



Application for Licence Amendment

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

Licence Number	L9154/2018/1
Licence Holder	Drilline Pty Ltd
ACN	065 688 164
File Number	DER2018/000988-1
Premises	Warrawanda Creek Sand Project Mining tenement M52/1063 NEWMAN WA As defined by the Premises maps attached to the Revised Licence
Date of Report	12 November 2020
Decision	Revised licence granted

Lauren Fox

A/MANAGER RESOURCE INDUSTRIES

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

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1. Decision summary

Licence L9154/2018/1 is held by Drilline Pty Ltd (Licence Holder) for the Warrawanda Creek Sand Project (the Premises), located at Mining tenement M52/1063, Newman WA.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Licence L9154/2018/1 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, 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

On 9 October 2020, the Licence Holder submitted an application to the department to amend Licence L9154/2018/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Installation and operation of Terex M1700 mobile screening and washing plant installed at working area (Figure 1). This is to be used as a washing plant and would be used to generate a washed sand product to be marketed as bore casing material. A turkey's nest dam will be constructed next to the Terex M1700 to provide a water recycling circuit to remove sediment.
- The turkey's nest dam will consist of two cells (Figure 2). Cell 1 is a modified sea container with five settlement compartments. The sea container will be sealed with a painted waterproof membrane. The first four compartments have a circular flow-through baffles at different heights to slow water velocity to drop out sediment.
- Sand drying plant and packing plant (Figure 3). Washed sand will be stockpiled and fed into the drying plant via a hopper. The input capacity is approximately 8 tonnes per hour. The dryer is designed to reduce the sand moisture content from approximately 10% to <1%. Particle sizing will be screened to +0.075mm and -6.7mm. The washed and dried sand enables the material to be free flowing when poured into the borehole casing as gravel packing.
- Striker SC185 mobile screening plant will be kept on site in the event of maintenance breakdown of the other plants, and for additional screening capacity at peak times when a number of products are manufactured simultaneously (Striker SC185). The Striker SC185 is equivalent in size and throughput to the currently approved Terex 683.

The amendment is required to produce a specialised product (bore casing filter material).

