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	L9445/2024/1
Licence Holder	Kimberley Ports Authority
ACN	56 780 427 150
File Number	INS-0002950 (APP-0030396)
Premises	Port of Broome 549 Port Drive, BROOME Legal description – Location 409 on Miscellaneous Plan 221193, Lots 616 and 956 on Deposited Plan 240107, Lot 621 on Deposited Plan 70861, Lots 650 and 651 on Deposited Plan 415214, Lot 698 on Deposited Plan 209491, and Lot 848 on Deposited Plan 174017 As defined by the premises maps attached to the revised licence
Date of Report	6 November 2025
Decision	Revised licence granted

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1. Decision summary

Licence L9445/2024/1 is held by Kimberley Ports Authority (licence holder) for the Port of Broome (the premises), located at located at 549 Port Drive, Broome, in the Kimberley region of Western Australia.

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 L9445/2024/1 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 1 August 2025, the licence holder applied to the department to amend licence L9445/2024/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- include the new Kimberley Marine Support Base (KMSB) wharf facility to the south of the existing Kimberley Ports Authority (KPA) wharf.
- remove time limited operation conditions related to Laydown Area 3 and replace it with a condition related to compliance being ensured through implementation of appropriate controls during night period operations.
- extend the Port of Broome prescribed premises boundary to incorporate the new loading facility.
- removal of “Meteorological station” at location L1 from the licence, and
- update of marine monitoring conditions.

This amendment is limited only to changes to Category 58: Bulk material loading or unloading, from the existing licence. No changes to the aspects of the existing licence relating to Category 82 have been requested by the licence holder.

Table 1 below outlines the proposed changes to the existing licence.

Table 1: Proposed design changes

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
58: Bulk material loading or unloading (premises on which clinker, coal, ore, ore concentrate, or any other bulk granular material is loaded onto or unloaded from vessels by an open materials loading system	1,600,000 tonnes per annum (tpa).	No change proposed.	The inclusion of the new Kimberley Marine Support Base (KMSB) wharf facility to the south of the existing KPA wharf. The loading of bulk mineral sand is primarily run by Kimberley Mineral Sands Pty Ltd

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
82: Boat building and maintenance: (premises on which vessels are commercially built or maintained, and organotin compounds are not used or removed from vessels)	N/A	N/A	No change proposed.

2.3 Overview and proposed change to the Port of Broome premises

The Port of Broome is a multi-use marine facility in Western Australia, serving industries like cattle and mining exports, and imports of general cargo and fuel. It supports maritime activities, including pearling, tourism, and naval operations.

The Kimberley Marine Support Base (KMSB) is a new facility within the port, designed specifically for Broome's unique environment and extreme tidal movements. KMSB holds a suite of long-term leases for land areas and portions of seabed within the Port of Broome, under which it is entitled to construct and operate a marine offloading facility and associated infrastructure.

The new KMSB infrastructure incorporates a floating wharf linked to a fixed causeway and will allow safe and efficient 24/7 operations regardless of tide.

Key design elements include:

- natural deep berth pocket of -15 m chart datum (the water is at least 15 meters deep at the lowest tide).
- 9,250 m^2 floating wharf (floating platform 165m long, 50m wide).
- 12 m wide, 400 m long bi-directional causeway.
- 85 m linkspan bridge with high load-bearing capability, and
- breasting and mooring dolphin structures to accommodate vessels up to 348 m overall length.

Kimberley Ports Authority (KPA) is charged with the role of overall management of the port. This involves financial aspects, strategic planning, forecasting and development. In addition, most day-to-day port activities (such as pilotage, stevedoring, security, navigation aid maintenance, anchorages, moorings, communications, channel maintenance, towage, cargo handling) are conducted inhouse or otherwise arranged by KPA. KPA is also responsible for strategically planning and coordinating the optimum overall development of the Port of Broome.

The loading of bulk mineral sands and the export would continue to be primarily run by Kimberley Mineral Sands Pty Ltd (KMS; a joint venture between Sheffield Resources Pty Ltd and YGH Australia Investments Pty Ltd). The mineral sands product originates from the KMS Kimberley mining operation, Thunderbird Mineral Sands Project, which is the subject of Ministerial Statement 1080 and subsequent variation approved under section 45C(1)(a) of the EP Act to allow export of the product out of the Port of Broome.

