



Application for Works Approval

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number W6676/2022/1

Applicant B & J Catalano Pty Ltd

ACN 008 961 975

File number DER2022/000075

Premises B & J Catalano Pty Ltd

Eatha Road

CHITTERING WA 6084

Legal description -

Part of Lot 42 on Deposited Plan 410794

Certificate of Title Volume 2929 Folio 44

As defined by the premises maps attached to the issued works approval

Date of report 16 August 2022

Decision Works approval granted

Christine Pustkuchen

**A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the Premises. As a result of this assessment, works approval W6676/2022/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department) has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary and overview of premises

On 16 February 2022, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The Application is to install and operate a crushing and screening plant for the processing of gravel material at part of Lot 42 on Deposited Plan 410794, Chittering (the Premises). The Premises is located approximately 5.9 kilometres (km) south-east of Lower Chittering township.

The Premises relates to the category 12 and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6676/2022/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6676/2022/1. The proposed premises (previously Lot 83) has historically been utilised for gravel and clay extractive industry operations.

2.3 Description of proposed activities

2.2.1 Staged operation

The Applicant is proposing to extract up to 250,000 tonnes per annum of gravel material using a staged approach across an area of approximately of 14.9 hectares (ha). A Striker 1320 Crusher that has a design capacity of 1,560,000 tonnes per annum will be used for crushing activities, however the Applicant has proposed an estimated throughput of 250,000 tonnes per annum of gravel material will be processed. Extraction will occur in two excavation areas at the Premises, referred to as Stage 9 and Stage 10 as shown in the Premises boundary depicted in the works approval. Stage 9 comprises of an area of approximately 12.4 ha and Stage 10 comprising of 2.5 ha in size. The estimated operating period of the Premises is proposed to be five years with mining activities proposed to be carried out over three years.

2.2.2 Site operations

Site preparation

The clearing of approximately 2.23 ha of native vegetation is required for the extractive industry activity within the Prescribed Premises boundary. The assessment of the clearing is not within the scope of this assessment. Prior to the commencement of each stage, topsoil will be removed and stockpiled in approximately two metre high windrows along the edges of the extraction areas as a measure to reduce noise and stormwater emissions.

A total of five stormwater detention ponds are proposed to be constructed within the proposed extraction areas, with four being constructed within Stage 9 and one being constructed within Stage 10. Diversion bunding will be constructed along the southern edge of Stage 9 and the eastern and northern edge of Stage 10 to minimise potentially contaminated stormwater and sediment runoff. Contour bunds will also be constructed in the excavation areas to minimise stormwater runoff. Figure 1 and Figure 2 Figure 2 indicate the design of the stormwater management infrastructure at the Premises for both stages.

Operational activities

Within each stage of extraction, a bulldozer will rip the laterite and blade the material to stockpile over a period of approximately one week per annum in two stages for Stage 9 and in one stage for Stage 10. The mobile crushing and screening plant will be utilised on a campaign basis to process and stockpile gravel material for up to approximately 4 weeks per annum in two stages (one stage per year) for Stage 9, and up to 1 week per annum in one stage for Stage 10. Material will be ready for use at the end of this processing period and trucks will enter the pit via an unsealed, existing access road and be loaded via a front-end loader for transportation off-site. A maximum of 12 loaded trucks per day from the product stockpiles will occur for a two-year duration for Stage 9 and 6 months for Stage 10. Following the completion of extraction in each stage, the topsoil will be replaced and seeded on a progressive basis prior to commencement of the winter months. The Premises are proposed to be in operation from 7am to 6:00pm, Monday to Friday, and Saturday's 7am to 12pm.