DIMENSIONS

M 1700 – 3 DECK RINSER WORKING DIMENSIONS

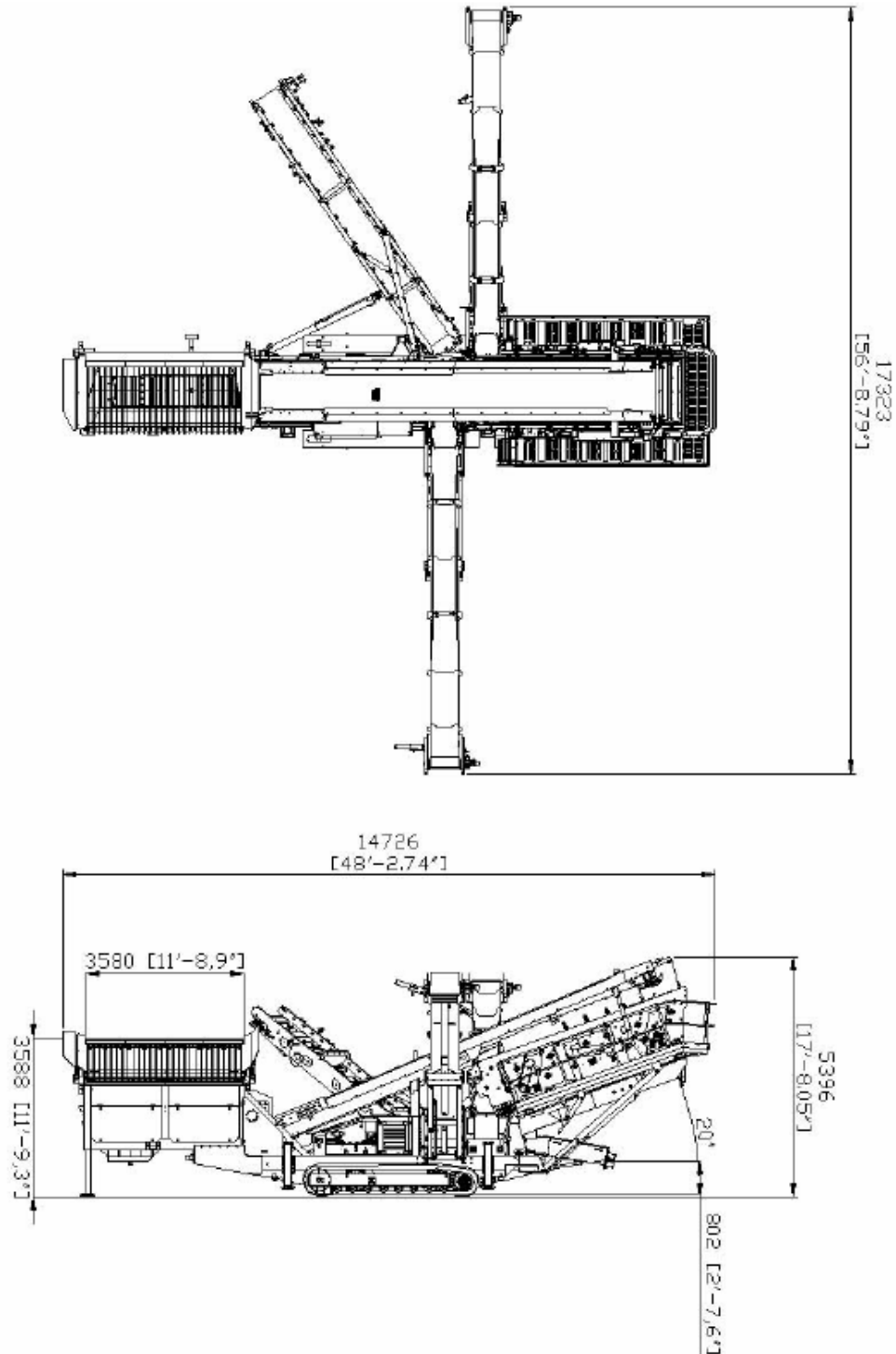


Figure 1: Terex M1700

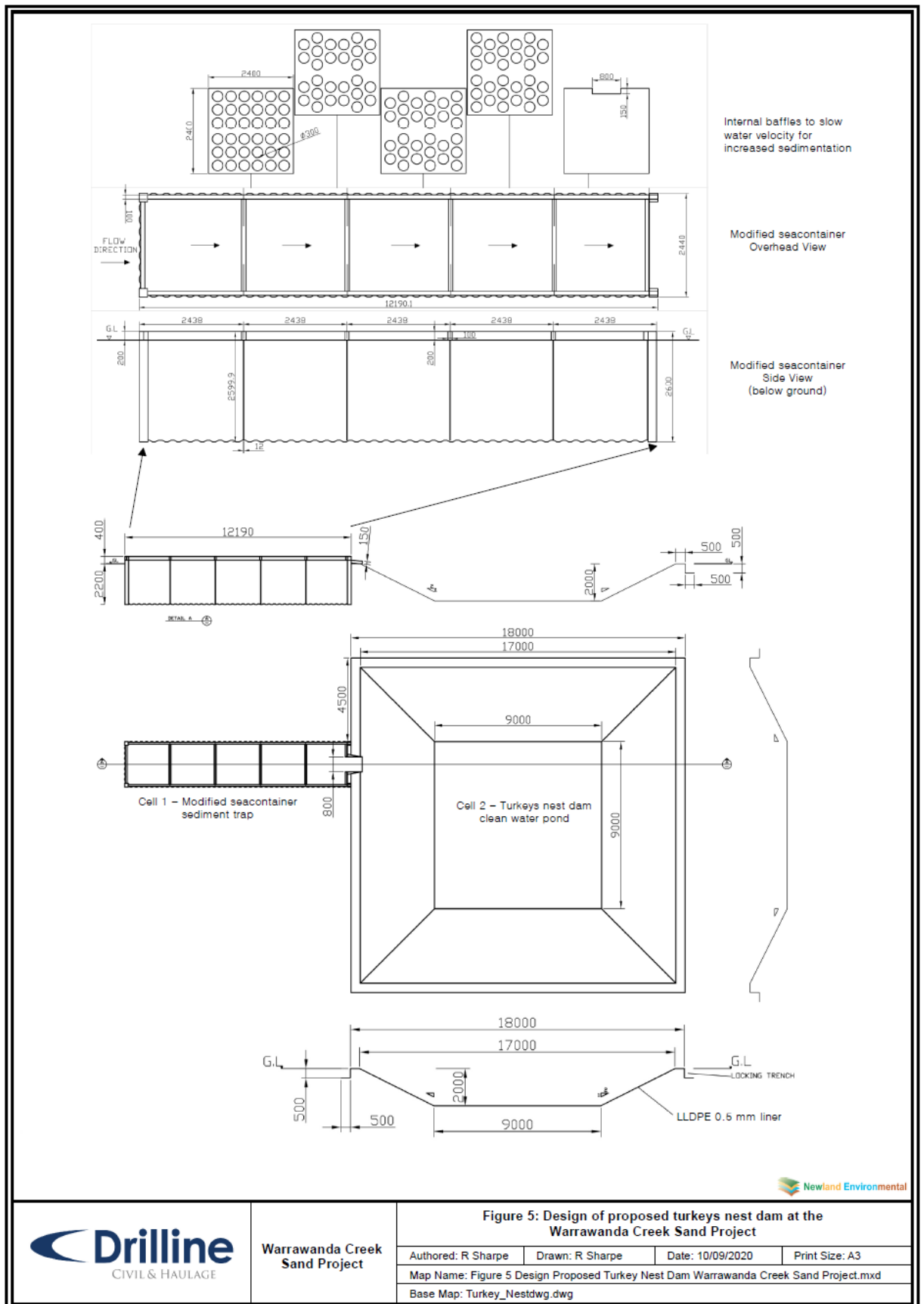


Figure 2: Turkeys nest dam

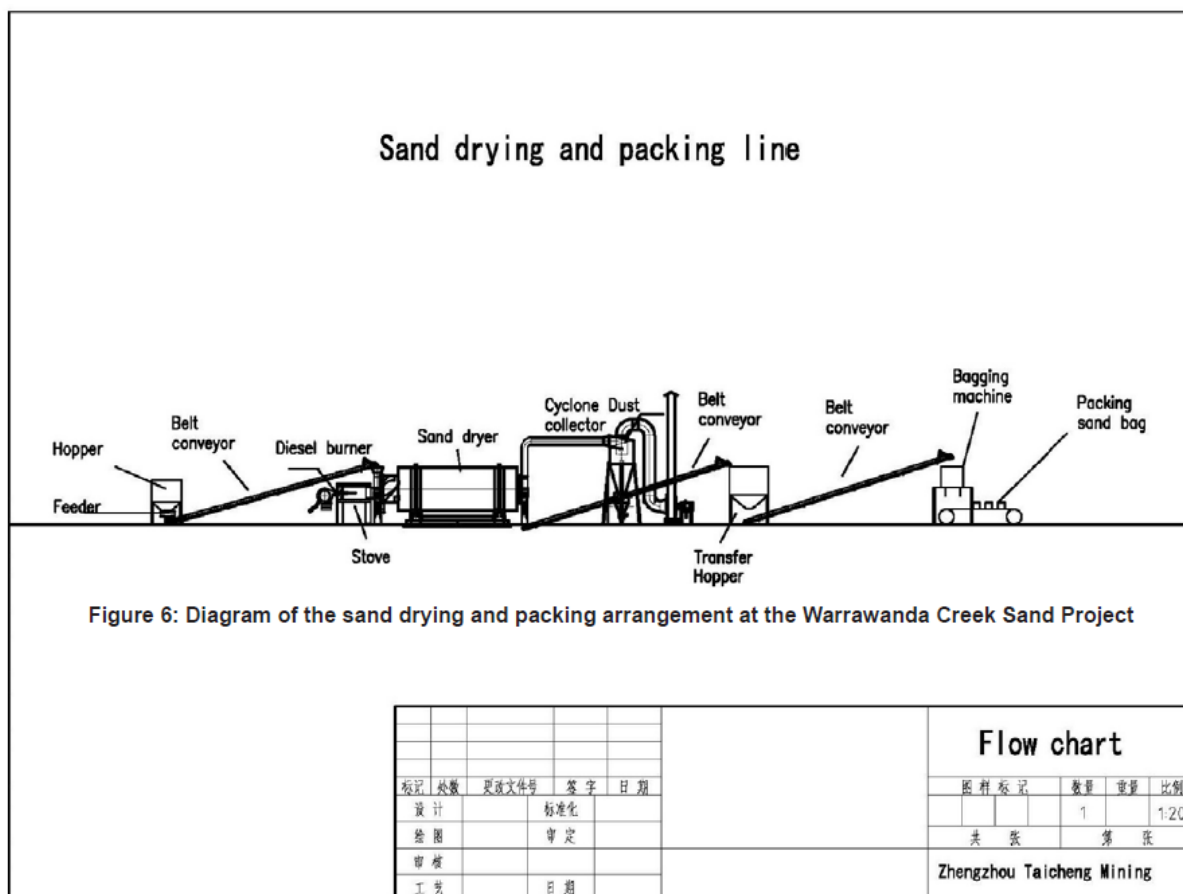


Figure 3: sand drying and packing line



Figure 4: Striker SC185

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 *Guidance*

Statement: Risk Assessments (DER 2017).

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 Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Dust	Screening, crushing, unloading, loading and storage of material Vehicle movements	Air/windborne pathway	Dust Management Plan submitted as part of this application which outlines the following: <ul style="list-style-type: none"> Dust covers and skirts to be fitted on all processing equipment (as is practical). Water truck cannon used on stockpiles and inaccessible areas. Water truck spray down will be used on roads, hardstand areas and processing areas. In the event of particularly strong winds, operations on site will be managed to prevent significant dust emissions. A traffic Management Plan will be applied