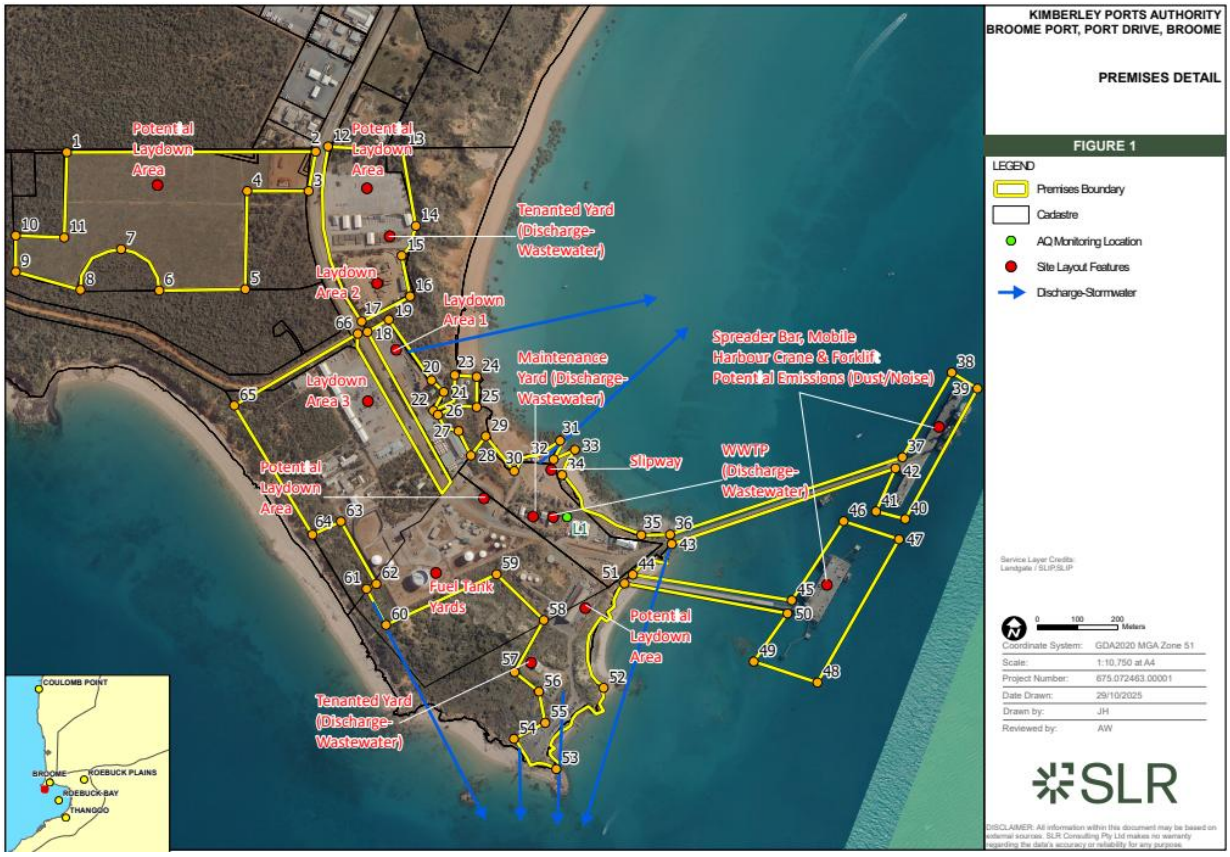

Figure 1: Port of Broome premises details

2.4 Product specifications

2.4.1 Mineral Sands

There is no proposed change to the suite of product to be exported, which consists of product from the KMS mine; magnetic, non-magnetic, and paramagnetic concentrates. The product has limited potential dust generation as they have a high specific gravity, are granular in nature, contain limited fines, and has an approximate 5% moisture content.

They do not contain contaminants such as hydrocarbons or acids and are highly insoluble.

2.4.2 Other Products

The port imports and exports a variety of products for both the domestic and international markets, including:

- Live cattle (no feedlots are within the port premises)
- Fodder (chaff and sawdust)
- Fuel (diesel, unleaded, Jet-A 1)
- Vessel stores and provisions (including waste)
- Water
- Fishing and pearling related cargoes
- Passenger baggage
- General cargo:
    - Containerised product.

- Cement, barite, ammonium nitrate and bentonite.
- Bulk products, including synthetic based muds (SBM), brine, barite and bentonite.
- Project cargo included oil and gas industry subsea equipment.

All products currently exported/imported through the existing KPA facility may also be loaded via the new KMSB facility.

KMSB will utilise the KPA stevedores and the process will be the same as for the KPA wharf. The only deviation is that the KMSB facility may be able to accommodate longer trucks (e.g. triple mineral sands trailers).

Only the loading of bulk mineral sands (as a bulk granular material) is authorised under Licence L9445/2024/1.

2.4.3 Product Loading Procedure

The mineral sands product is loaded into enclosed rotating containers at the mine, or source location. Once each container is filled it will be secured and checked for remnant products before being transported to the laydown area by truck.

2.4.4 Port Laydown Areas

The laydown area(s) are utilised by proponents to temporarily store containerised products prior to loading on trucks for transport to the port wharf. The product is trucked from the mine site and stored in containers at the laydown area awaiting transport to the KPA or KMSB wharf by truck for loading into vessels. All roads leading to laydown areas are bitumen; all laydown areas will be existing hardstand areas or will be newly formed, all within the port's prescribed premises boundary.

At the laydown areas, the containers are handled using reach stackers and typically stacked 4 to 7 containers high.

2.5 Mineral sands port loading procedures

The total annual throughput remains unchanged at 1.6 million tonnes. The total number of shipping movements related to mineral sands export will not change due to the addition of the KMSB facility to the existing licence.

As per the existing KPA operations, the product will be loaded directly into a vessel by the mobile harbour crane (MHC), or ship crane as a contingency option, which has Light Detection and Ranging (LiDAR) for accurate product placement within the hold of the vessel.

Each container of product is lifted and lowered into the hold of the ship. The container is rotated 180 degrees to empty the contents and then rotated back and lifted out of the hold. Empty containers are placed on the wharf.

A mechanical sweeping device will be available to collect any residue material on the wharf, though residue is not expected under normal operating conditions.

Empty containers will be returned to the laydown area for transport back to the mine. The product will be loaded in approximately 40,000 tonne lots via vessels at the KPA or KMSB wharf.

2.6 Part IV of the EP Act

The premises itself is not subject to regulation under Part IV of the EP Act however activities at the premises are subject to conditions set out in Ministerial Statement 1080 (MS 1080) published on 10 August 2018.

Post-assessment changes were approved under s.45C on 8 November 2022.

