Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Licence Amendment

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

Licence Number	L7340/1997/9
Licence Holder	Pilbara Iron Company (Services) Pty Ltd
ACN	107 210 248
File Number	DER2013/000903-2
Premises	Yandicoogina Iron Ore Mine Part of Mining Lease AM70/274; LGE L021123 NEWMAN WA 6753 As defined by the coordinates in Schedule 2 of the Revised Licence As defined by the Premises maps attached to the Revised Licence
Date of Report	11 June 2025 (FINAL) (V2)
Proposed Decision	Intent to grant revised licence

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1. Decision summary

Licence L7340/1997/9 is held by Pilbara Iron Company (Services) Pty Ltd (Licence Holder) for the Yandicoogina Iron Ore Mine (the Premises), located at Part of Mining Lease AM70/274 and LGE L021123, NEWMAN WA 6753.

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 operation of the Premises. As a result of this assessment, Revised Licence L7340/1997/9 has been granted.

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 07 November 2024, the Licence Holder submitted an application to the department to amend Licence L7340/1997/9 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Construction and operation of an additional discharge outlet (DO12) under Category 6 *Mine dewatering,* within the existing prescribed premises boundary; and
- Addition of used tyre storage under Category 57 within the existing prescribed premises boundary.

This amendment is limited only to changes to Category 6 and inclusion of Category 57 activities to the existing Licence. No changes to the existing Licence relating to Category 5, 12, 54, 64 and 73 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence

Table 1: Proposed design or throughput capacity changes

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
5	60,000,000 tonnes per annual period	60,000,000 tonnes per annual period	N/A
6	Disposal of up to 78 gigalitres (GL) per annum	Disposal of up to 78 GL/annum	Construction and operation of an additional discharge outlet DO12 under Category 6 within the existing prescribed premises boundary
12	10,000,000 tonnes per annual period	10,000,000 tonnes per annual period	N/A
54	1,192 cubic metres per day	1,192 cubic metres per day	N/A
57	0	5,000 tyres	During inspection over 100

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
			tyres were noted onsite, which triggers Category 57 under Schedule 1 of the *Environmental Protection Regulations 1987*
64	7,500 tonnes per annual period	7,500 tonnes per annual period	N/A
73	1,770 cubic metres in aggregate	1,770 cubic metres in aggregate	N/A

2.2.1 Category 6: Mine dewatering

The Licence Holder is proposing the construction and operation of an additional discharge outlet (DO12) to complement the 11 existing licensed discharge outlets. DO12 will be designed to discharge at a maximum, 15 GL/annum with an instantaneous rate of 500 litres per second (L/s).

The proposed location of discharge point DO12 to Weeli Wolli Creek is adjacent to the southern bank of the Weeli Wolli creek bed, approximately 2.0 kms to the south of DO6. Refer to Figure 1. DO12 is positioned upstream of existing discharge outlets and of areas in Weeli Wolli Creek demonstrating vegetation stress from changes in water availability as Hope Downs 1 discharge slows and its associated wetting front declines.

The installation of the DO12 discharge outlet will provide an additional discharge location for targeted dewatering to Weeli Wolli Creek. On commencement of dewatering from the dedicated bores within Bina Bina South, discharge water can be directed through either D09a, DO10, DO11, DO12 or a combination of all four.

The entire 475 m length of DO12 dewatering pipeline will be placed above ground along the route, within the approved disturbance and work footprint. No clearing will be required, as the pipeline will be placed on the existing access track from the tie-in point at the existing dewatering network to the outfall location.

Discharged water will be sourced from Bina Bina South and Junction South-East borefields and sumps which will cause a reduction in the total volume of water discharged from DO9A. There is anticipated to be a change in the volume of recirculation of discharge water back into the Bina Bina South borefield, however there isn't expected to be a significant net change in overall discharge at the Premises resulting from the proposal.

To mitigate impacts associated with the cessation of long-term permanent surface water discharge from Hope Downs 1, a pulsed water discharge strategy has been adopted at the Premises to imitate ephemeral creek flows and allow groundwater dependent ecosystems (GDE) time to adjust back to pre-mining flows. This involves periodically discharging larger volumes from each outlet to advance individual wetting fronts and replenish moisture in the vadose zone and then reducing the volumes to allow groundwater levels to drop and encourage tree roots to propagate downwards (similar to a rainfall event).

