ Yes – Provide details below

If Yes - Has an approval issued under the EPBC Act required an environmental offset for the same, or substantially the same, impact and the same, or substantially the same, matters of national environmental significance?

- ☐ No – Go to next section
☐ Yes – Provide details below

If Yes - Are there any matters of national environmental significance which are assessed under the EPBC Act which are the same, or substantially the same as any matters of national environmental significance, but that were not conditioned in the approval?

- ☐ No – Go to next section
☐ Yes – Provide details below

☐ I HAVE ATTACHED DETAILS OF MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE INCLUDING ANY APPLICABLE TRANSITIONAL PROVISIONS.

☐ I HAVE ATTACHED A COPY OF THE EPBC ACT APPROVAL.

There are currently nine matters of national environmental significance (MNES) which have been defined in the *EPBC Act*. To determine whether the proposed ERA(s) will have a significant impact on MNES and for referral requirements, please refer to the guidance provided by the Federal Government's Department of Environment on www.australia.gov.au and www.dcceew.gov.au/.

Section 19 – Waste

Attach a document that provides details of the proposed measures for minimising and managing waste generated by any amendment(s) to the relevant activity.

☒ I have attached a document that provides the required information; or

☐ If waste is to be managed according to an existing waste management plan, provide the name of the plan and the relevant page or section numbers below:

Application to amend an environmental authority

Section 20 – Regional interest areas (Resource activities only)

Is the activity a resource activity?

☒ No - Go to Section 26☐ Yes - Continue below

Is the resource activity located anywhere within an area of regional interest?

☐ No – Go to next section☐ Yes – Provide details below

If yes - Which area of regional interest, has or will require a regional interest development approval (RIDA)?

- ☐ Priority agricultural areas (PAAs)
- ☐ Priority living areas (PLAs)
- ☐ Strategic environmental areas (SEAs)
- ☐ Strategic cropping area (SCA)
- ☐ No RIDA required, I am an exempt activity.

If you have applied or been approved for a RIDA, provide the application reference:

A regional interests development approval (RIDA) is required when a resource activity is proposed in an area of regional interest under the *Regional Planning Interests Act 2014*. Further information, including application forms, can be found on the Department of State Development, Infrastructure and Planning website at www.planning.qld.gov.au.

Section 21 – ANZSIC code (Resource activities only)

Provide the ANZSIC code for the resource activity.

☐ 1101 Black coal mining	☐ 1313 Copper ore mining
☐ 1102 Brown Coal Mining	☐ 1314 Gold ore mining
☐ 1311 Iron ore mining	☐ 1315 Mineral sand mining
☐ 1312 Bauxite mining	☐ 1316 Nickel ore mining
☐ 1317 Silver-lead-zinc ore mining	☐ 1319 Metal ore mining (other metallic mineral ores)
☐ 1200 Oil and gas extraction	
☐ Other (provide details): _____	

The Australian and New Zealand Industrial Classification (ANZSIC) is used by the Australian Bureau of Statistics. It is required to be displayed in the public register.

Application to amend an environmental authority

Section 22 – Environmental impact statement (EIS)* (Resource activities only)

Has an application been made for a decision on whether an EIS would be required for the proposed amendment activity?

- ☐ No
☐ Yes

Has a decision been made on the application on whether an EIS would be required for the proposed amendment activity?

- ☐ Yes, a decision was made that an EIS is required – Attach decision.
☐ Yes, a decision was made that an EIS is **not** required – Attach decision.
☐ No, a decision has not yet been made.
☐ NA – No application has been made.

☐ I HAVE ATTACHED THE DECISION.

Has an EIS process that includes the proposed amendment been completed?

- ☐ No - Go to next section
☐ Yes

If yes - Has the EIS assessment report lapsed under section 59A of the EP Act?

- ☐ No - Provide details below
☐ Yes – Go to next section

I have assessed the environmental risks of the proposed amendment and consider them to be:

- ☐ The same as was assessed in the EIS process
☐ Different to what was assessed in the EIS process

☐ I HAVE ATTACHED THE ASSESSMENT OF THE ENVIRONMENTAL RISKS OF THE PROPOSED AMENDMENT.

* EIS refers to both the EIS process under the *EP Act* and the EIS process under the *State Development and Public Works Organisation Act 1971*.

* For further information about the EIS process is available at www.gld.gov.au, using the search term 'environmental impact statements'.

Section 23 – Environmental impact statement triggers*

Is the application to amend/alter an existing mine?

- ☐ No - Continue below
☐ Yes - Answer questions 1-6

Is the application for petroleum and gas activities?

- ☐ No – Go to next section
☐ Yes – Answer questions 7-9

For proposals to amend/alter an existing mine

1. Is the proposed amendment for an increase in the annual extraction of more than 100% or 5 million tonnes per year (whichever is the lesser)?

NOTE: Only answer this question if the current ERA project is for an existing mine extracting between 2–10 million tonnes per year of run of mine (ROM) ore or coal; otherwise select N/A.

- ☐ Yes
☐ No
☐ N/A

2. Is the proposed amendment for an increase in annual extraction of more than 50% or 10 million tonnes per year (whichever is the lesser)?