MS 1080 conditions a proposal to construct and operate a heavy mineral sands mining operating

on the Dampier Peninsula, and transportation of the products to the ports of Broome and Derby for export. Ministerial Statement 1080 and the post-assessment changes authorise:

- Less than 50 return journeys (100 truck movements) per day between the Thunderbird Mineral Sands Project (mine site) and Port of Broome operating 24 hours per day.
- Exportation of up to 1.6 Mtpa bulk mineral sand products from the Port of Broome.

2.7 Radiation management

Radiation Safety (Transport of Radioactive Substances) Regulations 2002 (the Regulations) and the ARPANSA Safe Transport of Radioactive Material Code of Practice 2019 (the Code) apply only to natural materials containing natural radionuclides where the activity concentration of the material exceeds 10 Bq/g.

As the typical sum of natural thorium and uranium in the KMS products is less than 10 Bq/g, the Regulations and the Code are therefore not applicable. This product does not require placarding as a radioactive substance for transport (10 Bq/g) under the Code (ARPANSA 2019).

Being above 1 Bq/g, the material is subject to management under the *Radiation Safety Act 1975* and the *Mines Safety and Inspection Act 1994* in accordance with the KMS Radiation Management Plan.

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 Dust emissions

All dust management measures relevant to the existing licence will remain applicable to the new KMSB wharf facility. The location of the KMSB wharf is such that the prevailing winds and receptors are commensurate with the existing KPA wharf and hence the air quality monitor that is currently in place can be utilised to determine any dust related impacts from loading/unloading at the new KMSB facility.

There have been seven reported exceedances of the 24-hour average PM_{10} criteria (50 µg/m³) since monitoring began in March 2024 until 30 June 2025; 20/3/24, 21/12/24, 12/3/25, 2/6/25, 10/6/25, 19/6/25, and 22/6/25 (Figure 2).

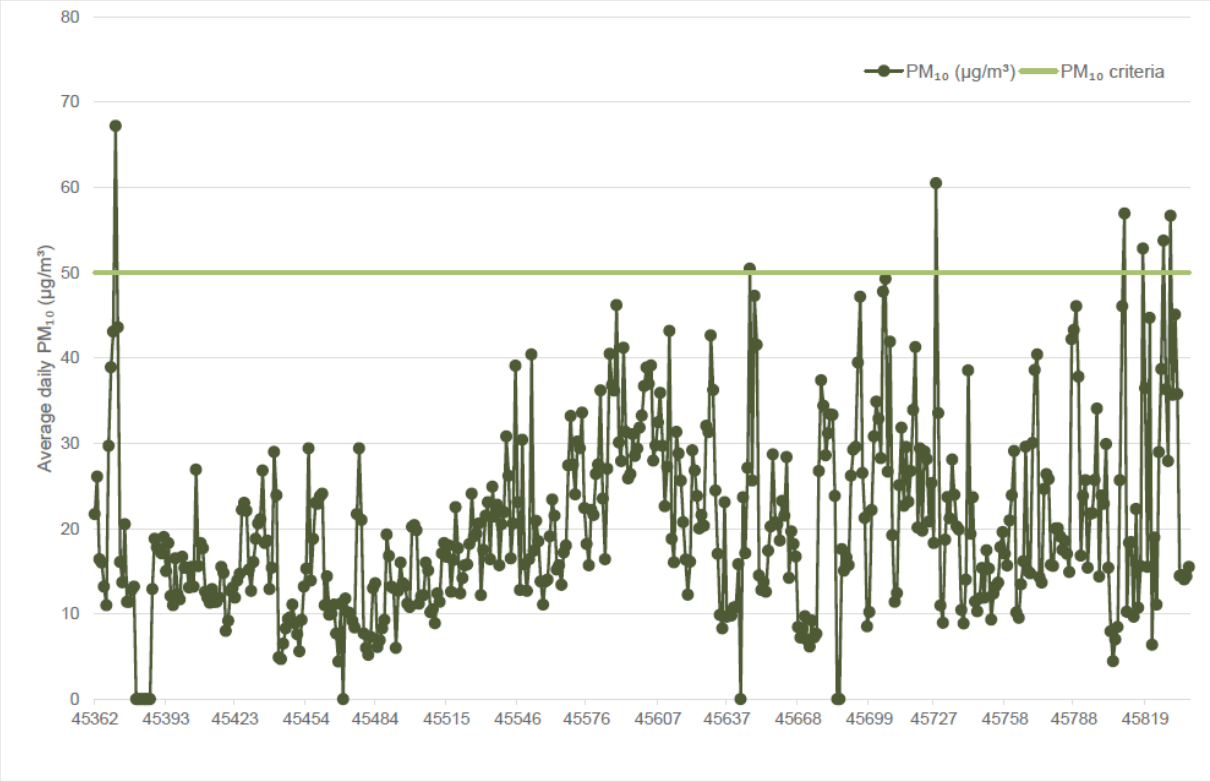

Figure 2: Climate Statistics for Broome Airport (Station No. 003003; BoM, 2025))

KMS vessels were alongside the KPA berth during four of the seven exceedances (20/3/24, 2/6/25, 10/6/25, and 19/6/25). However, following an investigation by the licence holder on each occasion, it was concluded that the prescribed activity (i.e. mineral sands handling and/or vessel loading) was not the source of dust emission. Dust was also not observed outside the prescribed premises boundary on any occasion, in accordance with the conditions of the licence.

The annual average PM_{10} for the year 1 July 2024 to 30 June 2025 is compliant at 22 µg/m³ compared to the criteria of 25 µg/m³.

As part of this amendment the licence holder notes that under conditions of works approval (W6852/2023/1) an air quality monitor was installed at an agreed location (labelled L1 in Figure 1). This is an E-Bam Plus to monitor dust during loading operations, and to also provide continuous PM_{10} monitoring data to the port. The unit was fitted with a meteorological station to ensure location specific weather conditions could be referenced in the assessment of data; however, this was not a requirement of the works approval. The works approval referred to the nearby Broome Bureau of Meteorology (BoM) station situated at the Broome Airport, located 6 km from the Port which provides reliable data used operationally.