vehicle speed limits. Haul trucks transporting materials offsite will have their loads fully covered to ensure that no dust emissions or spillages occur. Stockpiles will be sprayed down with water.
Noise	Screening, crushing, unloading, loading and storage of material Vehicle movements	Air/windborne pathway	No specific controls proposed as part of this amendment application. As detailed in Table 2 below, there are no foreseeable receptors to be impacted by noise. Therefore, noise emissions have not been risk assessed as no source-pathway-receptor linkage is present.
Contaminated stormwater (sediment) runoff from stockpiles	Stockpiling and screening of sand products.	Direct discharge	Raw materials and products are 'washed' as they originate from the creek and therefore the applicant expects there to be minimal fines to contaminate stormwater runoff. The licence holder has stated within the application that a windrow has been

Emission	Sources	Potential pathways	Proposed controls
			constructed around the work area which directs any stormwater to spoon drains and contain stormwater on site. The area where the project is located has a high evaporation rate and therefore it is expected that collected stormwater will evaporate.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's 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 (*Guidance Statement: Environmental Siting* (DER 2016)).

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

Human receptors	Distance from prescribed activity
Capricorn roadhouse	9km west-northwest of the premises. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Newman	21km northwest of the premises. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Sylvania station homestead	20km east of the premises. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Environmental receptors	Distance from prescribed activity
Pilbara Surface Water Area	Within premises boundary
East Murchinson Groundwater Area	Within premises boundary
Warrawanda Creek – adjacent to the working area	Within premises boundary (adjacent to the 'working area') Warrawanda Creek is a large ephemeral tributary of the Fortescue River, which only flows during extreme rainfall events. The creek flows into Ophthalmia Dam, 13km to the north of the