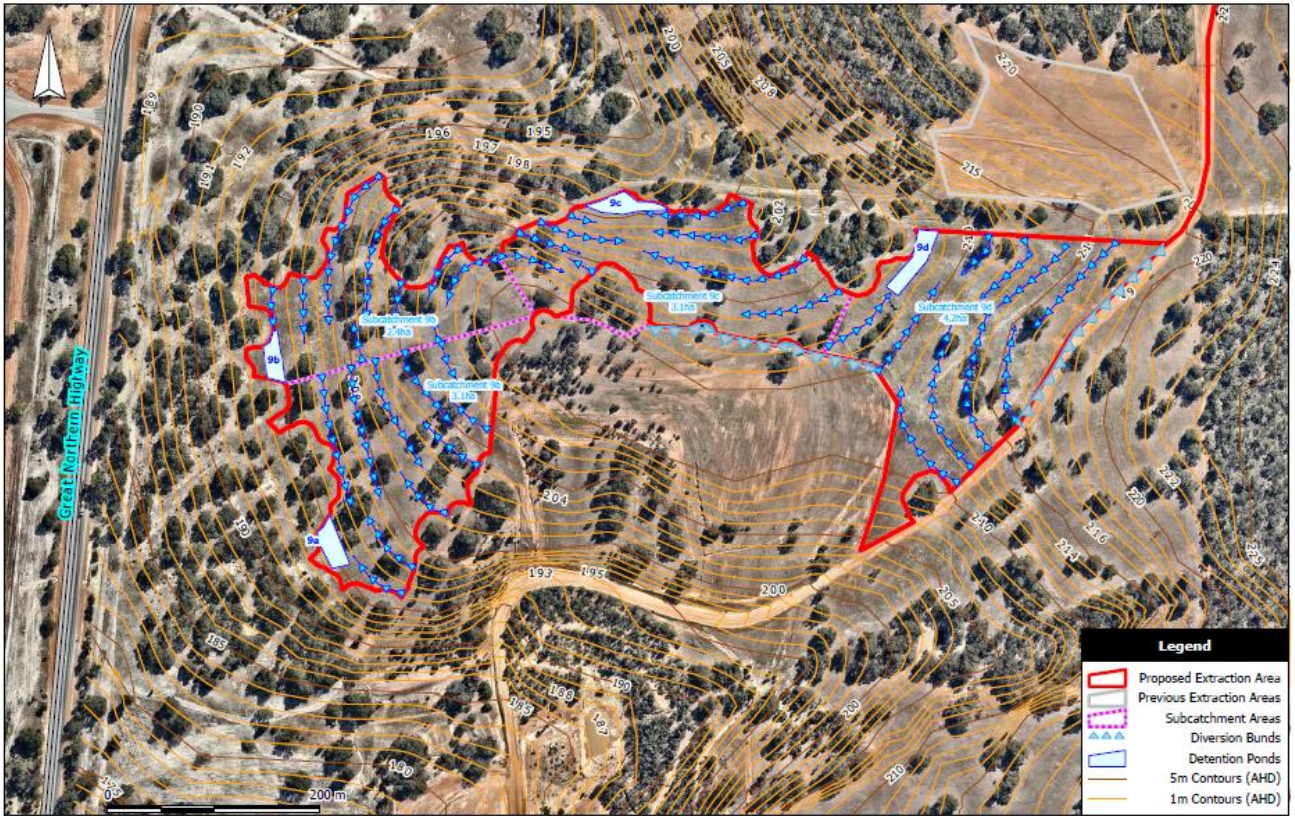


Figure 1: Stormwater Management Infrastructure for Stage 9 at the Premises



Figure 2 : Stormwater Management Infrastructure for Stage 10 at the Premises

2.3 Legislative context and other approvals

2.3.1 Development Approval

The Applicant was granted Development Approval (DA) P018/20 subject to conditions under the *Planning and Development Act 2005* by the Shire of Chittering (Shire) on 15 November 2021 for the purpose of Extractive Industry (Gravel) on Lot 42 Eatha Road, Chittering. The DA is valid until 21 November 2026.

2.3.2 Extractive Industry Licence

The Applicant may require an Extractive Industry Licence from the Shire.

2.3.3 EP Act – Native Vegetation Clearing Permit

The proposed activity will require the clearing of 2.23 ha of native vegetation for the purpose of extractive industry. A clearing permit will be required to be obtained under section 51E of the *Environmental Protection Act 1986*.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Placement of crushing and screening plant and associated equipment Vehicle movements on unsealed access roads Earthmoving and clearing of native vegetation activities to prepare site	Air / windborne pathway	<ul style="list-style-type: none">15kL water cart maintained on site when earth is being moved for dust mitigation during the construction phase;Adhere to 30 km/hour speed limits and ensure site staff stay on designated haulage routes and roads; andInternal roads will be surfaced with gravel to minimise dust lift-off from vehicle movement.
Noise			Applicant has not proposed controls.

Emission	Sources	Potential pathways	Proposed controls
	Construction of five detention ponds within the proposed extraction areas to capture contaminated surface water runoff during operation.		
Operation			
Dust	<p>Operation of the crushing and screening plant</p> <p>Unloading, loading and stockpiling of gravel material</p> <p>Vehicle movements on unsealed surfaces</p>	Air / windborne pathway	<ul style="list-style-type: none"> • 15kL water truck maintained on site to water down operational areas and stockpiles to minimise dust emissions; • Dust suppression spray bar installed within the crushing and screening plant to dampen product and suppress dust generation during plant operation; • If visual dust is observed leaving the site, the source of dust is to be identified and measures implemented to minimise further dust emissions; • Adhere to 30 km/hour speed limits and ensure site staff stay on designated haulage routes and roads; • Internal roads will be surfaced with gravel to minimise dust lift-off from vehicle movement; • Stockpiles to be dampened prior to unloading and loading of material onto trucks prior to transportation of material or through the crushing and screening plant; • A polymer-based spray-on stabilizer to be applied to topsoil and overburden stockpiles if they do not stabilize by crusting and grass regrowth; • Operations to cease during times of strong prevailing winds until such time as adequate wetting down has occurred or conditions have changed; • Existing remnant vegetation will be maintained as buffers along the western boundary of the site to assist with containing dust lift-off from open areas; • Truck loads to be fully covered prior to leaving the Premises to prevent dust lift-off during transportation; • Crushing and stockpiling activities to be located in topographic low points at the Premises with raw and processed stockpiles arranged to create windbreaks