During the application and assessment of the licence, the inclusion of a meteorological station that complies with AS/NZS 3580.1, *Methods for sampling and analysis of ambient air, Part 1.1: Guide to siting air monitoring equipment,* was included as an infrastructure requirement. The licence holder considers this condition to be impractical and unsafe during common site conditions, like cyclones. Also, the licence holder advises that weather conditions are continuously monitored at the Port of Broome via a subscription to WeatherZone and port staff regularly review the Bureau of Meteorology website for weather advice and updates.

The licence holder has requested that the requirement for the meteorological station be removed from the licence and meteorological data be sourced from the Bureau of Meteorology Broome NTC AWS Station, ID: 033102 instead.

3.2 Noise emissions assessment

Noise emissions have been identified as a key consideration under the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

Noise emissions from the KMSB facility are primarily associated with vessel loading operations, container handling at laydown areas, and truck movements. Mineral sands are transported in sealed rotating containers (rotainers), which are lifted and emptied directly into vessel holds using mobile harbour cranes (MHCs). This method is designed to minimise both dust and noise emissions.

Additional sources of noise include reach stackers and forklifts operating within laydown areas, where containers are stacked and staged for loading. Truck movements between the mine, laydown areas, and the wharf (up to 160 per day) also contribute to the overall noise profile. The port operates continuously, but the addition of the KMSB wharf is not expected to increase the total number of shipping movements, but rather to improve operational efficiency and reduce congestion.

The department has reviewed the acoustic assessment provided by the licence holder and the Delegated Officer considers the licence holder has demonstrated that:

- Acoustic modelling shows compliance with noise regulations under all operational scenarios.
- Laydown Area 3 can operate at night with container stacking barriers (3 to 5 rotainers high).

3.2.2 Regulatory framework and methodology

The Noise Regulations assigns noise levels for sensitive premises based on time of day and land use. For residential receptors, the most stringent limits apply during night-time hours (2200 – 0700 Monday to Saturday, 2200 – 0900 Sunday and public holidays), with LA10 levels as low as 35 dB(A) plus any applicable influencing factor.

As part of the amendment application, SLR Consulting Australia Pty Ltd (SLR 2025) conducted an acoustic assessment to evaluate the potential noise impacts associated with the KMSB facility, both in isolation and cumulatively with existing port operations. The assessment was undertaken in accordance with the Noise Regulations.

SLR's methodology included:

- Field measurements of operational noise sources (e.g. mobile harbour cranes, reach stackers, trucks) during March 2024.
- Predictive modelling using SoundPLAN v8.2, incorporating worst-case meteorological conditions (Pasquill Stability Class F) and topographical data.
- Assessment of multiple operational scenarios involving simultaneous activities at KPA and KMSB wharves.

3.2.3 Key Noise Sources and Scenarios

The primary noise sources assessed included:

- Mobile Harbour Cranes (106 dB(A)).
- Reach Stackers (105 dB(A)).
- Forklifts and trucks (102–106 dB(A)).
- Fodder loading equipment (up to 116 dB(A)).

Four operational scenarios were modelled:

- SC1: KMSB mineral sands loading only
- SC2: Simultaneous KMSB and KPA mineral sands loading
- SC3: KMSB mineral sands loading with KPA fodder loading
- SC4: KPA mineral sands loading with KMSB fodder loading

Scenario SC1 represents a situation where mineral sands are being loaded exclusively at the KMSB wharf using a mobile harbour crane and rotating containers (rotainers). Simultaneously, a rig tender is being loaded at the existing KPA wharf. Reach stackers are active in Laydown Areas 1 and 3, with additional container receival occurring in Laydown Area 2. This scenario establishes a baseline for KMSB operations without concurrent mineral sands loading at the KPA wharf.

Scenario SC2 intensifies the operational footprint by modelling simultaneous mineral sands loading at both the KMSB and KPA wharves. This scenario includes the same laydown area activity as SC1 and represents the highest cumulative noise emissions from mineral sands operations. It is considered the most acoustically intensive scenario due to the concurrent use of heavy machinery and loading infrastructure at both wharves.

Scenario SC3 introduces a different operational mix, with mineral sands being loaded at the KMSB wharf while fodder is simultaneously loaded onto a livestock vessel at the KPA wharf. Fodder loading is known to be a high-noise activity, particularly due to the use of the Walinga Agrivac system. This scenario assesses the combined impact of two distinct high-noise operations occurring concurrently at separate wharves.

Scenario SC4 reverses the arrangement of SC3, with mineral sands being loaded at the KPA wharf and fodder being loaded at the KMSB wharf. This scenario evaluates the noise implications of fodder loading at the new KMSB facility, which had not previously hosted such operations.

All four scenarios were modelled under worst-case meteorological conditions, including night-time temperature inversions and downwind propagation, to ensure a conservative assessment.

3.2.4 Sensitive Receptors and Assigned Levels

The assessment identified several sensitive receptors within 2 km of the KMSB wharf, including:

- Broome Fishing Club (700 m southwest) (Figure 6)
- Port Heritage Residences (R1–R3, 1,000 m west) (Figure 3)
- Broome Dinosaur Adventures (1,000 m northwest) (Figure 6)

1 and 2 km buffer zones are mapped in Figure 6 and the receptors further detailed in section 3.3.2. Assigned noise levels for these receptors were adjusted based on proximity to industrial land.