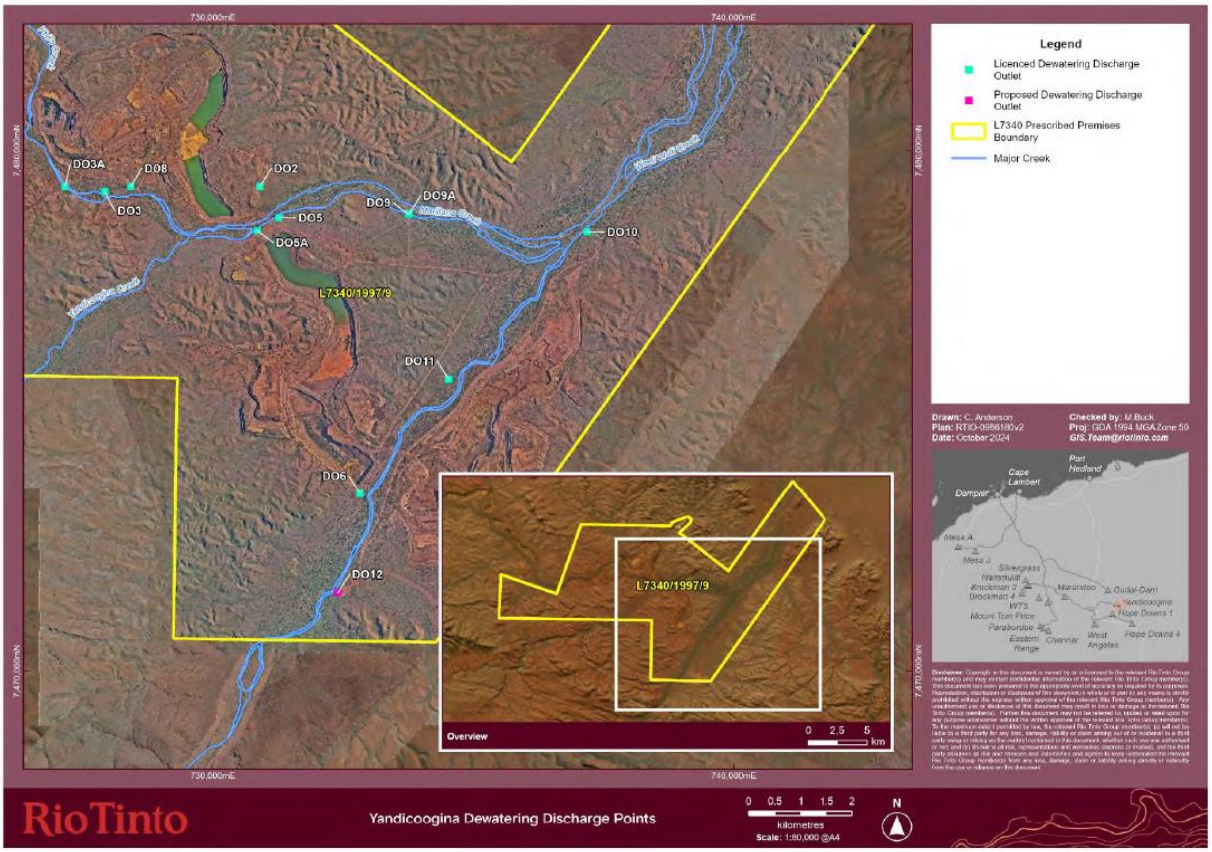


Figure 1: Indicative location of proposed facilities within the Yandicoogina Prescribed Premises Boundary, including the location of the dewater discharge points

Electrical conductivity-specific, nitrate nitrogen, nitrogen - total, phosphorus – total, zinc and barium have shown some exceedances in site specific guideline values (SSGV). No impact on the riparian flora and fauna values due to water quality issues was identified during the reporting period.

None of the vegetation represents a Priority Ecological Community (PEC) or Threatened Ecological Community (TEC).

- At baseline, riparian vegetation within parts of Marillana and Weeli Wolli creeks in the vicinity of the Yandicoogina operations and the proposed discharge location represented both clear and potential GDEs (more so within Marillana Creek);
- None of the weeds present are declared pests;
- No threatened flora occurs within the vicinity (200m) of the proposed works or are expected to occur; and
- No critical habitat for the protected Pilbara Olive Python (*Liasis olivaceus barroni*) and Northern Quoll (*Dasyurus hallucatus*) will be impacted.

More information on vegetation characteristics is shown in Table 3.

It should be noted that all monitoring of mine dewatering quality and vegetation is conducted under the Part IV of the EP Act Yandi Iron Ore Project MS1038 CEMP (RTIO 2021). Refer to Section 2.3. Only monitoring for flow rate and Per-and poly-fluoroalkyl substances (PFAS) is required under the Part V licence for mine dewatering discharge.

2.2.2 Category 57 Used tyre storage (general)

The Licence Holder stores used tyres onsite in accordance with the standards set out in the Department of Fire and Emergency Service's (DFES) *Guidance Note GN02: Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres*.

The main requirements include:

- Compacted earthen base to be maintained;
- Individual tyre stacks are not to exceed:
  - 3.7 m in height; and
  - 60 m^2 in area;
- A maximum of four tyre stacks can be grouped together as a 'tyre pile' with a minimum separation distance of 2.5 m must be maintained between each tyre stack; and
- A minimum separation distance of 18 m must be maintained between each 'tyre pile' and any combustible structure or material.

2.3 Part IV of the EP Act

The Yandicoogina Iron Ore Project - Revised Proposal was assessed by the Environmental Protection Authority (EPA) and approved under Ministerial Statement (MS) 1038.

Condition 5 relates to hydrological processes, inland waters environmental quality and flora and vegetation – dewatering, discharge of surplus water and riparian vegetation management. The Licence Holder has developed a Condition Environment Management Plan (CEMP) (RTIO 2021) to:

- address hydrological processes, inland water quality and flora and vegetation for dewatering, discharge of surplus water and riparian vegetation.
- specify environmental outcomes, trigger criteria, threshold criteria, and monitoring, and implement actions and contingency actions in the event thresholds are exceeded.
- address impacts on riparian vegetation including from, but not limited to changes to groundwater levels and groundwater quality; changes to surface water flows and surface water quality, and weeds.

The CEMP identifies the following high level environmental values of Weeli Wolli Creek:

1. Fortescue Marsh - A Priority Ecological Community and listed on the Directory of Important Wetlands of Australia as a wetland of national significance.
2. Flora and Vegetation – The vegetation communities and fauna habitats within the Yandicoogina Development Envelope including riparian vegetation and groundwater dependant ecosystems (GDEs).
3. Fauna – all vertebrate and invertebrate fauna which use Weeli Wolli Creek including subterranean fauna (stygofauna).
4. Heritage – including Aboriginal Heritage places.

The CEMP addresses environmental outcomes for surface dewater discharge (refer to Figure 2 for monitoring locations) and aims for no long term impacts to environmental values of Weeli Wolli Creek, Aboriginal heritage values linked to the physical and biological surroundings of Weeli Wolli Creek, or on the health or cover of riparian vegetation outside the Management Zone as defined in MS 1038. The Management Zone delineates the protected area from the Development Area of the Project.

In accordance with MS 1038 Condition 5, the Yandicoogina Operations Groundwater Operating Strategy (the strategy) (RTIO 2014) manages all borefields and abstraction (production bores)

that service the Yandicoogina Operations.

Rehabilitation and decommissioning are also regulated by Condition 6 of MS 1038.