Emission	Sources	Potential pathways	Proposed controls
			<p>to further minimise dust emissions;</p> <ul style="list-style-type: none"> • Ensure on-site employees and contractors are educated to minimise dust emissions from all operations; • A dust complaint register to be maintained at the Premises with signage erected at the front gate of the Premises providing emergency contact details of the operations manager; and • The operations manager will record any dust complaints received at the Premises and ensure to rectify the complaints promptly.
Noise			<ul style="list-style-type: none"> • Only broad-band reversing warning devices (reversing croakers) to be utilised on vehicles; • If a D10 dozer is to be utilised for the quarrying operations, it will be fitted with CAT noise suppression; • The location of the crushing and screening plant in each extraction stage is to be positioned such that the topsoil and product stockpiles will provide noise attenuation; • A noise complaint register to be maintained at the Premises with signage erected at the front gate detailing the contact details of the operations manager; • The operations manager will record any noise complaints received at the Premises and ensure to rectify the complaints promptly; and • Operations are restricted to the daytime hours of 7am to 6pm Mondays to Fridays, and 7am to 12pm Saturdays, with crushing and screening operations restricted to Monday to Friday; and • Stockpiles of material to be maintained after extraction operations have ceased to use as a noise buffer for the loading and unloading of trucks with gravel material.
Sediment laden stormwater	<p>Operation of the crushing and screening plant</p> <p>Stockpiling of material</p>	Overland and stockpile runoff during high rainfall events.	<ul style="list-style-type: none"> • Narrow-based contour bunds that are 4m wide will be constructed approximately 30m apart with a slope of approximately 6% and a grade of between 0.1 and 0.4% to direct stormwater runoff into detention ponds;

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> • Diversion bunds will be constructed along the southern edge of Stage 9 and the eastern and northern edge of Stage 10 to prevent sediment laden stormwater runoff entering and leaving excavation areas; and • Five stormwater detention ponds (four located within Stage 9 and one within Stage 10 extraction areas) to be constructed and designed to contain a 2 hour, 10% (1 in 10 year) AEP rainfall event.
Spills / leaks of hydrocarbons	Hydrocarbon spills or leaks from vehicle and equipment use, refuelling or maintenance activities	Overland runoff during high rainfall events. Leaching through soil profile to groundwater	<ul style="list-style-type: none"> • No fuels or chemicals will be stored on site • Refueling on site to take place using a mobile refuelling vehicle which is equipped with a “snap-on snap-off, fast-fill and auto shut-off” facility; • Major servicing of vehicles is to occur offsite; and • Spill kits will be retained on site in the event there is a hydrocarbon; fuel or chemical spill. <p>In addition to the controls outlined above, the Applicant has a Hydrocarbon Spill Management Plan titled ‘SAF-SP-029 Hydrocarbon Spill Response’ that outlines procedures that will be implemented in the event of a potential hydrocarbon spill on site.</p>

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant’s employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Rural residential Premises	*One internal residence is located within the same parcel of land (Lot 42) owned by Austral Bricks Pty Ltd, formerly known as Bristle Operations Pty Ltd (465m north of Stage 9 and 972m south of Stage 10). This residence is not considered to be a receptor for dust emissions as it is occupied under a lease agreement. This receptor is not considered to be a noise sensitive receptor as Regulation 7 of the Noise Regulations specifies that assigned levels apply to <i>noise emitted</i>

	<p>from premises or public place when received at other premises. This residence is therefore being treated as being on the same premises for the purpose of the Noise Regulations.</p> <p>Seven residential properties are located within 1km of the Prescribed Premises boundary of which contains Stages 9 and 10 extraction areas:</p> <p>Stage 9</p> <ul style="list-style-type: none"> • Resident 1 (Lot 51 on Plan 90001 – 165 Blue Plains Road, Chittering) 509m southeast of Stage 9. • Residents 2 and 3 (Lot 50 on Plan 90001 – 470 Maddern Road, Chittering) 2 x dwellings located 542m and 561m northeast of Stage 9; • Resident 4 (Lot 7 on Plan 91294 – 40 Blue Plains Road, Chittering) 764m south of Stage 9. • Resident 5 (Lot 201 on Plan 22975 – 370 Maddern South Road, Chittering) 863m southeast of Stage 9. • Resident 6 (Lot 202 on Plan 22975 – 180 Blue Plains Road, Chittering) 984m southeast of Stage 9. <p>Stage 10</p> <ul style="list-style-type: none"> • Resident 7 (Lot 221 on Plan 24698 – 554 Maddern Road, Chittering) 1km southeast of Stage 10. <p>The wind speed data obtained from Gingin weather station, indicated that the prevailing wind direction is predominantly from the east in the morning and from the south-west in the afternoon.</p>
Environmental receptors	Distance from prescribed activity
Threatened Ecological Community (TEC)	<p>According to available datasets, there are several mapped occurrences of the 'Banksia Dominated Woodlands of the Swan Coastal Plain' (Banksia woodlands) TEC within close proximity to extraction areas with the closest occurrence 11 meters (m) north of Stage 10.</p> <p>This TEC is listed as 'endangered' at a federal level under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act) and 'Priority 3' at a state level. A Flora and Vegetation survey undertaken by Plant Ecology Consulting in 2019 identified a 2.5 ha remnant of native vegetation located 140m northwest of the Stage 9 extraction area to be in a very good (Keighery, 1994) condition that is representative of the Banksia Woodlands TEC (Plant Ecology Consulting, 2019). The remaining mapped occurrences were identified during the survey as not being representative of the Banksia woodlands TEC.</p>
Remnant native vegetation	<p>Remnant native vegetation occurs within and surrounds both extraction areas (Stage 9 and Stage 10).</p> <p>A Flora and Vegetation survey has identified the vegetation condition surrounding the Stage 9 extraction area as being in a completely degraded to excellent (Keighery, 1994) condition, with the majority of the vegetation identified as paddock trees in a completely degraded (Keighery, 1994) condition (Plant Ecology Consulting, 2019).</p>
Conservation significant flora	<p>According to the Department of Biodiversity, Conservation and Attractions (DBCA) database, the following records have been identified within 2kms of the Prescribed Premises boundary:</p> <ul style="list-style-type: none"> • <i>Thelymitra stellata</i> (Threatened) – 3 x records – closest record 670m southeast of Stage 9; and • <i>Hibbertia glomerata subsp. Ginginensis</i> (Priority 3) – 1.9kms southwest of