Figure 3: Residential noise receptor locations

3.2.5 Assessment Results

Vessel loading

The acoustic assessment concluded that noise emissions from mineral sands loading at the KMSB wharf are compliant with the Noise Regulations under all modelled scenarios. Predicted LA10 levels at the most sensitive receptors (R1–R3) ranged from 45–51 dB(A) during night-time operations, depending on the scenario and barrier configuration.

Laydown areas

Laydown Areas 1 and 3 are used for container storage and handling. Laydown Area 3 was previously subject to restricted hours due to its proximity to sensitive receptors. However, the assessment supports the removal of these restrictions, provided that acoustic barriers are implemented during night-time operations.

Barrier configurations include:

- Base Barrier: 3 rotainers high (6 m).
- Barrier A: 4–5 rotainers high (8 – 10 m).
- Barrier B: 3 rotainers high for R2 / R3.
- Barrier C: 3 rotainers high for dual laydown use.

Transport movement

Truck movements from the mine to the Port (up to 50 quad round trips/day) and from laydown areas to the wharves (up to 160 movements/day) are not expected to change.

Under Regulation 3(1)(a) of the Noise Regulations, noise from vehicles on public roads is exempt. On-site truck movements were assessed and found to have minimal impact on off-site receptors.

3.2.6 Monitoring and Management

The licence holder has committed to ongoing environmental monitoring and management through its Operational Environmental Management Plan (OEMP), which includes:

- Six months of noise monitoring at key locations
- Incident and complaint reporting procedures
- Use of Performance-Based Standards (PBS) trucks to reduce noise
- Training for stevedores and operational staff

The OEMP also outlines weather-related operational limits, including cessation of loading during high winds (>25 knots) or heavy rainfall, and includes a detailed environmental risk register and source-pathway-receptor analysis.

The acoustic assessment demonstrates that the inclusion of the KMSB wharf facility into the Port of Broome's operations are not expected to result in exceedances of the Noise Regulations. With the implementation of recommended mitigation measures, particularly container stacking barriers in laydown areas, noise emissions from vessel loading, laydown operations, and transport activities will remain within acceptable limits.

3.2.7 Laydown Area 3

Laydown Area 3 was previously subject to limited operating hours due to its proximity to sensitive receptors. However, the updated modelling demonstrates that operations involving reach stackers and truck movements in this area can comply with the Noise Regulations, even during night-time periods, provided appropriate mitigation measures are in place.

The dominant noise source in Laydown Area 3 is the reach stacker, particularly during container handling. The modelling shows that when rotainer containers are stacked to form acoustic barriers, specifically, three containers high (6 metres), noise emissions at nearby receptors such as the Port Heritage residences (R1–R3) remain below the assigned night-time limits (Figure 4, and Figure 5).

It is noted that general cargo operations in Laydown Area 3, which do not involve reach stackers, produce significantly lower noise emissions and do not require barriers to achieve compliance. This flexibility supports the licence holder's operational needs while maintaining environmental protection standards.

Based on the assessment above, the restriction on operating hours at Laydown Area 3 is no longer considered necessary. The risk of noise impacts is low and manageable with the implementation of container stacking barriers during night-time operations. Removing the restriction will allow more efficient scheduling and use of port infrastructure without compromising compliance or amenity.

Figure 4: Designated barriers (4 or 5 rotainers high) for noise mitigation at night to R1

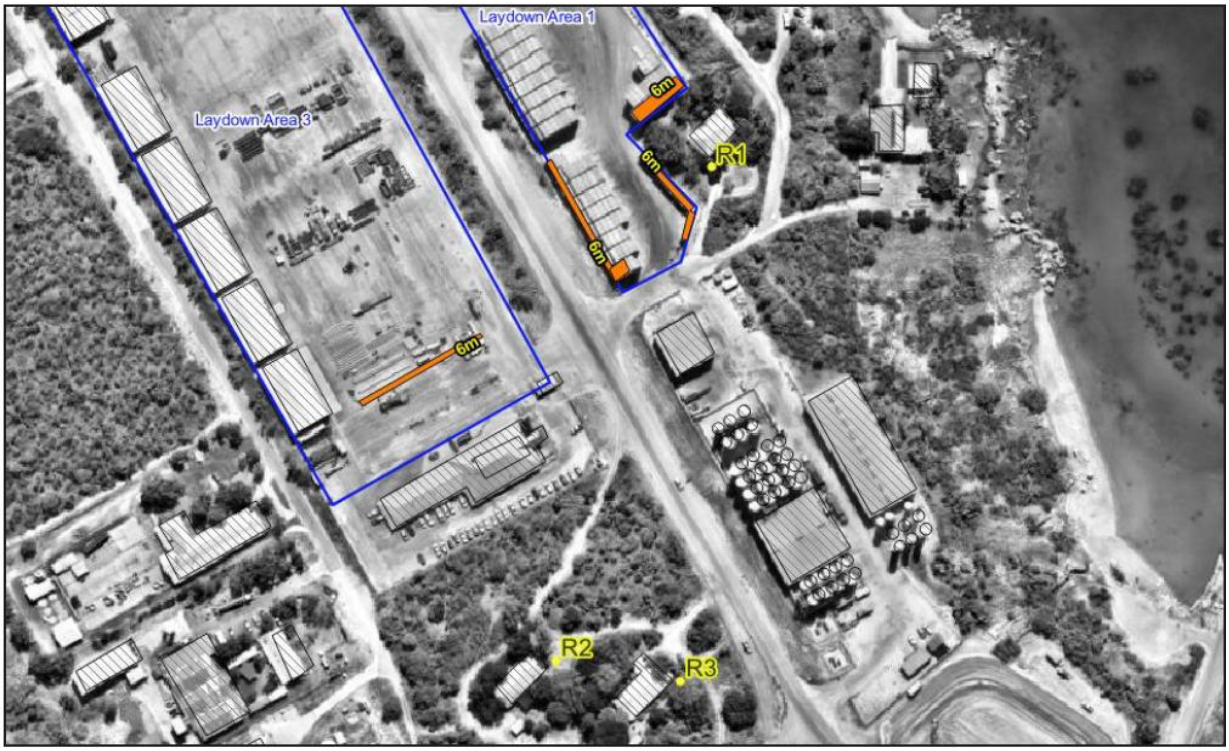

Figure 5: Designated barriers (3 rotainers high) for noise mitigation at night to R2 / R3