Requirements of MS 1038 are limited to hydrological processes and the environmental values associated with Weeli Wolli Creek and are not re-assessed in this Amendment Report nor are they duplicated as conditions in the existing licence.

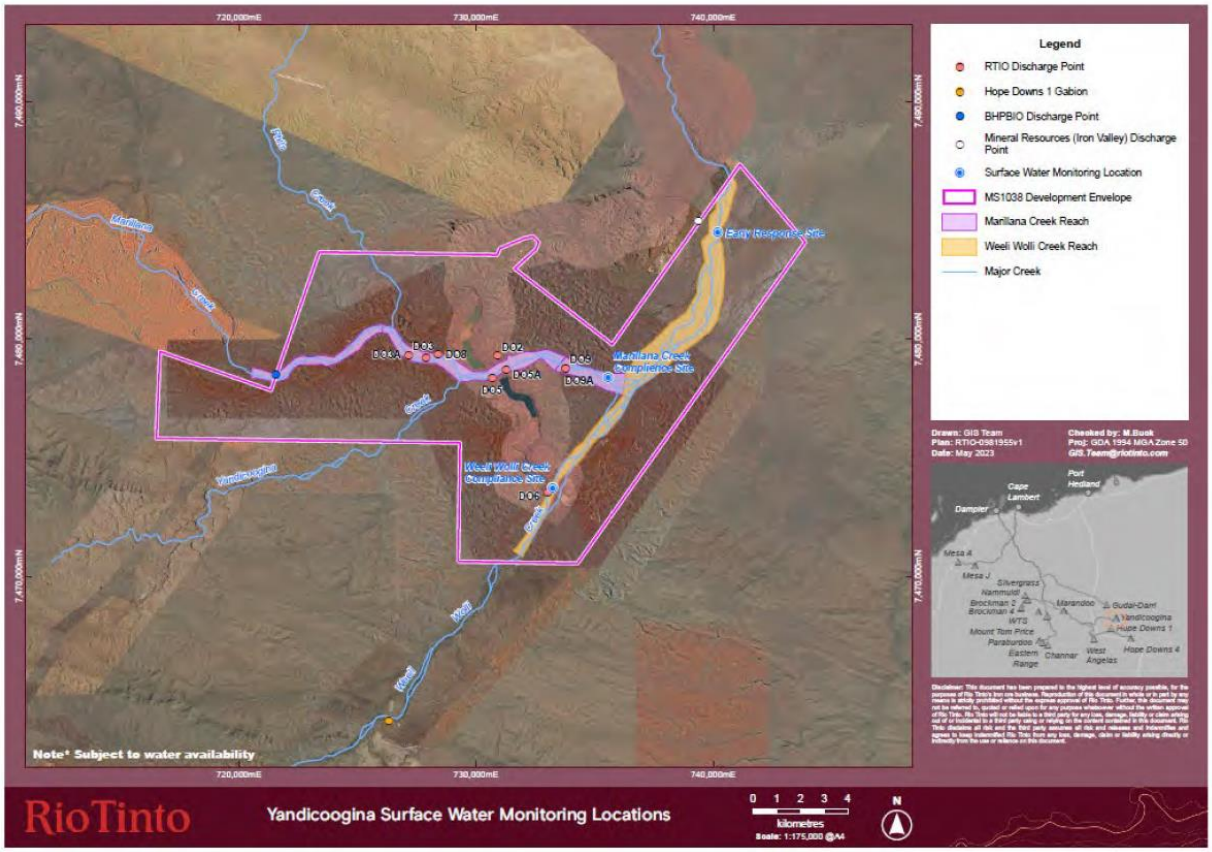


Figure 2: Yandicoogina EMP surface water compliance monitoring sites

2.4 *Contaminated Sites Act 2003* (CS Act) and Per-and poly-fluoroalkyl substances (PFAS)

The Premises is located adjacent to a site which has been classified under the CS Act as "Possibly contaminated – investigation required' in part, based on the presence of PFAS in groundwater.

While the Premises is not classified under the CS Act, the department does not currently hold site-specific information in relation to PFAS at the Premises.

The Premises is intersected by Marillana Creek and Weeli Wolli Creek, which have been identified as potential receptors to PFAS contamination identified at the adjacent site. Marillana Creek flows into Weeli Wolli Creek and eventually discharges into the Fortescue Marsh, which are areas of environmental and cultural significance.

To date, two large groups of PFAS compounds, perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), are listed as persistent organic pollutants under the Stockholm Convention, while a third, perfluorohexane sulfonate PFHxS, has been nominated as it meets the screening criteria for persistence, bioaccumulation, potential for long range environmental transport, and evidence for adverse impacts (NEMP 2020).

For each PFAS compound, by comparing to the 99% species protection values from the PFAS

National Environmental Management Plan then bioaccumulation in aquatic organisms within the Yandicoogina and Weeli Wolli Creeks can be accounted for.

Licence L7430/1997/9 was amended on 15 November 2023. During that amendment and on advice from the department's Contaminated Sites Branch (CSB) and given the potential for PFAS sources to have been present on this Premises, the department (through Conditions 13 and 14) required the Licence Holder to conduct a one-time spot sample for PFAS at the discharge locations to surface water to confirm the presence or absence of PFAS.

During this amendment, DO12 has been added to the discharge monitoring location for Condition 13 as the sampling requirement has not yet been actioned or reported on.

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 Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Installation of discharge outlet DO12	Air/windborne pathway	• Clearing will be managed to ensure that areas are only cleared as required; • Dust suppression will be implemented (including use of water trucks, control of vehicle movements / restricted speeds); and • Standard management procedures are expected to effectively mitigate the risk of dust emissions during construction.
Noise	Installation of discharge outlet DO12	Air/windborne pathway	Specific controls are not proposed. *Environmental Protection (Noise) Regulations 1997* and standard operating procedures are expected to effectively mitigate the risk of noise during construction.