	premises. This dam provides water to the aquifers for Newman's water supply.
Newman Water reserve – 8.2km to the north	8.2km to the north of the premises. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Threatened Ecological Communities (TEC) and Priority Ecological Communities (PEC): Ethel Gorge aquifer stygobiont community	9km to the north of the premises. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Environmentally sensitive area associated with the Ethel Gorge (TEC)	7.5km to the north, northwest. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
WMS server data WA 'Threatened and Priority Fauna' (DBCA-037)	13km to the north, northwest. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
WMS server Data WA 'Threatened and Priority Flora' (DBCA-036)	18.5km to the north, northwest. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Aboriginal and other heritage sites – Catalina Well ID 10129, lodged (not registered)	5.3km. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Public Drinking Water Source Area: Newman Water Reserve	8.2km north of the premises. Water is used for potable and industrial use. Given the significant distance to this receptor, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore this receptor has not been considered as part of this risk assessment.
Rivers, lakes etc. – Ophthalmia Dam, Fortescue River	13km, 10km. Given the significant distance to these receptors, the Delegated Officer considers it unforeseeable that a Risk Event would occur and therefore these receptors have not been considered as part of this risk assessment.

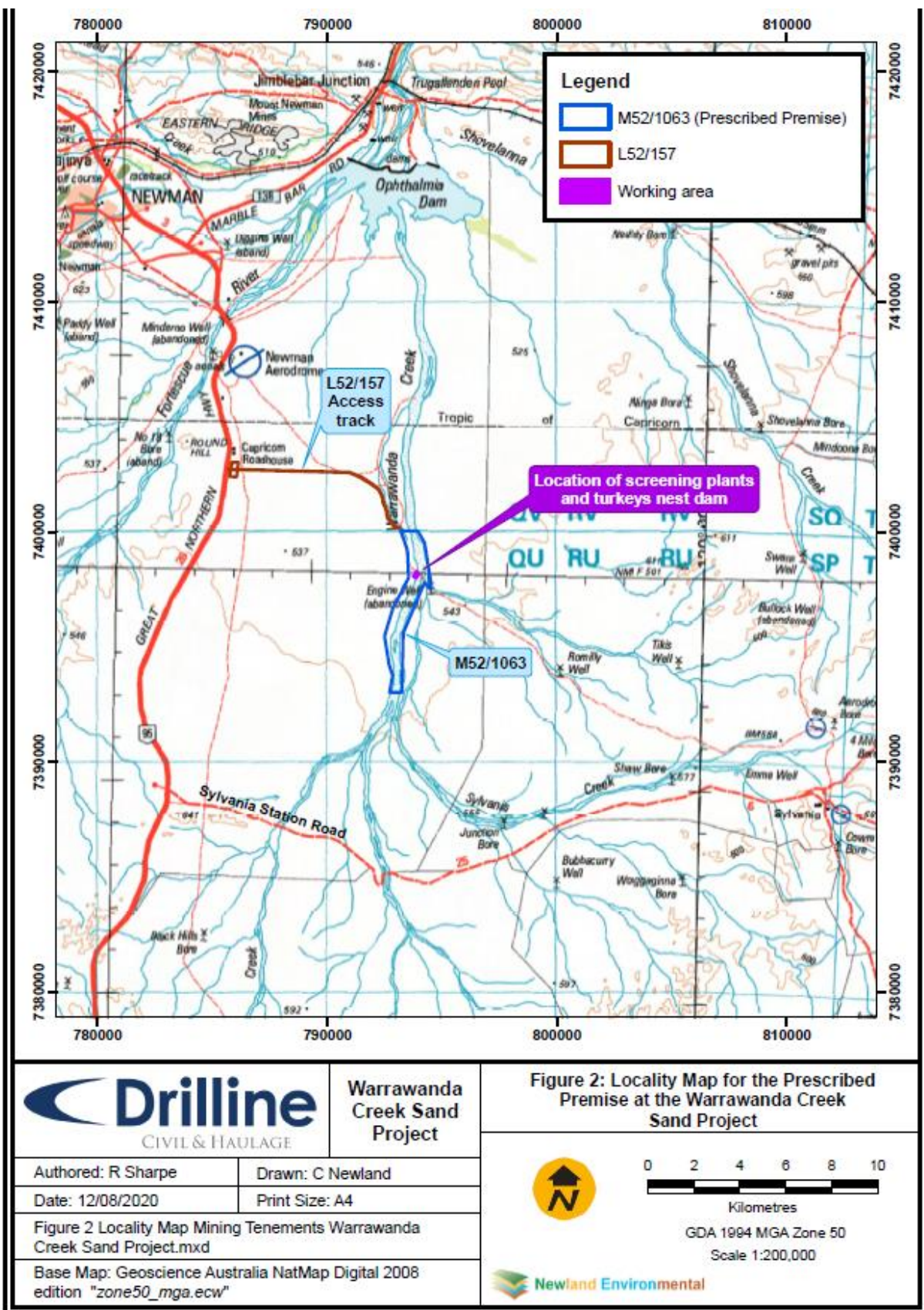


Figure 5: Locality map

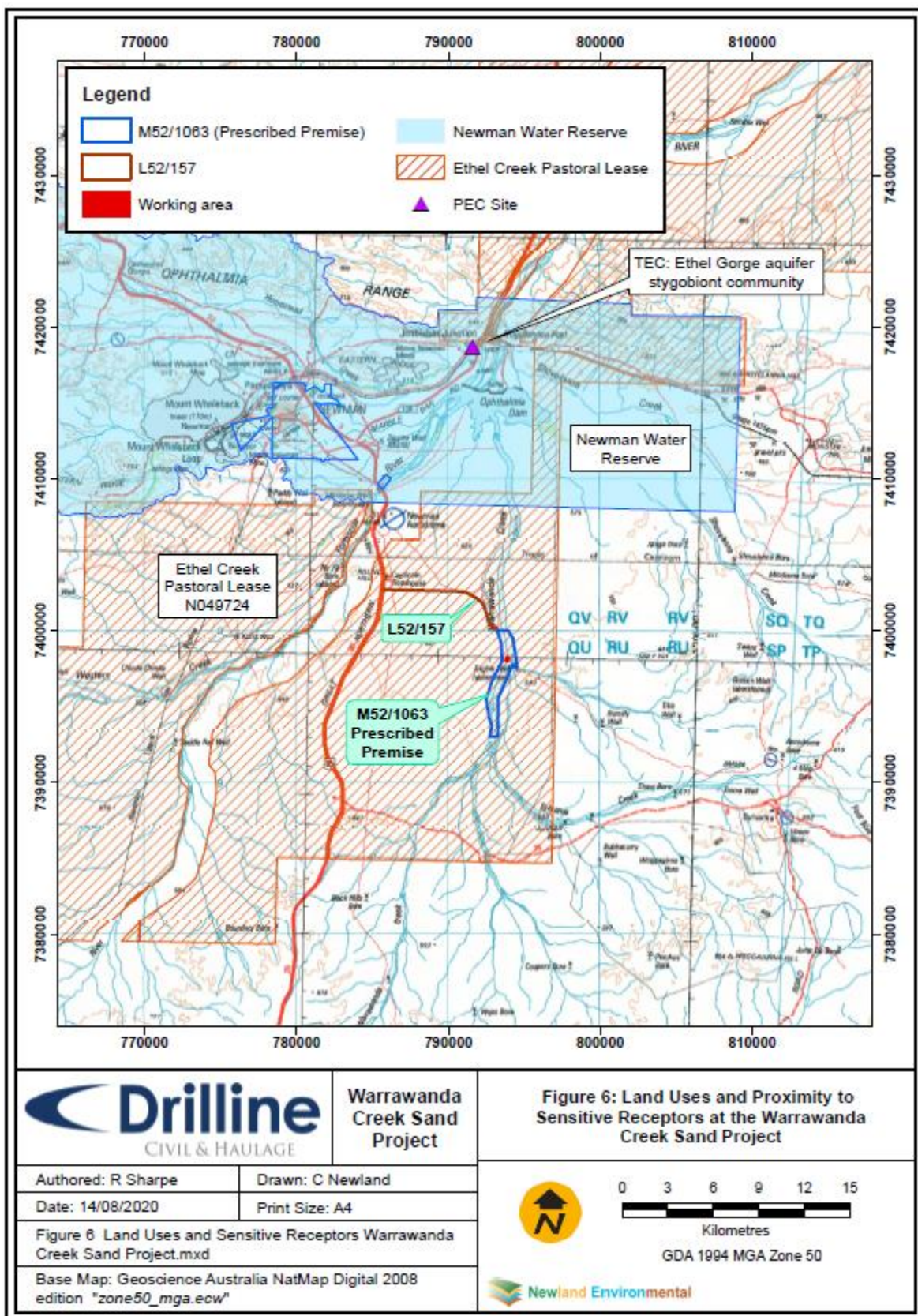


Figure 6: Distance to sensitive receptors

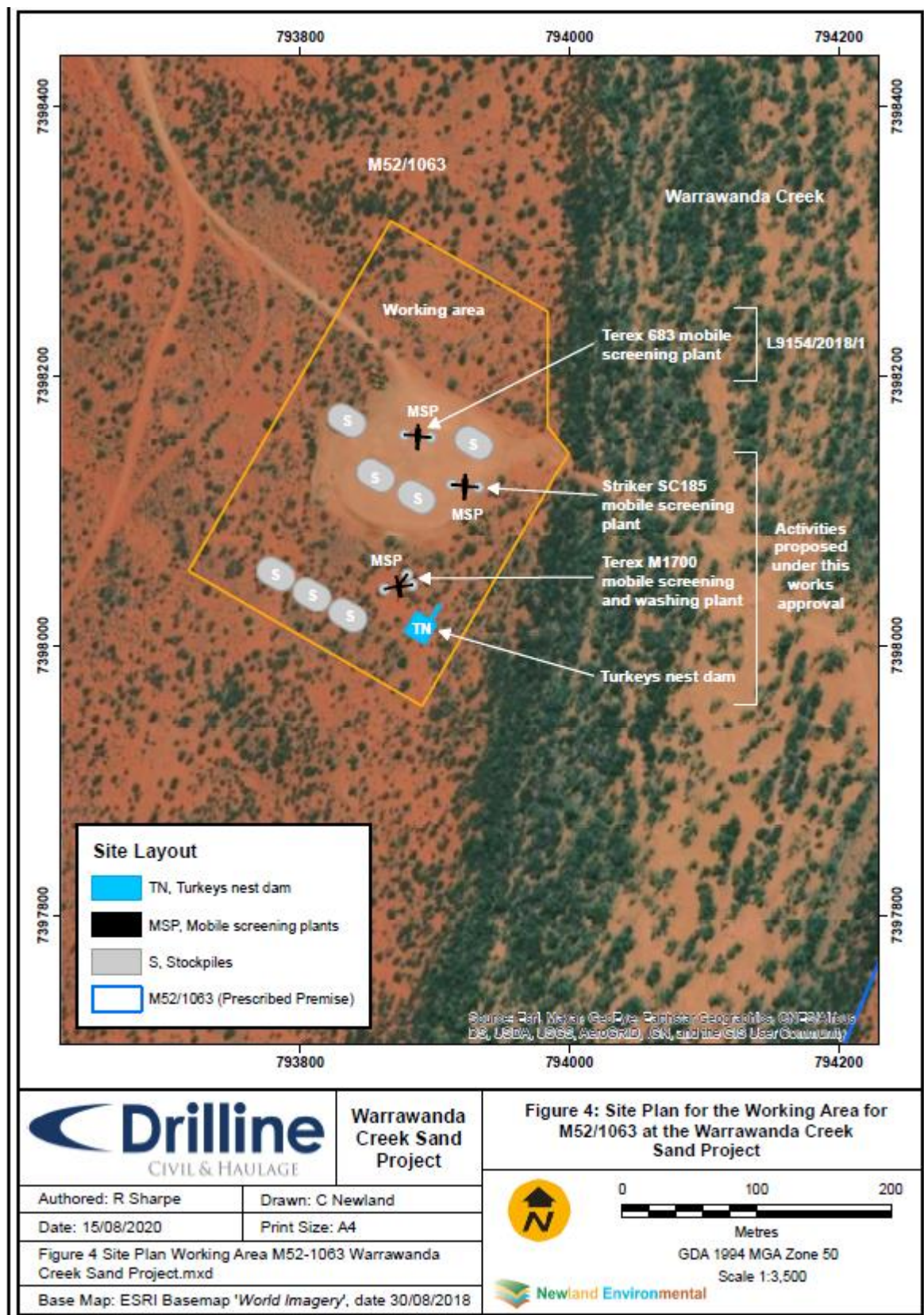


Figure 7: Site plan

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change 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 Licence Holder 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 Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