	<p>Stage 9.</p> <p>One priority 3 flora species <i>Haemodorum loratum</i> was recorded during the Flora and Vegetation Survey undertaken by Plant Ecology Consulting in December 2019 (Plant Ecology Consulting, 2019).</p>
Conservation significant fauna species	<p>According to the DBCA database, the following records have been identified within 2kms of the Prescribed Premises boundary:</p> <ul style="list-style-type: none"> • <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo – 503m northeast, 1.4kms southeast, 1.6kms southeast of Stage 9; • <i>Calyptorhynchus sp.</i> (white-tailed black cockatoo) – 872m southwest and 1.6kms southeast of Stage 9; and • <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo) – 319m north of Stage 10 and 1.3kms southeast and 1.7kms south of Stage 9. <p>The native vegetation within and adjacent to the proposed extraction areas was identified during a Targeted Black Cockatoo Survey as being foraging habitat and potential breeding habitat for black cockatoo species.</p>
Surface water lines	<p>There are drainage lines located in close proximity to both extraction areas, with one being located immediately adjacent to the northern boundary of Stage 9 and one being approximately 90m north of Stage 10. Surface drainage within the proposed EIL area is to the west towards Yal Yal brook which drains into Ellen Brook.</p>
Multiple-use Wetland	<p>A mapped occurrence of a multiple-use palus plain wetland associated to the Brockman River is located approximately 4.5kms west of Stage 10.</p>
Acid Sulphate soils	<p>No acid sulphate soils have been encountered in the previous extraction areas nor the clay extraction operations on the same property. The Applicant has identified that implementation of an acid sulfate soils management plan is a requirement of DA conditions.</p>
Groundwater	<p>The proposed Prescribed Premises boundary intersects the Gingin Proclaimed Groundwater Area and Swan River System Surface Water Area under the <i>Rights in Water and Irrigation Act 1914</i>.</p> <p>Depth to groundwater on Lot 42 EIL areas has been estimated as approximately 12.4m based on data obtained from a groundwater monitoring bore located 90m south of the Stage 9 extraction area and elevation contours of the area. The proposed operations will be well above the highest seasonal water table.</p>

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works approval W6676/2022/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. crushing and screening activities. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment of potential emissions and discharges from the premises during construction, time limited operations and operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Placement of crushing and screening plant and associated equipment Vehicle movements on unsealed access roads Earthmoving Construction of five detention ponds within the proposed extraction areas to capture contaminated surface water runoff during operation.	Dust	Pathway: Air / windborne dispersion Impact: Health and amenity of closest human receptors.	Seven rural residences located within 1km of the proposed excavation areas (closest residence 509m southeast of Stage 9).	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 (Table 1): Design and Construction/installation requirements Conditions 2 and 3: Submission of an Environmental Compliance Report	Minimal dust emissions may be generated from site preparation works including earthworks, equipment placement, vehicle movements, noise bunding and stormwater management infrastructure during the construction period. The limited scale of the construction works /placement that will occur over a short-term period coupled with the implementation of the Applicant's proposed controls are sufficient to mitigate any potential impacts on sensitive receptors from dust emissions. Additional regulatory controls are not required.
	Noise			Applicant has not specified controls for noise emissions during construction.	C = Slight L = Unlikely Low Risk	N/A	Condition 1 (Table 1): Design and Construction/installation requirements Conditions 2 and 3: Submission of an Environmental Compliance Report	It is expected that receptors will not be significantly impacted by noise emissions noting the short-term duration of the works and placement of the mobile crushing and screening plant equipment and that construction/site works will be conducted during daytime hours. The <i>Environmental Protection (Noise) Regulations 1997</i> (EP Noise Regulations) apply.
Operation <i>(including time-limited-operations operations)</i>								