NOTE: Only answer this question if the current ERA project is for an existing mine extracting over 10 million tonnes per year of ROM ore or coal; otherwise select N/A.

- ☐ Yes
☐ No
☐ N/A

Application to amend an environmental authority

3. Is the proposed amendment for an increase in annual extraction of greater than 25%? <i>NOTE: Only answer this question if the current ERA project is for an existing mine extracting over 20 million tonnes per year of ROM ore or coal extraction; otherwise select N/A.</i>	☐ Yes ☐ No ☐ N/A
4. Would the proposed amendment involve an extension into and significant impact on a Category A or B environmentally sensitive area, which is not already authorised by the State?	☐ Yes ☐ No
5. Would the proposed amendment involve a substantial change in mining operations—such as from underground to open cut, or (for underground mining) a change in operations from one causing little subsidence to one likely to cause substantial subsidence?	☐ Yes ☐ No
6. Would the proposed amendment introduce a novel or unproven resource removal process, technology or activity?	☐ Yes ☐ No
For petroleum and gas activities	
7. Would the proposed amendment involve a total disturbance area of greater than 2,000 hectares at any one time during the life of the proposed project? This includes areas occupied by well pads (single or multi-directional), access tracks and roads, water storages, and process plants?	☐ Yes ☐ No
8. Would the proposed amendment involve the construction of a high pressure pipeline over a distance of 300 kilometres or greater?	☐ Yes ☐ No
9. Would the proposed amendment involve the construction of a liquefied natural gas plant?	☐ Yes ☐ No
☐ I HAVE ATTACHED DETAILS OF HOW THE CRITERION IS TRIGGERED INCLUDING DETAILS OF THE IMPACT.	
* EIS refers to both the EIS process under the <i>EP Act</i> and the EIS process under the <i>State Development and Public Works Organisation Act 1971</i> . * There are numerous criteria used to make the EIS decision, for further information about the EIS process is available at www.qld.gov.au , using the search term 'environmental impact statements'.	

Section 24 – Coal seam gas (CSG) activities (Resource activities only)	
Does the application relate to an EA for a CSG activity that is an ineligible ERA?	☐ No – Go to next section ☐ Yes – Provide details below
Does the amendment change the way that CSG water is managed?	☐ No – Go to next section ☐ Yes – Provide details below
If the amendment will change the way that CSG water is managed the following information must be provided with this application.	
☐ I have attached a document that details: ☐ The quantity of CSG water the applicant reasonably expects will be generated in connection with carrying out each relevant CSG activity. ☐ The flow rate at which the applicant reasonably expects the water will be generated. ☐ The quality of the water, including changes in the water quality the applicant reasonably expects will happen while each relevant CSG activity is carried out. ☐ The proposed management of water including, for example, the use, treatment, storage and disposal of the water.	

Application to amend an environmental authority

The measurable criteria ('management criteria') against which the applicant will monitor and assess the effectiveness of the management of the water, including, for example, criteria for each of the following:

- ☐ (i) the quantity and quality of the water used, treated, stored or disposed of;
- ☐ (ii) protection of the environmental values affected by each relevant CSG activity; and
- ☐ (iii) the disposal of waste, including, for example, salt, generated for the management of the water.

- ☐ The action proposed to be taken if any of the management criteria are not complied with, to ensure that the criteria will be able to be complied with in the future.

If the application includes a CSG evaporation dam, an evaluation of the following must be provided:

- ☐ (i) best practice environmental management for managing CSG water;
- ☐ (ii) alternative ways for managing CSG water; and
- ☐ (iii) whether there is a feasible alternative to a CSG evaporation dam for managing the water. Note if the evaluation shows that there is a feasible alternative option, the CSG evaporation dam cannot form part of the water management for this amendment application.

Section 25 – Underground water rights (*Resource activities only*)

Is the activity proposed to be undertaken on a mineral development licence (MDL), mining lease (ML) or petroleum lease (PL)?

- ☐ No – Go to next section
- ☐ Yes – Provide details below

Does the proposed amendment involve changes to the exercise of underground water rights?

- ☐ No – Go to next section
- ☐ Yes – Provide details below

- ☐ I have attached a document that details:

- ☐ The areas in which underground water rights are proposed to be exercised.

For each aquifer affected, or likely to be affected, by the exercise of underground water rights:

- ☐ (i) a description of the aquifer;
- ☐ (ii) an analysis of the movement of underground water to and from the aquifer, including how the aquifer interacts with other aquifers and surface water; and
- ☐ (iii) a description of the area of the aquifer where the water level is predicted to decline because of the exercise of underground water rights; and
- ☐ (iv) the predicted quantities of water to be taken or interfered with because of the exercise of underground water rights during the period in which resource activities are carried out.

- ☐ The environmental values that will, or may, be affected by the exercise of underground water rights and the nature and extent of the impacts on the environmental values.

- ☐ Any impacts on the quality of groundwater that will, or may happen because of the exercise of underground water rights during or after the period in which resource activities are carried out.

- ☐ Strategies for avoiding, mitigating or managing the predicted impacts on the environmental values of the impacts on the quality of groundwater.