Emission	Sources	Potential pathways	Proposed controls
Hydrocarbons and chemicals	Installation of discharge outlet DO12	Direct discharges	Hydrocarbons will be managed via relevant legislation (including Australian Standard AS 1940-2004: Storage and handling of flammable and combustible liquids), the requirements of the Part V Licence L7340/1997/9 and standard operating procedures, including: • Fuel storage tanks will be designed and constructed to AS 1940-2004: The storage and handling of flammable and combustible liquids; • Management structures (bunding / secondary containment) are present at all hydrocarbon storage and refuelling facilities onsite to ensure any spills are contained; and • Spill response will be provided.
Operation			
Dewatering discharge with elevations in calcium, chloride, magnesium, potassium, sodium and sulphate	Operation of discharge outlet DO12 and associated pipelines	Pipeline leaks and spills	The entire 475 m length of DO12 dewatering pipeline placed above ground along the route, within the approved disturbance and work footprint. Telemetry for actuated valve and flow meter reporting flow meter data communications back to CITECT.
		Erosion of the creek bed causing sedimentation and reduction of water quality	At the outlet location, the pipeline is rock and erosion protected through the installation of a rock gabion structure to enable a reduction in water velocity as the discharged water flows into the targeted discharge area. The outlet structure has been engineered and designed to eliminate erosion in the creek. The use of gabion rock baskets (or mattresses) and openly placed rock protection provides a more natural and non-intrusive effect on the surrounding environment and eliminates the requirement for permanent concrete structures. The extent of surface discharge along Weeli Wolli Creek and the health of riparian vegetation along the discharge extent is managed as required by the conditions of MS 1038. • Discharge volumes to Weeli Wolli Creek will remain within licensed allowance; • A flow meter will be installed at the discharge point to record the

Emission	Sources	Potential pathways	Proposed controls
			discharge volume; • The discharge point will include a rip rap apron at the outlet, in addition to rip rap protection within the portion of the creek bed deemed susceptible to erosion; and • Appropriate design, management, inspection, and maintenance of the discharge point and erosion control is expected to mitigate the risk of erosion during operations.
		Elevated nutrient levels causing eutrophication decreasing water quality	• Water quality sampling established at the discharge point. The results of water quality monitoring will be compared against appropriate ANZECC (2000) water quality guidelines, and/ or Site SSGV's and previous monitoring results; • The health of riparian vegetation along the discharge extent is managed as required by the conditions of MS 1038. Pulsed discharge strategy allows better management of vegetation health; • Appropriate design, management, inspection, and maintenance of the discharge point is expected to mitigate the risk of discharge of potentially contaminated water during operations; and • The pulsed discharge strategy will mitigate the risk of potential eutrophication.
		PFAS in dewatering discharge	• Licence L7340/1997/9 requires a once off spot sampling event for PFAS.
		Inundation of vegetation	• Perennial discharge of surplus mine water in the area has made most of the riparian vegetation at least temporarily dependent on groundwater, resulting in the presence of riparian groundwater receptors in the region; • The proposed discharge location aims to mitigate the risk to these receptors from groundwater fluctuations. The discharge will more effectively distribute water and lessen the impact of surface water

Emission	Sources	Potential pathways	Proposed controls
			inundation; • Any potential impacts to GDEs are mitigated by the ability to fluctuate the water distribution and reduce the impacts of long-term surface water inundation. Any potential impacts to groundwater from seepage or pipeline failure or changes to groundwater flows will be minimised by engineering and design controls; and • The proposed action will mitigate potential long-term impacts to GDE by fluctuating water distribution across multiple discharge points mirroring an ephemeral creek condition and reducing negative impacts associated with permanent creek inundation. Vegetation monitoring is detailed in the Yandi Iron Ore Project MS1038 CEMP (RTIO 2021).
		Seepage to groundwater	• Perennial discharge of surplus mine water in the area has made most of the riparian vegetation at least temporarily dependent on groundwater, resulting in the presence of riparian groundwater receptors in the region; • The proposed discharge location aims to mitigate the risk to these receptors from groundwater fluctuations. The discharge will more effectively distribute water and lessen the impact of surface water inundation; and • Any potential impacts to groundwater from seepage, pipeline failure or changes to groundwater flows will be minimised by engineering and design.
		Weeds	Management and Monitoring of weeds is detailed in the Yandi Iron Ore Project MS1038 Environmental Management Plan (RTIO-HSE-0307300). This includes Environmental Criteria for the presence of weeds and associated Response Actions in the event of an exceedance of criterion. There are existing monitoring sites directly downstream of the proposed DO12 location. Furthermore, there are 35 weed control days planned at Yandi in

Emission	Sources	Potential pathways	Proposed controls
			2025.
Used tyre storage	Storage of used tyres onsite	Potential for tyre fires causing dark smoke	• Compacted earthen base to be maintained; • Individual tyre stacks are not to exceed: ➢ 3.7 m in height; and ➢ 60 m^2 in area; • A maximum of four tyre stacks can be grouped together as a 'tyre pile' with a minimum separation distance of 2.5 m must be maintained between each tyre stack; and • A minimum separation distance of 18 m must be maintained between each 'tyre pile' and any combustible structure or material.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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 3 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 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Newman	75 km south-east.
Phil's Creek Accommodation Village	5.5 km north west. **Screened out due to distance and location upstream of the Marillana Creek.**
BHP Yandi Camp	17 km north-west. **Screened out due to distance.**
Juna Downs Pastoral Lease	24 km east **Screened out due to distance.**
Recreational users of Marillana and Weeli Wolli Creeks	Less than 1 km.
Environmental receptors	**Distance from prescribed activity**
Department of Biodiversity Conservation and Attractions (DBCA) - Conservation Reserves and	75 km east.