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<p>Operation of the crushing and screening plant</p> <p>Unloading, loading and stockpiling of gravel material</p> <p>Vehicle movements on unsealed surfaces</p>	Dust	<p>Pathway: Air / windborne dispersion</p> <p>Impact: Health and amenity of closest human receptors.</p>	Seven rural residences located within 1km of the excavation areas (closest residence 509m southeast of Stage 9).	Refer to Section 3.1	<p>C = Moderate</p> <p>L = Unlikely</p> <p>Medium Risk</p>	Y	<p>Condition 1 (Table 1): Design and Construction/installation requirements</p> <p>Conditions 2 and 3: Submission of an Environmental Compliance Report</p> <p>Condition 5 (Table 2): Infrastructure and equipment requirements for mobile crushing and screening plant with associated equipment, stockpile material and watercart during Time Limited Operations</p> <p>Condition 6: Dust management</p> <p>Condition 14: Submission of Time Limited Operations report.</p> <p>Condition 15: Time Limited Operations Infrastructure and equipment reporting requirements for crushing and screening plant with associated equipment, stockpile material and watercart.</p>	<p>As discussed under Table 2 of this report, the prevailing wind direction is predominately from the east in the morning and the south west in the afternoons. The closest residential receptor is not situated within a prevailing wind direction, however Resident 2 and 3 is located in the afternoon prevalent wind direction.</p> <p>The Delegated Officer has taken into account that the crushing, screening and stockpiling of material that is likely to generate the greatest dust emissions will have a short duration of up to 4 weeks per annum. In addition, the Delegated Officer has taken into consideration the remnant native vegetation that occurs between the proposed Stage 9 and Resident 2 and 3 which would act as buffer to dust emissions. Given this, and the operational controls that have been proposed by the Applicant the Delegated Officer considers these controls are likely to be adequate in mitigating dust emissions to reduce impacts to nearby receptors and have been included on the works approval.</p>
<p>Operation of the crushing and screening plant</p> <p>Unloading, loading and stockpiling of gravel material</p> <p>Vehicle movements on</p>	Noise	<p>Pathway: Air / windborne dispersion</p> <p>Impact: Health and amenity of closest human receptors.</p>	Seven rural residences located within 1km of the excavation areas (closest residence 509m southeast of Stage 9).	Refer to Section 3.1	<p>C = Moderate</p> <p>L = Unlikely</p> <p>Medium Risk</p>	N	<p>Condition 1 (Table 1): Design and Construction/installation requirements for noise bund</p> <p>Conditions 2 and 3: Submission of an Environmental</p>	See section 3.3 – detailed risk assessment

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
unsealed surfaces							Compliance Report Condition 5 (Table 2): Infrastructure and equipment requirements for mobile crushing and screening plant with associated equipment, noise bund and stockpile material during Time Limited Operations Condition 7: Noise validation monitoring Conditions 8 to 13: Noise validation compliance reporting Condition 14: Submission of Time Limited Operations report. Condition 15: Time Limited Operations Infrastructure and equipment reporting requirements for crushing and screening plant with associated equipment, noise bund and stockpile material.	
Operation of the crushing and screening plant Stockpiling of material	Sediment laden stormwater	Pathway: Overland and stockpile runoff during high rainfall events. Impact: Increase of suspended solids into the environment causing ecosystem disturbance and impacts to	Drainage lines immediately adjacent to the northern boundary of Stage 9 and approximately 90m north of Stage 10 that flow towards Yal Yal brook which drains into Ellen Brook.	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 1 (Table 1): Design and Construction/installation requirements for noise bund Conditions 2 and 3: Submission of an Environmental Compliance Report Condition 5 (Table 2): Infrastructure and equipment requirements for Stormwater	There are drainage lines located immediately adjacent to the northern boundary of Stage 9 and approximately 90m north of Stage 10 that flow towards Yal Yal brook which drains into Ellen Brook. Noting the close proximity of the crushing and screen operation to these surface water body, there is a risk of sedimentation runoff from operational areas to this waterbody during a high rainfall event. However, the Delegated Officer has

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		surface water quality of nearby waterbodies.					<p>Management Infrastructure during Time Limited Operations</p> <p>Condition 14: Submission of Time Limited Operations report.</p> <p>Condition 15: Time Limited Operations Infrastructure and equipment reporting requirements for Stormwater Management Infrastructure during Time Limited Operations</p>	<p>taken into consideration that the drainage lines located near the operational areas are non-perennial in nature as is Yal Yal brook, and Ellen Brook is located more than 10kms downstream. The Delegated Officer considers the likelihood of the risk event occurring to be unlikely due to the construction of five detention ponds which will promote sedimentation of solids are that have been designed to contain at least a 1 in 10-year, 2 hour duration ARI rainfall event.</p> <p>Given this, the Delegated considers the Applicant's controls adequate to manage stormwater at the Premises.</p>
Spillage, leakage and seepage of hydrocarbons and chemicals used and stored onsite	Spills / leaks of hydrocarbons	<p>Pathway: Overland runoff during high rainfall events.</p> <p>Leaching through soil profile to groundwater.</p> <p>Impact: Overland flow following a spill or leak event may impact on surface water bodies if not properly contained.</p> <p>Contamination of soils and deterioration of groundwater quality inhibiting the survival of adjacent remnant</p>	<p>Drainage lines immediately adjacent to the northern boundary of Stage 9 and approximately 90m north of Stage 10 that flow towards Yal Yal brook which drains into Ellen Brook.</p> <p>Remnant native vegetation surrounding both stages of extraction.</p> <p>Banksia woodlands TEC located 140m northwest of the Stage 9 extraction area.</p>	Refer to Section 3.1	<p>C = Slight</p> <p>L = Possible</p> <p>Low Risk</p>	Y	N/A	<p>Noting that there is no storage of hydrocarbons, chemicals or fuels stored on site, and the spill management procedures that will be implemented in the event of a spill or leak, the Delegated Officer has determined that the risk of hydrocarbon contamination to receptors is low. The stormwater management infrastructure proposed to be constructed as part of the operation will also contribute to managing the risk of hydrocarbon spills or leaks.</p>