3.3 Marine environment monitoring

There are no gazetted areas of environmental significance that specifically fall within the Port of Broome operations area; however, it is recognised that there are areas of environmental significance in proximity but separate to the port's operations area. These are identified in Table 3.

The licence holder undertakes marine monitoring, including water and sediment monitoring as part of its operations. As per its monitoring and incident response process, in the event a trigger above a reporting level is detected, the licence holder investigates any incident to ascertain the source of the trigger. Once the source was identified, the licence holder states that appropriate actions are taken, including implementing additional controls or undertaking remediation or mitigation strategies as required.

A water, sediment, and benthic monitoring program is currently undertaken by the licence holder, and this will continue for the life of the operations. The existing licence marine monitoring is to be extended to include new monitoring locations adjacent to the new KMSB facility.

As part of this licence amendment application the licence holder has requested minor amendments to conditions to align with ongoing marine monitoring.

The proposed update to marine monitoring conditions expands the scope and frequency of monitoring to include water quality, sediment, and benthic habitat assessments adjacent to the new KMSB wharf. The licence holder believes that these updates ensure continued protection of marine receptors and will provide data to detect and manage any potential impacts.

3.4 Source-pathways and receptors

3.4.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises 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
Dust	Materials handled via the rotating container unloading system.	Air/windborne pathway	• Loading via rotating containers • Stevedore Safe Operations Procedure • Container housekeeping at mine and laydown area • Site inspections and audit programs • Complaints and Incident Reporting Processes • Environmental Monitoring (Air Quality)
Noise	Machinery operations and truck movements.	Air/windborne pathway	• Implementation of container stacking barriers during night-time operations • Minimal handling method chosen. • Routine site inspections and audit programs • Complaints and Incident Reporting Processes • Multiple containers per truck to reduce truck movements.

Emission	Sources	Potential pathways	Proposed controls
Sediment laden stormwater	Stormwater runoff	Overland runoff	• Loading method via rotating containers to prevent spillage. • Environmental Monitoring (Marine water and sediments) • Procedures for product handling to avoid spillage • Regular housekeeping to remove spillage • Sealed hardstand (wharf deck) • Good housekeeping • Emergency management procedures, including prompt cleanup of spills and disposal • No loading during heavy rainfall

3.4.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the licence holder 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 and Figure 6 below provides a summary of potential human and environmental receptors that may be impacted because 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
Port industrial area: a) Broome Fishing Club and Broome Volunteer Sea Rescue Group b) Broome Dinosaur Adventures c) Broome Pistol Club and Overflow Caravan Park	Commences at start of wharf neck 600 m west from wharf. a) 700 m southwest of wharf and 650m of nearest laydown area b) 1,000 m northwest of wharf and 155 m southeast of nearest laydown area c) 1,800 m northwest of wharf approximately 960 m northeast of laydown area
Port houses (caretaker residences)	1,000 m west of wharf and within 50 m to 80 m of Laydown Area 3
Environmental receptors	**Distance from prescribed activity**
Marine and tidal environments of Roebuck Bay	Benthic communities, including benthic infauna Mixed assemblage (seagrass and macroalgae) dominated the subtidal areas in the vicinity of the wharf,
	Mangroves are within 100m north of the premises and >600m west of the wharf.

Environmental receptors	Distance from prescribed activity
Threatened Ecological Communities	One Threatened Ecological Community, Monsoon Vine Thickets on the coastal sand dunes of Dampier Peninsula as potentially occurring within a 10 km radius of the site.
Threatened and/or priority flora and fauna	Forty-eight threatened species and 68 migratory species potentially occurring within a 10 km radius of the site.
Cultural receptors	**Distance from prescribed activity**
Aboriginal heritage site	There are five registered Aboriginal sites identified as occurring within the Port. • Registered Site: Lintapitjin/Lot 2065 Port Drive (Land ID 12410) – artefacts, scatter, ceremonial, midden, mythological. No gender restrictions apply. • Registered Site: Entrance Point/Yinara (Land ID 12873) – artefacts, scatter, midden, mythological, camp. No gender restrictions apply. • Registered Site: Beacon Hill (Land ID 14444) – artefacts, scatter, midden. No gender restrictions apply. • Registered Site: Gantheaume Point 2 (Land ID 12872) – artefacts, scatter, camp and midden. No gender restrictions apply. • Registered Site: Gantheaume Point 1 (Land ID 12924) – artefacts, scatter, creation, dreaming narrative, midden, other. No gender restrictions apply. National Heritage Listed site identified as The West Kimberley (Place ID 106063) is located within a 10 km radius of the site.
State heritage site	Three residences of state heritage significance are within Port boundary. Listed above as human receptors as these residences are occupied.