For more information about exercising underground water rights or the associated requirements refer to the guideline [Requirements for site-specific and amendment applications—underground water rights \(detsi.qld.gov.au\)](https://detsi.qld.gov.au/requirements-for-site-specific-and-amendment-applications-underground-water-rights)

Section 26 – Financial assurance / estimated rehabilitation cost

Do you currently have financial assurance or scheme assurance held for the approved EA?

- ☒ No – Go to next section
- ☐ Yes – Provide details below

- ☐ I will not need to change the financial assurance or scheme assurance in relation to this amendment.

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- ☐ I will be changing the financial assurance and have attached the form [Application to amend or discharge financial assurance held for an environmental authority \(ESR/2015/1752\)](#).
- ☐ I will be applying for a new estimated rehabilitation cost decision if this amendment application is approved.

Section 27 – Compliance and enforcement tools or site management plan

Is this land currently subject to an environmental enforcement order (EEO), environmental protection order (EPO), transitional environmental program (TEP) or a site management plan (SMP)?

- ☒ No – Go to next section
- ☐ Yes (EEO) - provide details below
- ☐ Yes (EPO) - provide details below
- ☐ Yes (TEP) - provide details below
- ☐ Yes (SMP) - provide details below

PROVIDE THE REFERENCE NUMBER AND BRIEF DETAILS INCLUDING: DESCRIPTION OF LAND; LOT AND PLAN NUMBERS; AND LOCAL GOVERNMENT AREA.

Section 28 – Environmental management register

Is any part of the land currently recorded in, or has previously been removed from, the environmental management register?

- ☒ No – Go to next section
- ☐ Yes – Provide details below

- ☐ The land is currently in the environmental management register.
- ☐ The land has been removed from the environmental management register.
You must attach evidence (e.g. Notice) advising that the details have been removed.

Section 29 - Website address

Is the application for a mining activity on a mining lease, or a geothermal, petroleum, or greenhouse gas storage activity?

- ☒ No – Go to next section
- ☐ Yes – Provide details below

Provide the website address for the application notice and application documents.

Provide details of the contact person if technical assistance is required.

NAME

TELEPHONE

EMAIL

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Section 30 – Site contact

Would you like to nominate a site contact?

☐ No – Go to next section☒ Yes – Provide details below

SITE CONTACT NAME

Clint Miles

POSITION

Manager

EMAIL

clint@absolutewaste.com.au

TELEPHONE

0429 773 102

☒ INDICATE IF YOU WANT THE SITE CONTACT TO RECEIVE CORRESPONDENCE VIA EMAIL

A site contact is an alternative contact nominated by the legal entity which holds, or will in future hold, a relevant authority issued by the department. The department may direct correspondence relating to actual or potential compliance matters to the site contact.

Section 31 – Payment of fees

Application fee:

\$ 0

For fees payable to the Department of the Environment, Tourism, Science and Innovation

Preferred☐ Apply using [Online Services](#) – submit the application online and pay by credit card.**Alternatively**☒ Email the completed application with a request to pay the application fee by BPOINT. Please do not email your credit card details – we will send you a link to pay securely by credit card via BPOINT.

For fees payable to the Department of Primary Industries

☐ Payment by cheque or money order made payable to the Department of Primary Industries (attached).☐ Please contact me (the applicant) for credit card payment:

Phone number: Insert phone no.

An application fee is payable at the time the application is made. Information on the fee can be located on the website [Forms and fees for environmental authorities | Business Queensland](#). Where the proposed amendment is determined by the administering authority to be a major amendment, an assessment fee of 30% of the annual fee for the authority at the time of application, is also payable. The assessment fee is payable once notification of the assessment level decision is issued. The assessment fee must be paid before the assessment of the amendment application can proceed.

The supplementary annual fee is payable where the amendment is approved and results in the aggregate environmental score (and hence the annual fee) for the EA increasing. The supplementary annual fee is a pro-rata adjustment to the annual fee for the period from when the amended EA takes effect to the next anniversary day for the EA. This is payable within 20 business days after the approval date. The supplementary annual fee can be calculated using the [Fee calculator \(ESR/2015/1731\)](#).

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Section 32 – Declaration

Note: If you have not told the truth in this application you may be prosecuted.

I declare that:

- I am the holder of the EA, or authorised signatory for the holder of the EA.
- The information provided is true and correct to the best of my knowledge.
- I understand that under section 480 of the EP Act, it is an offence to give the administering authority or an authorised person a document that contains information that I know, or ought reasonably know, to be false or misleading in a material particular.
- I understand that under section 480A of the EP Act, if I am required to give a document to the administering authority, it is an offence to give a document that I know, or ought reasonably to know contains incomplete information in a material particular.
- I understand that failure to provide sufficient information may result in the application being refused. I understand that an incomplete application may be invalid. Invalid applications will be returned without processing and will only be processed if resubmitted with all invalidating issues addressed.
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.
- If the proposed amendment is made, the relevant activities will continue to comply with the ERA Standard (eligibility criteria and standard conditions) for all eligible ERAs, or where they cannot comply, I have indicated otherwise in my application and provided the required supporting information.
- If the proposed amendment is a minor amendment (condition conversion), I can comply with the ERA Standard (eligibility criteria and standard conditions) for each of the ERAs authorised by the EA.
- If the proposed amendment is made, I will continue to comply with all conditions of my environmental authority as well as any relevant provisions in the EP Act.
- I understand that I am responsible for managing the environmental impacts of these activities, and that approval of this application is not an endorsement by the administering authority of the effectiveness of management practices proposed or implemented.