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		native vegetation.						

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. depicts additional regulatory controls imposed by department.

3.3 Detailed risk assessment for noise emissions to human receptors

3.3.1 Overview of risk event

Through consideration of the source-pathway-receptor analysis there is a risk of noise emissions released from the ripping and blading and subsequent crushing and screening of gravel material during operations impacting upon nearby sensitive residential receptors. As discussed under Section 3.1.2 of this report, there are seven sensitive noise receptors located outside the Premises within 1000m of the Stage 9 and Stage 10 extraction areas, with the closest receptor being located 509m southeast of the Stage 9 extraction area. If noise emissions are not managed appropriately, noise emissions may impact on the health and amenity of nearby sensitive residential receptors.

3.3.2 Noise Assessment review

No noise modelling has been conducted for the Stage 9 and Stage 10 extraction areas proposed under this works approval. It is noted that the previous stage 4 operations (operated under L8988/2016/1) are in proximity to the Stage 9 and 10 extraction areas. The noise verification data obtained from the Stage 4 operations indicated potential exceedance of the assigned noise levels at the residential receptor located 542m northeast of Stage 9 (Resident 2 in Table 2). Stage 4 noise emission levels recorded at the nearest receptors are considered to be indicative of noise levels that may be experienced by receptors during Stage 9 and Stage 10 operation.

3.3.3 Risk Assessment

The crushing, screening and stockpiling of material is estimated to occur for up to 4 weeks per annum, with the remainder of the year being for the loading of trucks from product stockpiles with a maximum of 12 loaded trucks per day. Noting short term duration of the crushing, screening and stockpiling of material which is likely to generate the greatest noise emissions, the likelihood of noise emissions impacting upon nearby receptors will be reduced. Given this, and that no noise complaints were received during previous operating period of L8988/2016/1, the Delegated Officer has determined that noise modelling is not required at this stage. However, noise verification monitoring will be required to be undertaken during time limited operations to confirm compliance with the EP Noise Regulations at the nearest receptors whilst time limited operations are occurring. Noise validation monitoring and noise validation compliance reporting conditions will be placed on the works approval as a regulatory control's.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 23 May 2022	No comments received	N/A
Local Government Authority advised of proposal on 18 May 2022	The Shire of Chittering (Shire) replied on 18 May 2022 providing the following:	Noted.

	<ul style="list-style-type: none"> • The Applicant was granted Development Approval (DA) for the purpose of extractive industry on Lot 42 on Deposited Plan 410794, Chittering; • The issuance of an Extractive Industry Licence (EIL) is dependent on the Applicant satisfying all relevant conditions imposed on the DA for Lot 42. 	
Nearby residences advised of proposal on 17 May 2022	One public submission was received from a nearby resident on 27 May 2022 regarding the works approval application. The main concern raised in the submission is in relation to the presence of acid sulphate soils in the area and the close proximity of the Yal Yal creek waterway located downhill to the west of the extraction site. The submission raised concern over the risk of acid sulphate runoff as a result of extractive industry operations and the potential downstream impact this would have on the Yal Yal creek which is linked to the Gnangara Mound groundwater. The submission requested that this risk be taken into consideration when allowing further operations to be approved at the site.	Impacts from acid sulphate soils resulting from clearing of native vegetation and extraction activities are considered to be out of the scope of this assessment as they are not associated with Category 12 (Screening of material) activities. The Applicant has an Acid Sulphate Soil Monitoring and Management Plan which has been approved by the Shire of Chittering.
Applicant was provided with draft documents on 3 August 2022	Comments from Applicant received on 2022. Comments are summarised in Appendix 1.	Refer to Appendix 1.

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
5. Lundstrom Environmental Consultants Pty Ltd (Lundstrom Environmental) 2021, *DWER Annual Environmental Report & Annual Audit Compliance Report – Gravel Quarry – Lot 83 Great Northern Highway – L8988/2016/1 – For the Period 1 January 2020 to 31*

December 2020, prepared for B & J Catalano Pty Ltd, dated January 2021, DWER Reference: DWERDT436698.