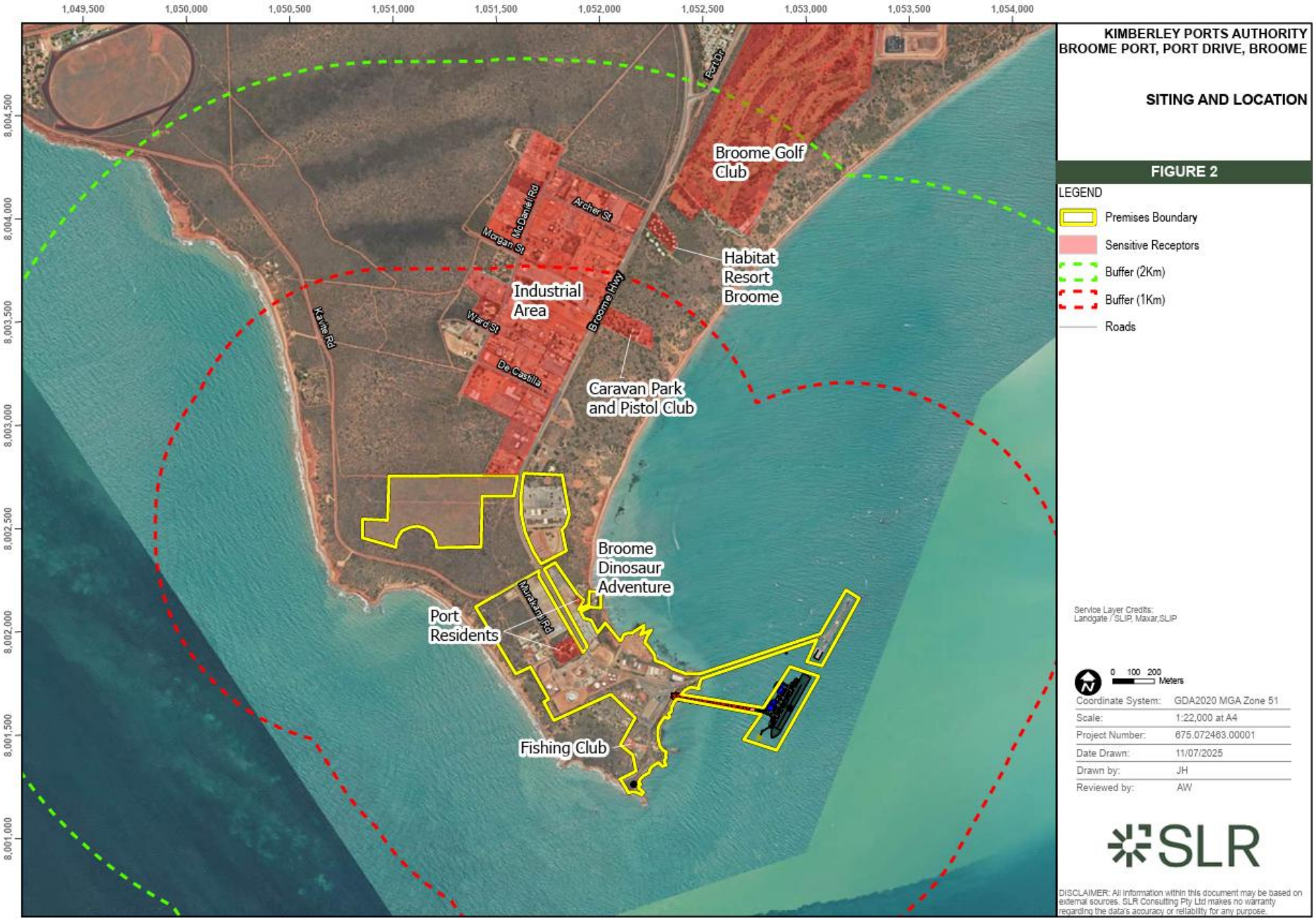

Figure 6: Distance to sensitive receptors

3.5 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 3.3. 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 3.3), 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 holders' 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 L9445/2024/1 that accompanies this Amendment Report authorises emissions associated with the operation of the premises i.e. Category 58: Bulk material loading or unloading.