Managed Areas No Parks and Wildlife Services Conservation Reserves or other Managed Areas are located within or near the Premises. The nearest Reserve, Karijini National Park is located more than 75 km to the east of the Premises.	
Threatened Ecological Communities (TEC). The Project area is heavily disturbed, and no TEC were recorded in the proposed work area.	N/A.
Priority Ecological Communities (PEC) The Fortescue Marsh is classified by the Department of Biodiversity, Conservation and Attractions (DBCA) as a Priority Ecological Community (PEC) and has been classified as having Priority 1 conservation status. The Fortescue Marsh is the largest ephemeral wetland in the Pilbara region and is listed on the Directory of Important Wetlands of Australia as a wetland of national significance. The diverse ecosystem includes endemic flora, fauna and supports a rich diversity of restricted aquatic and terrestrial invertebrates.	40 km north-east.
Priority Ecological Communities (PEC) The Weeli Wolli Spring Community is classified by the Department of Biodiversity, Conservation and Attractions (DBCA) as a Priority Ecological Community (PEC) and has been classified as having Priority 1 conservation status. The Weeli Wolli Spring's riparian woodland and forest associations are unusual as a consequence of the composition of the understory. The sedge and herb field communities that fringe many of the pools and associated water bodies along the main channels of Weeli Wolli Creek have not been recorded from any other wetland site in the Pilbara. The spring and creek line are also noted for their relatively high diversity of stygofauna and this is probably attributed to the large-scale calcrete and alluvial aquifer system associated with the creek. The valley of Weeli Wolli Spring also supports a very rich microbat assemblage including a threatened species.	5 km southwest.
Threatened and/or priority flora Flora studies have previously been completed for the Yandicoogina Project. No threatened flora were identified within the proposed disturbance area for the additional discharge outlet. P4 flora species Lepidium catapycnon (Hamersley Lepidium) were previously recorded within 600 m of DO11. As the development and operation of the proposed discharge point DO12 will be within a disturbance footprint at least 200 m away from priority flora, it will not cause any additional	200 m.

physical disturbance of the surrounding vegetation.	
Threatened and/or priority fauna Fauna studies have previously been completed for the Yandicoogina Project. No threatened fauna were identified within the proposed disturbance area however, priority fauna have been recorded within approximately 1 km. As the development and operation of the proposed discharge point will be within a disturbance footprint at least 1 km away from priority fauna, it will not cause any additional physical disturbance to surrounding fauna habitats.	1 km.
Groundwater Dependent Ecosystems (GDEs) Communities along the majority of Marillana and Weeli Wolli creeks can be considered GDEs, with some areas (near Oxbow, near the confluence of Marrillana and Yandicoogina creeks, and some parts of Weeli Wolli near the southern end of the JSE pit) clearly representing GDEs. In most cases the riparian vegetation in question represents a potential GDE and in cases where Melaleuca argentea was present pre-mining, such vegetation clearly represents a GDE. Perennial discharge of surplus mine water in the area has also rendered the majority of riparian vegetation groundwater dependent and as such riparian groundwater receptors occur in the area.	Less than 1 km.
Aboriginal and other heritage sites Prior to the construction of existing facilities, Aboriginal cultural heritage surveys were conducted in and around the site. Heritage sites have further been captured by Rio Tinto's internal database and are avoided by at least 10 m. Outlets discharge into Weeli Wolli Creek which traverses the Native Title boundaries of both Nyiyaparli and Banjima Traditional Owners. The Weeli Wolli Creek also falls within the Yandicoogina mining lease and as such we have commercial obligations and regularly consult with Gumala Aboriginal Corporation under the Yandi Land Use Agreement. The Weeli Wolli Creek has cultural values of significance to all of these Groups. Banjima, Nyiyaparli and Gumala Aboriginal Corporation have all previously been consulted about this project.	At least 10 m.
Public Drinking Water Source Area (PDWSA) - Newman PDWSA	>50kms.
Rivers, lakes, oceans and other bodies of surface	Less than 1 km

water, etc. Weeli Wolli Creek (drains to Fortescue Marsh) and Marillana Creek (drains to Fortescue Marsh)	**Screened out as water quality of the creek is managed under MS 1038.**
Environmental values of Weeli Wolli Creek	The following values are as mentioned in section 2.3 and their descriptions are from the CEMP prepared by the Licence Holder. **Value 1 – Fortescue Marsh** "Approximately 38 km north-north-east of the discharge locations, the Fortescue Marsh is the largest ephemeral wetland in the Pilbara region. Itis a Priority Ecological Community and listed on the Directory of Important Wetlands of Australia as a wetland of national significance" (RTIO, 2021). <u>The Fortescue Marsh:</u> • Catchment includes major ephemeral creeks which intersect the Premises (RTIO 2021); • Is episodically inundated, predominantly as a result of rainfall associated with tropical low-pressure cyclonic weather systems that generally occur between December and April (RTIO 2021); • Has cultural and heritage significance to the region's traditional owners and supports a range of native plant and animal species, including a large and diverse number of migratory bird species (RTIO2021); and • Supports conservation significant plant and animal species and communities here and in the surrounding areas, including endemic flora, fauna and a diversity of aquatic and terrestrial invertebrates (RTIO 2021). **Value 2 – Flora and Vegetation** "The vegetation communities and fauna habitats within the Yandicoogina Development Envelope are relatively widespread and well-represented regionally. This includes local riparian vegetation communities and groundwater dependant ecosystems commonly associated with large ephemeral creek systems of the Pilbara region. The riparian vegetation communities of Marillana and Weeli Wolli Creeks within the Development Envelope are similar to other large ephemeral systems of the Pilbara. Low flow pathways are populated with large open eucalypt woodland, over eucalypt and acacia low woodland, largely flanked by tall, open acacia shrubland with **Cenchrus ciliaris* tussock grasslands. One community, identified locally as the C1A riparian community, broadly comprises a eucalypt woodland containing a co-dominant *Melaleuca argentea* component and is considered to have local conservation significance due to its