Where an agreement is in place between all holders of the EA, one holder can sign on behalf of the other joint holders. Please tick the checkbox below.

☐ I HAVE AUTHORITY TO SIGN THIS FORM ON BEHALF OF ALL THE JOINT HOLDERS OF THE EA.

Applicant's or authorised signatory's signature

FULL NAME	POSITION	COMPANY / ORGANISATION
SIGNATURE		DATE

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Joint holder(s) signature if applicable		
NAME, POSITION AND COMPANY NAME	SIGNATURE	DATE
NAME, POSITION AND COMPANY NAME	SIGNATURE	DATE
NAME, POSITION AND COMPANY NAME	SIGNATURE	DATE
OR ☐ I HAVE ATTACHED A DOCUMENT THAT PROVIDES THE REQUIRED INFORMATION FOR ALL JOINT HOLDERS.		
Where the EA holder is a company, this form must be signed by an authorised person for that company. Where there is more than one holder of the EA, this declaration is to be signed by all holders, unless there is an agreement between all holders that one can sign on behalf of the other(s).		

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Section 33 - Submission

Please submit your completed application to:

For ERA 2, ERA 3 or ERA 4:

Post: Senior Environmental Scientist
Intensive Livestock Unit
Department of Primary Industries
PO Box 102
TOOWOOMBA QLD 4350

Enquiries Phone: (07) 4688 1374
Fax: (07) 4529 4192
Email: livestockregulator@dpi.qld.gov.au

For a mining ERA where the proposed amendment impacts upon the resource tenure:

Enquiries Mining Registrar
Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development
The Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development has a list of office locations for mining registrars on its website
<https://www.nrmmrrd.qld.gov.au>.

For all other ERAs:

Post: Permit and Licence Management
Department of the Environment, Tourism, Science and Innovation
GPO Box 2454
BRISBANE QLD 4001

Enquiries Website: www.business.qld.gov.au
Email: palm@detsi.qld.gov.au
Phone: 13 QGOV (13 74 68)

Applications and enquiries should not be submitted to individual officers. The latest version of this publication can be found at [Application to amend an environmental authority \(ESR/2015/1733\)](#).

Section 34 - Definitions to terms used in this form

(Where there is inconsistency between the definition of terms used here and the terms used in the EP Act, the terms in the EP Act apply)

Condition conversion	For an EA, means an amendment replacing all the conditions of the authority with the standard conditions for the environmentally relevant activity which the authority relates. The relevant eligibility criteria and standard conditions must be able to be met.
Eligibility criteria	For an environmentally relevant activity, means eligibility criteria that are in effect for the activity under – (a) An ERA standard; or (b) A code of environmental compliance; or (c) A regulation in respect of a mining activity.

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Environmentally relevant activity (ERA)	A resource activity or a prescribed ERA.
ERA project	A prescribed ERA project or a resource project.
ERA standard	For an environmentally relevant activity, means the eligibility criteria and/ or the standard conditions set by the administering authority.
Major amendment	For an environmental authority, means an amendment that is not a minor amendment.
Material change of use of premises for an ERA	A category of assessable development requiring a development permit under the <i>Planning Act 2016</i> . Refer Schedule 10, Division 2, Item 8 of the Planning Regulation 2017.
Minor amendment	For an environmental authority, means an amendment that is – (a) a condition conversion; or (b) a minor amendment (threshold).
Minor amendment (threshold)	For an environmental authority, means an amendment that the administering authority is satisfied— (a) is not a change to a condition identified in the authority as a standard condition, other than— (i) a change that is a condition conversion; or (ii) a change that is not a condition conversion but that replaces a standard condition of the authority with a standard condition for the environmentally relevant activity to which the authority relates; or (iii) a change that will not result in a change to the impact of the relevant activity on an environmental value; and (b) does not significantly increase the level of environmental harm caused by the relevant activity; and (c) does not change any rehabilitation objectives stated in the authority in a way likely to result in significantly different impacts on environmental values than the impacts previously permitted under the authority; and (d) does not significantly increase the scale or intensity of the relevant activity; and (e) does not relate to a new relevant resource tenure for the authority that is— (i) a new mining lease; or (ii) a new petroleum lease; or (iii) a new geothermal lease under the Geothermal Energy Act; or (iv) a new GHG injection and storage lease under the GHG storage Act; and