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 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**				
Operation								
Unloading, loading and storage of material. Vehicle movements	Dust	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Two residents on port land 1 km from the wharf. Port industrial area commencing at start of wharf neck 600 m west from wharf.	Refer to Section 3.3	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 9 – Operational requirements for ship loading infrastructure Condition 11 – Air quality monitoring, including particulate matter 2.5 microns and under, and wind speed and direction Condition 17 – Environmental Report, including provision of raw data and detailed analysis, such as investigations of any exceedances of relevant NEPM criteria at air quality monitoring station L1	The Delegated Officer has determined that the likelihood of adverse noise or dust impacts on identified receptors is low. This is based on the separation distance between the operational areas and sensitive receptors, the implementation of effective operational controls by the licence holder, and the physical characteristics of the mineral sands product. The product is transported in sealed rotating containers (rotainers), and its granular composition, with limited fines, that reduces the potential for airborne dust emissions. Given these considerations, the risk associated with loading operations at the wharf is considered acceptable, provided that the licence holder continues to implement the prescribed operational controls during and after loading activities. To further support environmental management, ongoing air quality monitoring will be maintained as a key dust control measure. This monitoring will enable the licence holder to assess potential impacts on receptors both within and surrounding the premises and will contribute to a more comprehensive understanding of site-specific dust conditions over time. The delegated officer supports the request for removal of the meteorological station from the licence as environmentally acceptable as air quality monitoring may be supported by the Bureau of Meteorology station within 6km of the premises.
		Pathway: Air/windborne pathway **Impact:** Health and amenity	Marine environment immediately adjacent to the premises and tidal environments of Roebuck Bay Threatened Ecological Community, Monsoon Vine. Threatened and/or priority flora and fauna	Refer to Section 3.3	C = Slight L = Unlikely **Low Risk**	Y	Condition 9 – Operational requirements for ship loading infrastructure Condition 12 – Marine monitoring.	The source of the dust (mineral sands) is not altering, and the current operational controls have been found to be sufficient that no exceedance of licence limits between March 2024 and June 2025 (the most recent monitoring available at the time of this application). The Delegated Officer considers that the risk of dust impacting marine species is adequately controlled by the licence holders' controls. Ambient marine monitoring is specified in the licence to monitor impacts from spills during ship loading over the long-term and it is considered that any impacts to receptors from dust deposited on marine waters because of ship loading, which is considered to be low risk, will also be informed from this monitoring. The inclusion of biannual water sampling, annual benthic surveys, and five-yearly sediment and infauna assessments reflects a precautionary and scientifically sound approach, aligned with the scale and nature of mineral sands loading activities.
Vehicle / machinery movements. Trucks and reach stackers used within the laydown areas for offloading containers from trucks and reloading empty.	Noise	**Pathway:** Air/windborne pathway **Impact:** Health and amenity	Two residents on port land 1 km from the wharf. Port industrial area commencing at start of wharf neck 600 m west from wharf.	Refer to Section 3.3	C = Minor L = Unlikely **Medium Risk**	Y	Condition 9 – Operational requirements for laydown areas 1 and 3	Requirements specified under the Noise Regulations are considered sufficient to mitigate the potential impacts from this activity. The Delegated Officer notes that the proposed loading activities at the wharf are generally predicted to comply with the requirements of the Noise Regulations. Allowing ship loading using rotainers trucked from Laydown Area 3 is justified as acoustic modelling demonstrates compliance with night-time noise limits when appropriate container stacking barriers are in place. The reach stacker is the dominant source, and mitigation measures effectively reduce emissions to acceptable levels at nearby receptors.
Stormwater interaction with stockpiled material, spillage or other contaminants spilled in laydown areas, access roads and wharf	Sediment laden stormwater	**Pathway:** Overland runoff **Impact:** Ecosystem disturbance or impact to surface water quality	Marine environment immediately adjacent to the premises and tidal environments of Roebuck Bay Threatened Ecological Community, Monsoon Vine. Threatened and/or priority flora and fauna	Refer to Section 3.3	C = Minor L = Possible **Medium Risk**	Y	Condition 9 – Operational requirements for ship loading, including immediate clean-up of any spilled product on the wharf and access routes following ship loading events	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
Application advertised on the department's website 22 September 2025	None received	N/A
Local Government Authority Shire of Broome advised of proposal 19 September 2025	The Shire of Broome replied on 21 October 2025. The Shire of Broome note that KPA is seeking to amend the current Licence to include the new KMSB wharf facility, that the annual throughput of material remains unchanged, and the total number of shipping movements will not change. The Shire does not have any comments on the amendment.	N/A
Broome Dinosaur Adventures advised of proposal 19 September 2025	None received	N/A
Habitat Resort Broome advised of proposal 19 September 2025	None received	N/A
Conservation Council of WA advised of proposal 19 September 2025	None received	N/A
Nyamba Buru Yawuru Ltd (NBY) advised of proposal 19 September 2025	None received	N/A
Licence Holder was provided with draft amendment on 24 October 2025.	The licence holder responded on 31 October, waiving the remainder of the comment period. The licence holder provided updated coordinates of the prescribed premises boundary as requested and included a revised Figure 1 – Prescribed premises boundary map, which was updated with recent aerial imagery.	The Delegated Officer has updated the prescribed premises boundary coordinates and Figure 1 in the revised licence.

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
Licence history	Update summary of changes to include this licence amendment.
Condition 9 – Infrastructure and equipment Table 1, Row 2	Remove “Meteorological Station” from Table 1. Existing Rows 3 and 4 renamed to Rows 2 and 3.
Condition 9 – Infrastructure and equipment Table 1, Row 2 (formerly Row 3)	Update ship loading operation requirements to clarify when wharfs must be swept. Update wharf premises boundary coordinates to include the new KMSB.
Condition 9 – Infrastructure and equipment Table 1, Row 3 (formerly Row 4)	Remove the hours of operation restriction on the use of Laydown Area 3. Add a condition related to only allowing operations at Laydown Area 3 when appropriate controls (i.e. stacked containers) during night period operations are implemented when a resident is occupying a relevant residence.
Condition 11 – Air quality and meteorological monitoring. Table 2, Row 2	Remove “Meteorological Station” from Table 2. Add in that meteorological data to be sourced from the Bureau of Meteorology Broome NTC AWS Station, ID: 033102
Condition 12 – Marine monitoring	Update conditions related to marine monitoring to expand the scope of marine monitoring to include biannual water quality sampling, annual intertidal and subtidal benthic habitat assessments, and five-yearly sediment and benthic infauna surveys
Definitions Table 4	Remove “AS 3580.14 2014” (related to meteorological station) from Table 4
Schedule 1: Maps	Replace Figure 1 - Prescribed premises boundary, key infrastructure and air monitoring location L1 Replace Figure 2 - Water quality, sediment quality and benthic infauna sampling locations Replace Figure 3 - Annual intertidal and five-yearly benthic community habitat sampling locations
Schedule 2: Premises boundary	Updated prescribed premises boundary coordinates in Schedule 2 to include new KMSB.

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. SLR Consulting Australia Pty Ltd (SLR) 2025, *Kimberley Port Authority Licence Amendment Supporting Information*, Broome, Western Australia