	groundwater dependency, associated mesic habitat values, somewhat restricted distribution, and association with a major creekline in the area (predominantly Marillana Creek). This community is similar but of different structure and reduced significance in relation to the vegetation community of Weeli Wolli Spring (significant *Melaleuca argentea* woodlands)" (RTIO 2021). **Value 3 – Fauna** "Weeli Wolli Creek provides habitat for a wide range of fauna. The alluvial aquifer system supports subterranean fauna (stygofauna), whilst the ephemeral seasonal surface expression of water supports fish and aquatic invertebrates (although the project area does not contain permanent pools). Weeli Wolli Creek also provides foraging habitat for an assemblage of various bat species and is the most northerly distribution of the Chocolate Wattle Bat (*Chalinobolus morio*). The Pilbara Olive Python (Liasis olivaceus barroni) has been recorded within Weeli Wolli Creek and the Development Envelope may contain habitat for the Northern Quoll (*Dasyurus hallucatus*)" (RTIO 2021). **Value 4 – Heritage (see above Aboriginal Heritage Sites)** "Weeli Wolli Creek holds special cultural and spiritual significance for the Traditional Owner groups of the region (Nyiyarparli and Banjima people) as a place where the rainbow serpent (Yarduba) resides. Weeli Wolli Creek hosts significant ethnographic and archaeological heritage sites which are associated with the water course. It is noteworthy that discharge of excess groundwater dewatered from nearby mining operations has created a temporary perennial source of water within parts of Weeli Wolli Creek, which is predicted to return to ephemeral patterns upon the cessation of discharge" (RTIO 2021). **All values are screened out as they are managed under the CEMP.**
Groundwater	2 m below ground level (mBGL) in the vicinity of the modern day creek beds to 34 mBGL further away. Groundwater principally occurs in two aquifer systems, namely the CID and flood-plain (alluvium) aquifers. Both aquifers are inter-connected and recharged from nearby and overlying creek systems.

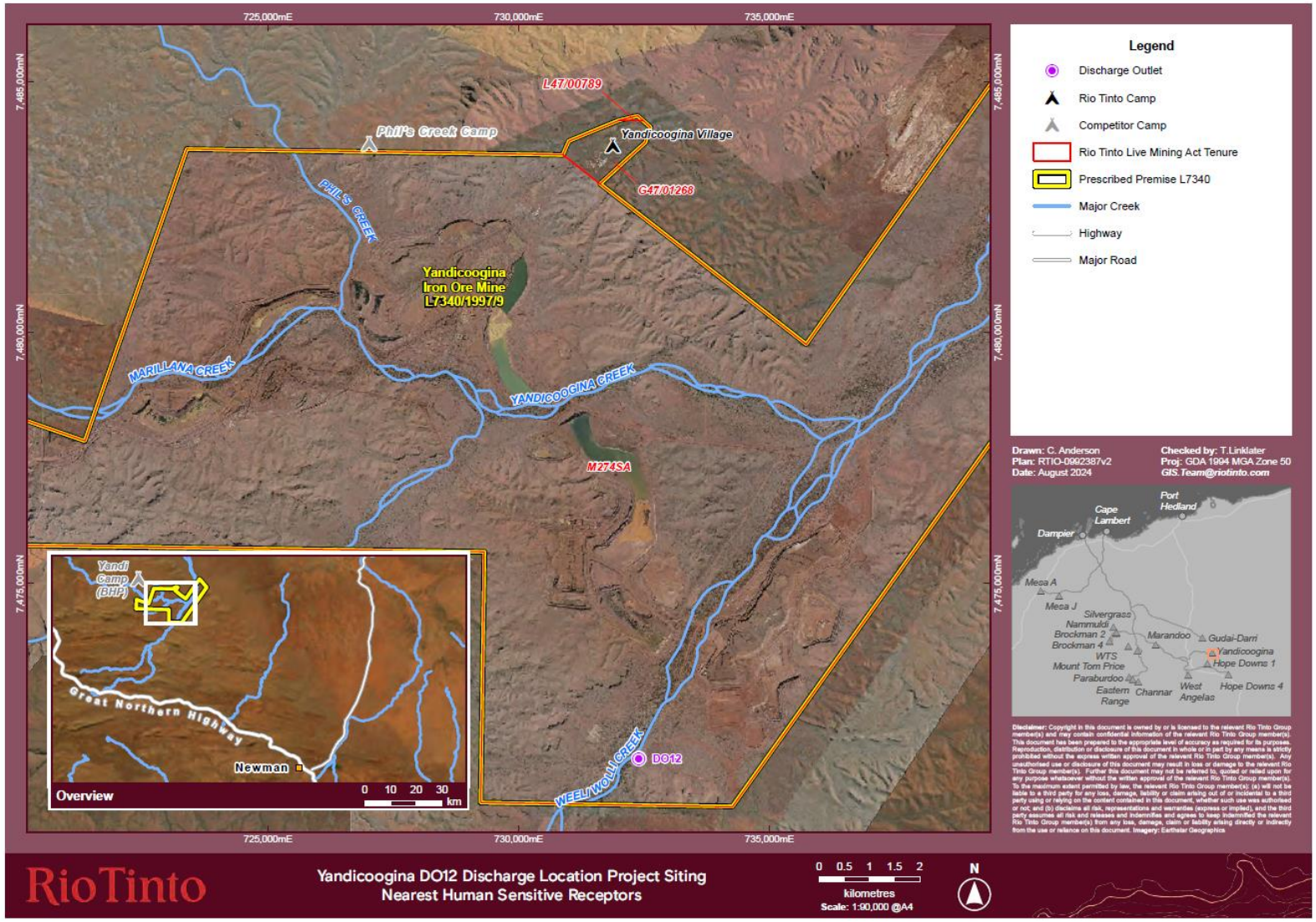


Figure 3: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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 incomplete 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 4.

The Revised Licence L7340/1997/9 that accompanies this Amendment Report authorises emissions associated with the construction and operation of the Premises.