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	(f) involves an addition to the surface area for the relevant activity of no more than 10% of the existing area; and (g) for an environmental authority for a petroleum activity— (i) if the amendment involves constructing a new pipeline—the new pipeline does not exceed 150km; and (ii) if the amendment involves extending an existing pipeline—the extension does not exceed 10% of the existing length of the pipeline; and (h) if the amendment relates to a new relevant resource tenure for the authority that is an exploration permit or GHG permit—the amendment application under section 224 seeks an amended environmental authority that is subject to the standard conditions for the relevant activity or authority, to the extent it relates to the permit.
Mobile and temporary ERA	A prescribed ERA, other than an activity that is dredging material, extracting rock or other material, or the incinerating of waste: (a) carried out at various locations using transportable plant or equipment, including a vehicle (b) that does not result in the building of any permanent structures or any physical change of the landform at the locations (other than minor alterations solely necessary for access and setup including, for example, access ways, footings and temporary storage areas) (c) carried out at any one of the locations: (iii) for less than 28 days in a calendar year, or (iv) for 28 or more days in a calendar year only if the activity is necessarily associated with, and is exclusively used in, the construction or demolition phase of a project.
Prescribed ERA	An environmentally relevant activity that is not a resource activity and is prescribed under section 19 of the EP Act.
Prescribed ERA project	All prescribed ERAs carried out, or proposed to be carried out, as a single integrated operation.
Registered suitable operator	A person who, or a corporation which, under section 318I of the EP Act has been assessed as being suitable to carry out an ERA and has been listed on the suitable operator register.
Resource activity	An activity that is any of the following: (a) a geothermal activity (b) a greenhouse gas (GHG) storage activity (c) a mining activity (d) a petroleum activity.

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Resource project	Resource activities carried out, or proposed to be carried out, under 1 or more resource tenures, in any combination, as a single integrated operation.
Single integrated operation	Occurs when all of the below criteria are met: (a) the activities are carried out under the day-to-day management of a single responsible individual, for example, a site or operations manager; (b) the activities are operationally interrelated; (c) the activities are, or will be, carried out at one or more places; and (d) the places where the activities are carried out are separated by distances short enough to make feasible the integrated day-to-day management of the activities.
Underground water rights	Means any of the following: (a) underground water rights within the meaning of the <i>Mineral Resources Act 1989</i> ; (b) underground water rights within the meaning of the <i>Petroleum and Gas (Production and Safety) Act 2004</i> ; (c) underground water rights within the meaning of the <i>Petroleum Act 1923</i> , section 87(3).

Appendix 10



SCHEDULE 8 – ENVIRONMENTAL OBJECTIVE ASSESSMENT

Performance Outcome/Acceptable Outcomes	Response
Division 1 – Operational Assessment	
Air	
Environmental Objective: The activity will be operated in a way that protects the environmental values of air. PO1: There is no discharge to air of contaminants that may cause an adverse effect on the environment from the operation of the activity. PO2: All of the following: (a) Fugitive emissions of contaminants from storage, handling and processing of materials and transporting materials within the site are prevented or minimised; (b) Contingency measures will prevent or minimise adverse effects on the environment from unplanned emissions and shut down and start up emissions of contaminants to air; (c) Releases of contaminants to the atmosphere for dispersion will be managed to prevent or minimise adverse effects on environmental values	Complies The facility has been operational for over 20 years. Dust emissions from the waste management and recycling activities are expected to be minimal but may occur as a result of: ▪ screening and crushing activities of concrete; ▪ concrete stockpiling activities; and ▪ waste particles from the landfill. Minor dust impacts are more commonly identified during the dry season. Fresh water is available at the facility and a water truck is filled for dust suppression purposes and applied to areas as required. This occurs when concrete crushing is being undertaken and is applied to the crusher concrete stockpiles. If dust impacts are identified on the landfill, water will be utilised for dust suppression purposes, but the Applicant has confirmed, generally this is not required. The subject land consists primarily of loamy clay base which means the creation/ working of waste cells generally comprises dense soil types that do not cause significant dust impacts. Wind impacts are generally greatest during the dry season. The dust impacts from the facility are generally minimal however in the event dust impacts are observed the following mitigation measures are applied: ▪ dust suppression via a water truck; and ▪ restricting activities until there is less windy weather. The facility is located in a rural area and achieves sufficient separation from sensitive receptors. The closest sensitive receptor is the dwelling house located approximately 750m from the working area on the subject site. It is unlikely that dust emissions will exceed the thresholds at a sensitive receptor as identified by the <i>Environmental Protection (Air Quality) Policy 2019</i>, further the facility has been operational for more than 20 years. Avoidance and mitigation: Given the above, it is considered that impacts to the air environment will be avoided by appropriately managing the design and operation of the working area. This effectively protects air