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

The Revised Licence L9154/2018/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. screening activities.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises during construction, commissioning and operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Construction								
Placement of screen and associated equipment including vehicle movement (reversing beepers). Construction of turkeys nest dam.	Dust	Air / windborne pathway causing an increase in turbidity and impact to the quality of Warrawanda Creek.	Surface water – Warrawanda Creek within the Premises boundary, adjacent to the work area.	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 2	Construction and installation requirements for new equipment to ensure that potential dust emissions are managed.
Operation (including time-limited-operations operations)								
Operation of screening and washing plant and stand drying plant and associated equipment. Vehicle movements	Dust	Air / windborne pathway causing an increase in turbidity and impact to the quality of Warrawanda Creek.	Surface water – Warrawanda Creek within the Premises boundary, adjacent to the work area.	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 2	Construction and installation requirements for new equipment to ensure that potential dust emissions are managed.
Stockpiling of raw material and products	Dust	Air / windborne pathway causing an increase in turbidity and impact to the quality of Warrawanda Creek.	Surface water – Warrawanda Creek within the Premises boundary, adjacent to the work area.	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 2	Construction and installation requirements for new equipment to ensure that potential dust emissions are managed.

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Surface water – Warrawanda Creek within the Premises boundary, adjacent to the work area.	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	<u>Condition 1</u>	Construction and installation requirements for new equipment to ensure that stormwater contamination emissions are managed.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 11 November 2020	No comments provided, and consultation period waived on 11 November 2020	N/A

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 5: Summary of licence amendments

Condition no.	Proposed amendments
N/A	Updating general format of licence to align with the current licence version.
N/A	Definitions amended where required to address updates to the current licence version.
Former condition 1	Removed: this condition is not a condition set of the current licence version. Subsequent remaining conditions have been renumbered where required to reflect this.
New condition 1	Inclusion of construction and installation requirements for new equipment and infrastructure to mitigate dust emissions and stormwater contaminated with sediment from screening operations.
2	Amended to reflect current licence version and format/wording of this condition.
3 and 4	Environmental Compliance Report to ensure that new equipment and infrastructure are installed according to the requirements in Condition 1.
5	Reflects that information related to the new infrastructure is recorded.
6	Amended to reflect wording and format of the current licence version.
Former condition 7; new condition 8	Removed: this condition has been replaced with inserted condition 8 to reflect current licence version wording and format of this condition.
Former condition 9	Removed: no longer a condition in the current licence version and not required for this licence.
Schedule 1	Premises maps have been updated.
Schedule 2	Removed: the requirements of this schedule are now specified throughout the updated licence conditions.

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	<input 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 checked="" type="checkbox"/>	Current licence number:	L9154/2018/1		
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		9 October 2020			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Drilline Pty Ltd			
Premises name		Drilline Civil and Haulage			
Premises location		M52/1063			
Local Government Authority		Shire of Meekatharra			
Application documents					
HPCM file reference number:		DWERDT323810			
Key application documents (additional to application form):		Application form& Dust Management Plan			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		<p>Construction of:</p> <p>Mobile screening and washing plant installed (M1700)</p> <p>Turkeys nest dam to be constructed next to Terex M1700 to provide a water recycling circuit to remove sediment.</p> <p>Additional Striker SC185 mobile screening plant on site, in the event of maintenance or breakdown of the other plant.</p> <p>Installation of sand drying plant.</p>			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity
Category 12: Screening etc. of material	100,000 tonnes per annum (L9154/2018/1)	No

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 type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: 10/09/2035 Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Mining tenement
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: CPS6279/3
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" 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.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office:

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Classification: N/A Date of classification: N/A