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

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction 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								
Installation of discharge outlet DO12	Dust	Air/windborne pathway causing impacts to health and amenity	Recreational users of Marillana and Weeli Wolli Creeks	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	N/A
	Noise			Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	N/A
	Hydrocarbons and chemcials	Direct discharges	Soils, vegetation, groundwater	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	N/A
Operation								
Operation of discharge outlet DO12 associated pipelines	Dewatering discharge with elevations in calcium, chloride, magnesium, potassium, sodium and sulphate	Pipeline leaks and spills	Soils, vegetation, groundwater, Aboriginal Heritage Sites	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	**Condition 6, Table 3 Design and installation requirements requires that DO12 is constructed with rock gabion structure and flow meter**	N/A
		Erosion of the creek bed causing sedimentation and reduction of water quality	Recreational users of Marillana and Weeli Wolli Creeks	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	**Condition 6, Table 3 Design and installation requirements requires that DO12 is constructed with rock gabion structure and flow meter** Condition 7 requires that DO12 is operated in accordance with the Licence following compliance	N/A

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**				
							document Condition 8, Table 4 Authorised discharge points requires that discharge is via outlet with erosion controls Condition 10, Table 6 Emission and discharge limits requires limits on discharge at DO12 Condition 12, Table 8 Emissions and discharge monitoring requires flow rate monitoring at DO12	
		Elevated nutrient levels causing eutrophication decreasing water quality	Riparian vegetation communities and GDEs	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	N/A	Managed under MS 1038. All monitoring is conducted under the Yandicoogina Operations Groundwater Operating Strategy (RTIO 2014).
		PFAS in dewatering discharge	Riparian vegetation communities and GDEs	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	Condition 13, Table 9 PFAS and discharge monitoring requires monitoring of PFAS at DO12 Condition 14 requires a report on PFAS monitoring	N/A
		Inundation of vegetation	Riparian vegetation communities and GDEs	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	N/A	Managed under MS 1038. All monitoring is conducted under the Yandicoogina Operations Groundwater

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**				
								Operating Strategy (RTIO 2014).
		Seepage to groundwater	Groundwater	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	Y	N/A	Managed under MS 1038. All monitoring is conducted under the Yandicoogina Operations Groundwater Operating Strategy (RTIO 2014).
		Weeds	Riparian vegetation communities and GDEs	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	N/A	Yandi Iron Ore Project MS1038 Environmental Management Plan (RTIO-HSE-0307300).
Storage of used tyres onsite	Dark smoke from fires	Potential for fires causing dark smoke	Vegetation, fauna	Refer to Section 3.1	C = Moderate L = Rare **Medium Risk**	Y	Condition 3, Table 1 Infrastructure and equipment operational requirements requires that used tyre storage is in line with the key recommendations of the Department of Fire and Emergency Service's (DFES) *Guidance Note GN02: Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres*..	N/A

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

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 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal (20 December 2024)	No comments received.	N/A.
Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal (20 December 2024)	DEMIRS replied on 02 January 2025 stating/advising that: Proposed activities are located on State Agreement Mineral Lease AM70/274 granted pursuant to the *Iron Ore (Yandicoogina) Agreement Act 1996*, with activities subject to the *Iron Ore (Yandicoogina) Agreement Act 1996* and Ministerial Statement No 1038 issued under Part IV of the *Environmental Protection Act 1986*. Proposed activities are not subject to the provisions of the *Mining Act 1978*, and DEMIRS has no comments on the proposed amendment to licence.	Noted.
Department of Planning, Lands and Heritage (DPLH) advised of proposal (20 December 2024)	No comments received.	N/A.
Banjima Native Title Aboriginal Corporation RNTBC advised of proposal (20 December 2024)	Banjima Native Title Aboriginal Corporation RNTBC replied on 17 January 2025.	Followed up with Licence Holder as a Request For Further Information (RFI). Confirmation from Licence Holder received on 24 March 2025 and 14 April 2025 that they liaised with Banjima Native Title Aboriginal Corporation RNTBC during the RFI process.
Karlka Nyiyaparli Aboriginal Corporation RNTBC advised of proposal (20 December 2024)	No comments received.	N/A.
Yinhawangka Aboriginal Corporation RNTBC (20 December 2024)	No comments received.	N/A.

Licence Holder was provided with draft amendment on 01 May 2025	Licence Holder replied on 21 May 2025 Refer to Appendix 1 Licence Holder was also provided with drafts on 09/06/2025 and replied on 09/06/2025 with no further comments.	Licence Holder replied on 21 May 2025 Refer to Appendix 1 Licence Holder was also provided with drafts on 09/06/2025 and replied on 09/06/2025 with no further comments.

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 6 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.

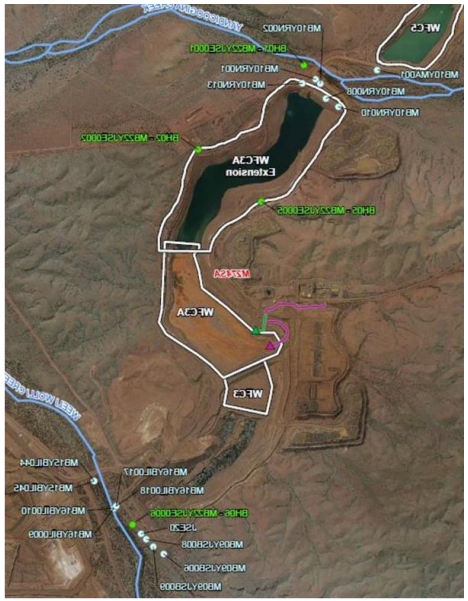
Table 6: Summary of licence amendments

Condition no.	Proposed amendments
3, Table 1	Addition of use tyre storage conditions from the Department of Fire and Emergency Service's (DFES) *Guidance Note on the bulk storage of rubber tyres including shredded and crumbed tyres.*
6, Table 3	Addition of DO12 design and installation requirements.
7	Addition of DO12 for operational requirements.
8, Table 4	Addition of DO12 to authorized discharge points for emissions.
10, Table 6	Addition of DO10, DO11 and DO12 discharge limits.
12, Table 8	Addition of DO12 to discharge monitoring requirements.
13, Table 9	Addition of DO12 to PFAS monitoring requirements.
14, Table 10	Addition of Table to clarify reporting requirements for all DO points.
21	Addition of DO12 to Environmental Compliance Report.
23, Table 12	Modify Annual Environmental Report condition to updated version.
Schedule 1: Maps, Figure 5	Updated to include DO12.