	quality for the continued health of biodiversity and human life, as well as aesthetic and rural values.
Water and Wetlands	
<u>Water</u> Environmental Objective: The activity will be operated in a way that protects environmental values of waters. PO1: There is no actual or potential discharge to waters of contaminants that may cause an adverse effect on an environmental value from the operation of the activity. PO2: All of the following: (a) The storage and handling of contaminants will include effective means of secondary containment to prevent or minimise releases to the environment from spillage or leaks; (b) Contingency measures will prevent or minimise adverse effects on the environment due to unplanned releases or discharges of contaminants to water; (c) The activity will be managed so that stormwater contaminated by the activity that may cause an adverse effect on an environmental value will not leave the site without prior treatment; (d) the disturbance of any acid sulfate soil, or potential acid sulfate soil, will be managed to prevent or minimise adverse effects on environmental values; (e) acid producing rock will be managed to ensure that the production and release of acidic waste is prevented or minimised, including impacts during operation and after the environmental authority has been surrendered; (f) any discharge to water or a watercourse or wetland will be managed so that there will be no adverse effects due to the altering of existing flow regimes for water or a watercourse or wetland; (g) for a petroleum activity, the activity will be managed in a way that is consistent with the coal seam gas water management policy, including the prioritisation hierarchy for managing and using coal seam gas water and the prioritisation hierarchy for managing saline waste; (h) the activity will be managed so that adverse effects on environmental values are prevented or minimised. <u>Wetlands</u> Environmental Objective: The activity will be operated in a way that protects the environmental values of wetlands.	Response The proposed facility has been operational for over 20 years, with the relevant Development and Environmental Permits (permits) in place, and the facility has been operating within the parameters of these permits. Langtree Consulting Engineers have reviewed and assessed the current stormwater management measures that have been implemented at the facility and have prepared an updated Stormwater Manager Plan (SMP) (refer to Appendix 8). In the main, stormwater will continue to be managed as per the current arrangements, but with the construction of the fourth basin, which forms part of the original approval for the facility. The waste cells in the landfill area include a clay liner that ensures there is minimal percolation of water into the groundwater and stormwater networks. Stormwater that filters through the waste cells of the landfill is collected in a detention area adjacent to the landfill sites, where it is then pumped into a designated leachate pond situated to the north-west of the landfill area. There are three freshwater ponds located on the periphery of the landfill area. As outlined in the SMP Stormwater at the site is considered to be categorised as follows: ▪ <i>Clean stormwater – stormwater runoff from undisturbed or rehabilitated areas are considered to produce clean stormwater runoff which is safe to discharge to the environment.</i> ▪ <i>Sediment laden stormwater – stormwater runoff from non-rehabilitated areas of the site typically has poor ground cover which results in transportation of sediments during rainfall events.</i> ▪ <i>Leachate – rainfall that has come into contact with the active face of the landfill or green waste stockpiles are considered as leachate and is managed in accordance with the Leachate Management Plan and EA Permit.</i> Management of onsite stormwater is based on the following principles: ▪ <i>Diversion of clean water from entering working areas to minimise volume of stormwater required to be treated.</i> ▪ <i>Capture of stormwater from operating areas for storage and treatment in the</i>



PO1: There will be no potential or actual adverse effect on a wetland as part of carrying out the activity. PO2: The activity will be managed in a way that prevents or minimises adverse effects on wetlands.	<i>leachate pond or sediment ponds as required.</i> From historic reporting associated with the facility, there are a series of stormwater catchment areas and associated ponds that have been constructed. Ponds 1, 2 and 4 are freshwater ponds, whilst pond 3 is a leachate pond. There are a series of existing swale drains which discharge stormwater into the ponds. <u>Existing Catchments</u> From available Lidar of the site, concentrated stormwater from the working areas of the site discharge from the site at different locations as follows: • Pond 1 and 2 (88,953 m²) – northern boundary to Christmas Creek via unnamed order 1 Stream; and • Pond 4 (157,116 m²) – eastern boundary to Sleeper Log Creek. There are currently four existing ponds on at the facility. Ponds 1 and 2 capture runoff from the landfill area, which has not come into contact with waste material (i.e. from capped fill and road areas). Pond 3 acts as a leachate pond, whilst Pond 4 collects runoff from the road and battery storage area near the site access. The battery storage area is roofed and stormwater does not come into contact with any waste in the area. Potential fugitive release: The facility will contain a range of potential waste containments. Impacts to environmental values if fugitive release occurs: Impacts to environmental values as a consequence of waste contaminants being released to waterways or wetlands, will be negligible, given the wastes that can be accepted at the facility, the procedural operations and methods associated with sorting and disposal of wastes and the stormwater quality measures associated with the facility. Avoidance and mitigation: The WAP and the SMP, are both plans that will contribute to the avoidance of waste containments, by appropriately managing the wastes that are accepted at the facility and managing and treating stormwater on site. The working area of the facility will remain generally the same as the current approved footprint. For the purposes of stormwater, catchments for the working area will be treated by a series of sediment basins before leaving the site. Existing Pond 1 will become Sediment Basin 1 to



treat the landfill area, a new sediment basin (Sediment Basin 2) will be constructed to treat the processing area located in the south western region of the facility and Pond 4 will become Sediment Basin 3. Sediment Basin 2 is effectively the fourth fresh pond approved under D33/03. The location of Sediment Basin 2 has changes slightly to that approved under D33/03, in order to accommodate the size of the basin required and take advantage of a natural depression area on the site. All release points shall be monitoring points to ensure any stormwater release complies with water quality objectives.

Based on the Sediment Basin calculations in the SMP, existing ponds 1 and 4, which will become Sediment Basins 1 and 3, will require little to no amendment with regards to volume capacity. All basins shall be provided with a 1:6 vehicle access for clean out and a rock lined spillway for discharge. Due to shape of existing ponds, the SMP recommends that internal baffles are utilised to increase the effective length to width ratio.

A stockpile area exists to the east of the landfill area. Stormwater from this area generally travels north as overland flow for 150 m before departing the site property boundary and does not enter a watercourse for over 400 m. Clean water is diverted around the stockpile area and dirty water from the stockpile area is primarily treated through woven sediment fence and or mulch bund.

The working area of the facility will remain generally the same as the current approved footprint associated with D33/03, as such, there will be no increase in stormwater run-off from the subject site. As previously outlined, the site discharges to Christmas Creek and Sleeper Log Creek via existing streams and no changes are proposed to discharge locations.