6. Lundstrom Environmental Consultants Pty Ltd (Lundstrom Environmental) 2022, *Acid Sulfate Soil Monitoring and Management Plan*, prepared for B & J Catalano Pty Ltd, dated April 2022, DWER Reference: A2111962.
7. Plant Ecology Consulting 2019, Reconnaissance vegetation survey at the Donnington Quarry, 4884 Gt Northern Highway, Chittering, prepared for B & J Catalano Pty Ltd, 16 December 2019, DWER Reference: A1901961.
8. Western Wildlife 2019, *Donningtons Gravel Quarry, Chittering – Targeted Black Cockatoo Survey*, prepared for B & J Catalano Pty Ltd, dated November 2019, DWER Reference: A1901958.

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Works Approval		
<p>Condition 1 (Table 1): Design and construction requirements for the noise bund</p> <p>DWER requested that the Applicant confirm if a noise bund is proposed to be constructed and if so what the dimensions of the bund will be. DWER requested the Applicant provide a map showing the location of the noise bund.</p>	<p>The Applicant advised that topsoil stockpiles will be 2m high and are not considered effective noise bunds due to their low height. However, product stockpiles (approx. 8m high) will be strategically positioned around the crushing and screening operations (eastern side of crusher/screener) to serve as noise bunds and provide noise attenuation to the eastern residencies. A figure of the proposed noise bund locations was provided.</p>	<p>Noted and updated Condition 1 (Table 1), Item 2 to specify the design requirement of the noise bunds (product stockpiles) shall be 8m in height and positioned in the infrastructure locations specified in Figure 3 of the Works Approval.</p> <p>Condition 5 (Table 2), Item 2 of the Works Approval updated to reflect the information provided by the Applicant.</p>
<p>Condition 3: Submission of an Environmental Report</p>	<p>The Applicant asserted that the certification requirements for the items of infrastructure in Condition 1 (Table 1) does not warrant engineering certification and that these are standard items that the Department have authorised certification for other B & J Catalano sites to be undertaken by a third-party environmental professional (such as Lundstrom Environmental Pty Ltd).</p>	<p>To maintain consistency with other Category 12 Works Approvals that have been granted for the Applicant, the Delegated Officer considers this request to be valid, and has amended Condition 3 of the Works Approval to state that certification is required to be undertaken by a site manager.</p>
<p>Condition 7: Noise validation monitoring condition</p>	<p>The Applicant noted that an assessment of the noise emissions associated with the extraction, crushing, screening and loading of gravel for the previous extraction stages on Lot 42 was undertaken by Lloyd George Acoustics in 2015 and provided with the works approval application. The Applicant noted that computer modelling was used to predict the noise levels, under worst case conditions, to each of the external sensitive receiver locations.</p> <p>The Applicant noted the use of the Stage 4 noise assessment results in the Department's decision for the works approval and asserted the following points as reasoning as to why condition 7 should be removed from the works approval as there are likely to be no noise impacts to sensitive receptors:</p> <ul style="list-style-type: none"> • Stage 10 is adjacent and to the west (further from sensitive 	<p>The Delegated Officer notes that no noise modelling was undertaken for the Stage 9 and 10 proposed new extraction areas and that the noise validation monitoring results conducted for Stage 4 which is located 600m further away than the previously modelled Stage 8 predicted noise exceedances at Residence 2. Given this, there is a lack of information to be certain that noise regulations will be met at the closest receptors. In addition, as no noise modelling has been conducted for the new stages, there is uncertainty that the 8m noise bunds proposed to be positioned and maintained to the east of the crushing and screening plant locations to reduce the impacts of noise emissions is sufficient to comply with the Noise Regulations at Residence 2.</p>

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Condition	Summary of applicant's comment	Department's response
	<p>receptors) of Stage 1, which modelling showed noise levels L_{A10} under 40dB for all sensitive receptors;</p> <ul style="list-style-type: none"> • Stage 9 is adjacent and to the south and west (similar distance to sensitive receptors) of Stage 8, which modelling showed noise levels L_{A10} under 40dB for all sensitive receptors (36dB to S1); • Stage 4 is located between Stages 9 and 10 approx. 600m south of Stage 10 and approx. 850m north of Stage 9; • At least 3m high (and up to 8m high) product stockpiles will be established and maintained between the crushing plant and dozer working areas and the eastern residences; and • Product stockpile noise bunds will also be used to attenuate noise from loading operations. 	<p>Given the above, the Delegated Officer has determined there is not enough certainty to support the Applicant's request to remove the Noise validation monitoring condition from the Works Approval. Noise validation monitoring during Time Limited Operations is considered to be appropriate to confirm compliance at the nearest receptors.</p>
Decision Report		
<p>Section 2.2.2 of the Decision Report: Site Operations Process</p> <p>DWER requested that the Applicant confirm whether crushing will occur continuously or on a campaign basis during the durations of crushing and screening proposed for the extraction stages.</p>	<p>The Applicant confirmed that crushing will take place on a campaign basis.</p>	<p>Noted and updated Section 2.2.2 of the Decision Report to include this additional information provided by the Applicant.</p>
<p>Figure 2 of the Decision Report: Stormwater Management Infrastructure for Stage 10 at the Premises</p> <p>DWER requested the Applicant provide an updated figure to align with the amended footprint area for Stage 10.</p>	<p>No response was provided by the Applicant.</p>	<p>Given there is not a significant change in the location of the detention pond for Stage 10 to its original location and GPS coordinates have not been specified, the Delegated Officer has determined that the existing figure 2 can remain in the Decision Report and no further changes will be made.</p>