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. Pilbara Iron Company (Services) Pty Ltd, APPLICATION FOR A LICENCE AMENDMENT UNDER THE ENVIRONMENTAL PROTECTION ACT 1986 (WA) Yandicoogina L7340/1997/9 07/11/2024 (Application and Supporting Documentation).
5. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0026309 FW: L7340/1997/9 - Yandicoogina Licence Amendment 10/12/2024 (Reply to queries on weed management, pipeline controls and maximum tyre storage).
6. Pilbara Iron Company (Services) Pty Ltd, FW: APP-0026309 -APPLICATION FOR AN AMENDMENT TO LICENCE (L7340/1997/9) -REQUEST FOR FURTHER INFORMATION FOLLOWING STAKEHOLDER CONSULTATION [SR-0186321] 10 March 2025 (Under Validation RFI reply).
7. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0026309 -APPLICATION FOR AN AMENDMENT TO LICENCE (L7340/1997/9) -REQUEST FOR FURTHER INFORMATION FOLLOWING STAKEHOLDER CONSULTATION [SR-0186321] 24 March 2025 (Confirmation from Licence Holder on liaising with Banjima Native Title Aboriginal Corporation RNTBC during RFI process).
8. Pilbara Iron Company (Services) Pty Ltd, RE: [External] FW: APP-0026309 -APPLICATION FOR AN AMENDMENT TO LICENCE (L7340/1997/9) -REQUEST FOR FURTHER INFORMATION FOLLOWING STAKEHOLDER CONSULTATION [SR-0186321] 14/04/2025 (Further confirmation from Licence Holder on liaising with Banjima Native Title Aboriginal Corporation RNTBC during RFI process).
9. Pilbara Iron Company (Services) Pty Ltd, Re: [External] APP-0026309 -PROPOSED AMENDMENT TO LICENCE L7340/1997/9 21/05/2025 (Reply to 21 days letter).
10. Pilbara Iron Company (Services) Pty Ltd, Re: [External] APP-0026309 -PROPOSED AMENDMENT TO LICENCE L7340/1997/9 26/05/2025 (APP-0026309 – confirming DO2 and DO5A no longer discharging).
11. Pilbara Iron Company (Services) Pty Ltd, Re: [External] APP-0026309 -PROPOSED AMENDMENT TO LICENCE L7340/1997/9 27/05/2025 (APP-0026309 – Reply providing PFAS sampling results).
12. Pilbara Iron Company (Services) Pty Ltd, Re: [External] L7430 Yandicoogina FINALS for review 09/06/2025 (APP-0026309 – Reply received to pdfs sent stating no further comments).

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

Condition	Summary of Licence Holder's comment	Department's response
15, Table 10	The monitoring requirements outlined in Table 10 are excessive and we feel there is an opportunity to reduce the number of bores that need to be monitored. The frequency and number of bores to be sampled has been carried over from the operational requirements as per Works Approval 6518. Given no adverse findings/results were detected during the TLO and over the last 12 months, we believe there is justification to remove some of these bores. Many of these bores are in close proximity to each other and screened at the same level (e.g. all the MB10YRN, MB09YJS and MB16YBIL bores shown on the map below).  Can we propose the following bores are removed from Table 10: MB10YRN008, MB10YRN002, MB10YRN013MB09YJSB008,	This can be requested as part of a future amendment as it will require referral for technical advice. These groundwater monitoring bores were specifically required as part of the works approval.

Condition	Summary of Licence Holder's comment	Department's response
	MB16YBIL0018, MB16YBIL0009, MB16YBIL0010, MB15YBIL045.	
Amendment Report		
Section 2.4	DWER requested that the Licence Holder provide an update on the PFAS monitoring requirements specified in licence conditions and advise on likely timeframes for completing this requirement. Currently there are no timeframes specified for this monitoring to be completed – DWER will consider specifying timeframes as part of this amendment. RTIO - The PFAS monitoring results for D010 were provided in the Environmental Commissioning report submitted to DWER on 06 March 2025. D011 hasn't been commissioned yet but PFAS monitoring results will also be obtained for this discharge outlet once operational. All of the PFAS results for D010 were below the Limits of Reporting so is there any possibility of removing this sampling requirement for D012?	The intent of condition 13 and 14 was that a once of sample for all discharge points was to be carried out. To-date only monitoring results for D010 have been provided to DWER. Upon review of the existing condition and related reporting requirements, DWER considers that there is a need for the Licence Holder to provide a wholistic interpretation/summary report for the monitoring program. DWER also understands that specified discharge points are interchangeable and used as required to spread the discharge of water across the creek alignment. To clarify the PFAS sampling requirements, Condition 13 has been updated to include a clear timeframe for when sampling must be completed and also clarifies the minimum discharge samples that must be collected/sampled to fulfil the monitoring requirements. To clarify PFAS sampling reporting requirements, Condition 14 has been updated and modified to ensure that the revised monitoring requirements specified in Condition 13 are reported on appropriately. Condition 21 in relation to the Environmental Compliance Report for D011 and D012 remain unchanged (note reference to D010 has been removed from the condition as compliance was determined on this aspect on 21 May 2025 – separate correspondence was sent to Licence Holder on this matter) This can be requested as part of a future amendment as PFAS monitoring reports require assessment. PFAS monitoring sampling reports for all DO points not yet provided to DWER.
Figure 3	DWER requested that the Licence Holder provide a map depicting distances to sensitive receptors. RTIO - A map showing human, flora and fauna sensitive receptors has been attached.	Updated as requested.