Site Stormwater Management

The SMP prepared by Langtree Consulting Engineers has been designed to minimise the disturbance area outside of the active working area of the facility, divert clean water around the site and dirty water to sediment basins. Sediment laden water from the operational area will be treated by sediment traps in the form of sediment basins, before being discharged from the site.

These management measures effectively avoid release of contaminants into waterways or wetlands and maintains the quality of the water and the associated environmental values.

Further the conditions of the EA permit for the facility require going ground and surface water monitoring.



Noise	
Environmental Objective: The activity will be operated in a way that protects the environmental values of the acoustic environment. PO1: Sound from the activity is not audible at a sensitive receptor. PO2: The release of sound to the environment from the activity is managed so that adverse effects on environmental values, including health and wellbeing and sensitive ecosystems, are prevented or minimised.	Response The facility has been operational for more than 20 years. The activities undertaken at the facility do not generate significant amounts of noise. The main noise generating activities are from the operation of machinery on the site, including the screening and crushing plant, bulldozers and excavators. These activities are undertaken infrequently and as required. In addition, the facility is located in a rural area and achieves sufficient separation from sensitive receptors. The closest sensitive receptor is the dwelling house located approximately 750 m from the subject land on Lot 1 on RP742572. There are also two existing background noise sources, being the Bruce Highway and the Great Western Railway Line, therefore, it is unlikely that noise emissions will exceed those required at a sensitive receptor as identified by the <i>Environmental Protection (Noise) Policy 2019</i>. Avoidance and mitigation: The release of sound to the environment from the activity will be appropriately managed so that adverse effects on environmental values, including health and wellbeing and sensitive ecosystems, are prevented or minimised. The operations associated with the facility do not generate excessive noise levels that will exceed those required at a sensitive receptor or the environment, as identified by the <i>Environmental Protection (Noise) Policy 2019</i>. The existing EA includes conditions appropriate for the management of noise and these conditions should be maintained as part of this amendment application.
Waste	
Environmental Objective: Any waste generated, transported, or received as part of carrying out the activity is managed in a way that protects all environmental values. PO1: Both of the following apply: (a) waste generated, transported or received is managed in accordance with the waste and resource management hierarchy under the Waste Reduction and Recycling Act 2011; (b) if waste is disposed of, it is disposed of in a way that prevents or minimises adverse effects on environmental values.	Response: All waste generated, transported, or received at the facility is managed in a way that protects all environmental values, refer to the WAP, prepared by the Applicant. The WAP sets out the procedure for accepting, sorting and disposing of wastes within the facility, to ensure the correct waste is disposed in the right part of the facility. This will protect the environmental values in the surrounding locality. Any waste that is not accepted at the facility will be stored at the facility until it can be removed and appropriately disposed of off-site and/ or will be collected by a suitably licenced waste contractor.
Land	
Environmental Objective:	Response Based on the existing permit M33/03 and EA P-EA100698838, the existing facility can receive



The activity is operated in a way that protects the environmental values of land, including soils, subsoils, landforms and associated flora and fauna. PO1: There is no actual or potential disturbance or adverse effect to the environmental values of land as part of carrying out the activity. PO2: All of the following apply: (a) activities that disturb land, soils, subsoils, landforms and associated flora and fauna will be managed in a way that prevents or minimises adverse effects on the environmental values of land; (b) areas disturbed will be rehabilitated or restored to achieve sites— i) That are safe and stable; and ii) Where no environmental harm is being caused by anything on or in the land; and iii) That are able to sustain an appropriate land use after rehabilitation or restoration; (c) the activity will be managed to prevent or minimise adverse effects on the environmental values of land due to unplanned releases or discharges, including spills and leaks of contaminants; (d) the application of water or waste to the land is sustainable and is managed to prevent or minimise adverse effects on the composition or structure of soils and subsoils.		maximum of 10,000 tonnes of waste per annum. The existing facility has been operating of over 20 years. The Applicant is seeking to increase the threshold of waste the facility can receive, sort and dispose of to not more 50,000 tonnes of waste per annum. The proposed increase will result in the following changes to the scale and intensity of the existing operations: ▪ receipt of disposal of not more than 50,000 tonnes per year, whilst maintaining the footprint of the existing facility, including cell layout, RRA and the like; ▪ employee number to increase by two, so a total of four employees; ▪ hours of operation will remain Mon-Sat 6.30 am – 7.00 pm; ▪ number of truck movements to and from the facility will be between 30 to 50 per day (historically it was 36 per day) or worse case 60-70 per day, with the largest design vehicle being a 2-axle rigid body truck; and ▪ types of waste to be managed will remain consistent with the current EA's. Potential contaminants and management: WAP has been prepared by the Applicant, which outlines the required process and activities associated with accepting and handling waste at the facility. Impacts to environmental values if fugitive release occurs The existing EA contains specific conditions that relate to monitoring and management matters that could impact upon existing environmental values. Avoidance and mitigation: As noted in the WAP and SMP the facility and will continue to be managed and operated in a manner that avoids potential disturbance or adverse effect to the environmental values The EA permit prescribes the type of waste the facility can accept and contains various conditions that address matters that have the potential to impact on the surrounding environmental values.
Division 2 – Land Use Assessment		
Site Suitability		
Environmental Objective: The choice of the site, at which the activity is to be carried out, minimises serious environmental harm on areas of high conservation value and special significance and sensitive land uses at adjacent places. PO1: Both of the following apply: (a) areas of high conservation value and special significance likely to be affected	Response: The facility has been operational for more than 20 years. Since acquiring the facility, the Applicant has undertaken a review of how the previous owner had been operating and managing the facility. The findings of this review have identified opportunities to rationalise day-to-day activities, processes and operations associated with the facility and realise additional capacity at the facility.	