Condition	Summary of applicant's comment	Department's response
<p>Table 3 of the Decision Report: Noise controls during construction.</p> <p>DWER requested that the Applicant to confirm whether construction/site works are proposed to occur in the day or night time.</p>	<p>No response was provided by the Applicant.</p>	<p>Noting that the Development Approval for the proposal only allows operation during the day, it is assumed that the Applicant can only conduct construction/site works during the day. Table 3 of the Decision Report has been updated with this conclusion.</p>

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Works approval	<input checked="" type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input type="checkbox"/>	Current licence number:		
		Relevant works approval number:	N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	16 February 2022 RFI Response provided 5 May 2022 (DWERDT599592)			
Applicant and Premises details				
Applicant name/s (full legal name/s)	B & J Catalano Pty Ltd			
Premises name	N/A			
Premises location	Part of Lot 42 on Plan 410794, Chittering			
Local Government Authority	Shire of Chittering			
Application documents				
HPCM file reference number:	DER2022/000075			
Key application documents (additional to application form):	Supporting Documents (DWERDT565442) including: <ul style="list-style-type: none"> • Attachment 1A (Proof of Occupier Status); • Certificate of Titles; • Attachment 1B -ASIC Company Extract; • Attachment 1C; • Attachment 2: Aerial Photo of Premises; • Attachment 3B: Description/Overview; • Attachment 5: Other Approvals (Development Approval); • Attachment 6A: Emissions and discharges (Dust Management Plan); • Figure 1: Dust Management Plan • Figure 2: Extraction Area; 			

	<ul style="list-style-type: none"> • Annexure 1: Particle Size Analysis for Crushed Gravel; • Annexure 2: Wind-Roses for Pearce RAAF; • Annexure 3: Site Classification Assessment Chart; <ul style="list-style-type: none"> (A) -Figure 1: Site and Surrounds (Proposed stages 9 and 10) • Appendix 1: Site risk assessment/classification for activities generating uncontaminated dust; • Noise Management Plan; <ul style="list-style-type: none"> (B) -Figure 1: Site and Surrounds (Proposed stages 1 and 2); (C) -Figure 2: Noise Contour Map • Lloyd George Acoustics (2016) 'Environmental Noise Assessment – Gravel Extraction Pit – Lot 83, 4884 Great Northern Hwy, Chittering – Reference: 15083297-01C', prepared for B & J Catalano Pty Ltd; dated 14 November 2016; • Lloyd George Acoustics (2016a) 'Lot 83 Great Northern Highway Gravel Quarry – Noise Assessment Works Approval W5979 – Reference 15083297-02', prepared for B & J Catalano, dated 11 November 2016; • Lloyd George Acoustics (2019) 'Lot 83 Great Northern Highway, Chittering – Noise Assessment – Reference 16093734-01B, dated 21 March 2019. • Attachment 7: Site and Location; and • Attachment 10: Fee Calculation.
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Scope of application/assessment

<p>Summary of proposed activities or changes to existing operations.</p>	<p><u>Works Approval</u></p> <p>The Applicant is proposing to operate a mobile crushing and screening plant for the extraction of gravel material over two stages across a total area of 14.9ha. Stage 1 will comprise of an area of approximately 2.5ha (referred to as Stage 10 Attachment 2, Part 2) and Stage 2 will cover 12.4ha (referred to as Stage 9 in Attachment 2, Part 1). The estimated operating period of the Premises is proposed to be five years with mining activities proposed to be carried out over three years.</p> <p>Five stormwater detention ponds will be constructed within the proposed extraction areas to capture any surface water runoff from operating areas. As each stage of extraction is opened, stormwater detention ponds will be excavated below the workings (but within the extraction area) with the capacity to hold at least the 2hr 10% AEP storm event.</p>
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Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 12: Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or	250,000 tonnes per annum (estimated/actual throughput)	

separated.		
Legislative context and other approvals		
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input checked="" type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry: The Applicant has demonstrated occupancy for Part of Lot 42 on Plan 410794, Chittering.
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Applicant has obtained development approval for all stages from the Shire of Chittering for both land parcels. The Applicant is still waiting for the approval of an Extractive Industry Licence.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 8701/1 The Applicant has advised that approximately 2.23 hectares of native vegetation is proposed to be cleared. The Application is currently under assessment awaiting approval of a revegetation plan.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.

<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Name: Gingin Proclaimed Groundwater Area and Swan River System Surface Water Area</p> <p>Has Regulatory Services (Water) been consulted?</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A</p> <p>Priority: N/A</p> <p>Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>N/A</p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>N/A</p>
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>N/A</p>
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: Acid Sulphate Soil</p> <p>Date of classification: N/A</p> <p>Lot 41 and 42 Eatha Road, Chittering.</p> <p>CSS Site ID: 12258</p>