by the proposal are identified and evaluated and any adverse effects on the areas are minimised, including any edge effects on the areas; and (b) the activity does not have an adverse effect beyond the site. PO2: Both of the following apply: (a) areas of high conservation value and special significance likely to be affected by the proposal are identified and evaluated and any adverse effects on the areas are minimised, including any edge effects on the areas; and (b) critical design requirements will prevent emissions having an irreversible or widespread impact on adjacent areas.	The proposed change simply involve increasing the volume of waste the facility can receive and dispose of from not more than 10,000 tonnes per annum to not more than 50,000 tonnes per annum. The proposed change will be accommodated within the approved working area. Given the above, the site is both appropriate and ideal for the proposed manufacturing facility.

Location on Site

Environmental Objective:

The location for the activity on a site protects all environmental values relevant to adjacent sensitive uses.

PO1:

The location for the activity means there will be no adverse effect on any environmental values.

PO2:

Both of the following apply:

- (a) the activity, and components of the activity, are carried out on the site in a way that prevents or minimises adverse effects on the use of surrounding land and allows for effective management of the environmental impacts of the activity; and
- (b) areas used for storing environmentally hazardous materials in bulk are located taking into consideration the likelihood of flooding.

Response:

The facility has been operational for more than 20 years. Since acquiring the facility, the Applicant has undertaken a review of how the previous owner had been operating and managing the facility. The findings of this review have identified opportunities to rationalise day-to-day activities, processes and operations associated with the facility and realise additional capacity at the facility.

The proposed change simply involve increasing the volume of waste the facility can receive and dispose of from not more than 10,000 tonnes per annum to not more than 50,000 tonnes per annum. The proposed change will be accommodated within the approved working area.

The procedure around accepting, sorting and disposing of wastes at the facility and the updated SMP, will ensure that the development maintains the quality of the surrounding environmental values.

Critical Design Requirements

Environmental Objective:

The design of the facility permits the operation of the site, at which the activity is to be carried out, in accordance with best practice environmental management.

PO1:

The activity does not involve the storage, production, treatment, or release of hazardous contaminants, or involve a regulated structure.

PO2:

All of the following apply:

- (a) all storage provided for hazardous contaminants includes secondary containment to prevent or minimise

Response:

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The proposed change simply involve increasing the volume of waste the facility can receive and dispose of from not more than 10,000 tonnes per annum to not more than 50,000 tonnes per annum.



releases to the environment from spillage or leaks; (b) regulated structures comply with the 'Manual for assessing consequence categories and hydraulic performance of structures' published by the department; (c) provide containers for the storage of hazardous contaminants that are secured to prevent the removal of the containers from the site by a flood event; (d) the design of the facility prevents or minimises the production of hazardous contaminants and waste; and (e) if the production of hazardous contaminants and waste is not prevented or minimised under paragraph (d)—the design of the facility contains and treats hazardous contaminants rather than releasing them.	The proposed change will be accommodated within the approved and existing working area. The procedure around accepting, sorting and disposing of wastes at the facility and the updated SMP, will ensure that the development maintains the quality of the surrounding environmental values.

Standard Criteria

Definition:

The standard criteria are a series of considerations defined in Schedule 4 Dictionary of the *Environmental Protection Act 2008*. These criteria must be considered under Section 176 of the *Environmental Protection Act 2008* as part of deciding the Environmental Authority application.

The standard criteria are outlined below:

- (a) the following principles of environmental policy as set out in the *Intergovernmental Agreement on the Environment*:
- the precautionary principle;
 - intergenerational equity; and
 - conservation of biological diversity and ecological integrity.

Response:

- Regarding the precautionary principal outlined in the *Intergovernmental Agreement on the Environment*, it is noted that the facility has been operating for over 20 years. The change simply involves increasing the volume of waste the facility can receive and dispose of from not more than 10,000 tonnes per annum to not more than 50,000 tonnes per annum. The proposed change will be accommodated within the approved and existing working area. There is WAP and an updated SMP for the facility, to ensure it is appropriately operated and managed.
- Regarding intergenerational equity outlined in the *Intergovernmental Agreement on the Environment*, it is noted that the design and operation of the existing facility ensures that the health, diversity and productivity of the environment is maintained and effectively conserved to ensure benefits are experienced by future generations.
- Regarding conservation of biological diversity and ecological integrity, as outlined in the *Intergovernmental Agreement on the Environment*, it is noted that the design and operation of the facility is well established having operated for over 20 years. As outlined within this assessment, the operation and management of the facility will ensure the quality of surrounding ecosystems, including diversity and integrity, are maintained and not adversely affected.