Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Department initiated Amendment

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

Licence Number	L8846/2014/2
Licence Holder	Phosphate Resources Ltd
ACN	009 396 543
Application Number	APP-0027822
Internal Number	INS-0001767
Premises	Christmas Island Phosphates Christmas Island INDIAN OCEAN TERRITORIES WA 6798 Legal description – Being Lot 47 and 48 on Plan 218106, Lot 51 on Plan 218108, Lot 53 on Plan 218110, Lot 197 on Plan 218134, Lot 482 and 488 on Plan 219653, Lot 554 on Plan 221294, Lot 622 on Plan 43303, Lot 637 on Plan 43304, Lot 3001 and 3002 on Plan 41813, and Lot 3022 on Plan 43297, as depicted in Figure 1, Schedule 1 and as defined by the coordinates in Schedule 2
Date of Report	9 February 2026
Decision	Revised licence granted

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1. Decision summary

The Delegated Officer has determined to make amendments to Licence L8846/2014/2. The amendments are administrative in nature and do not alter the risk profile of the Premises, providing that activities, emissions and receptors as stated in the existing approvals remain unchanged.

This Amendment Report documents the amendments made pursuant to section 59 and 59(B) of the *Environmental Protection Act 1986* (EP Act).

The Revised Licence issued because of this amendment supersedes the existing Licence previously granted in relation to the premises. The decision report for the existing licence will remain on the department's website for future reference and will act as a record of the department's decision making.

2. Scope of assessment

2.1 Regulatory framework

In amending the licence, 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 Amendment summary

Licence L8846/2014/2 is held by Phosphate Resources Ltd (PRL, the Licence Holder) for Christmas Island Phosphates (CIP, the premises), located at Christmas Island, Indian Ocean Territories WA 6798.

The Premises relates to the categories and the assessed design capacity under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations), which are defined in existing Licence L8846/2014/2.

On 2 July 2025, the department initiated an amendment to Licence L8846/2014/2 to incorporate the following changes:

1. A requirement to install a new ambient air quality monitoring network, consisting of the following equipment:
    - One Delta OHM HD52.3D weather station for the monitoring of meteorological conditions. The station will be positioned north of the Wharf area within an existing fenced enclosure and will be solar-powered, with a minimum 48-hour battery back-up to ensure uninterrupted operation. The station will collect data on parameters such as wind speed and direction, temperature, humidity, atmospheric pressure, and rainfall which will be used to support interpretation of PM_{10} monitoring results and assist in identifying potential sources and dispersion patterns of particulate emissions.
    - Two Oizom Real Time Dust Monitors, one installed to the north and one to the south of the Wharf area within two pre-existing fenced areas. Each unit will be solar-powered and equipped with a battery back-up capable of maintaining operation for approximately 48 hours. The Oizom Dustroid monitors utilise laser/optical particle counter technology and are fitted with heated inlets to prevent condensation-related interference. Each unit can measure PM_{10} concentrations within a range of 0–5,000 µg/m³, with a resolution of 0.1 µg/m³ and a minimum detection limit of 1 µg/m³. The monitors are MCERTS (UKAS), approved as indicative dust monitoring instruments.

- Two Focussed Photonics (FPi) BPM-200 Beta Attenuation Monitors (BAMs), one installed at Tong Chee Road and the other adjacent to the Malay Club. The BAM units will be housed in secure, outdoor enclosures equipped with air conditioning and heated inlets to prevent condensation. Power will be supplied via mains electricity and protected with surge suppression. The units will comply with the instrument performance specifications outlined in Table 1 of AS 3580.9.11:2022. Wind speed and direction will be measured using ultrasonic static anemometers, which are maintenance-free and suited to coastal and high-rainfall environments.

2. A requirement to provide an Environmental Compliance Report for the new equipment installed.
3. Integration of the new air quality monitoring equipment into the ambient environmental quality monitoring requirements specified under the licence, including the definition of a reportable limit and notification obligations if this limit is exceeded.
4. The inclusion of specified actions for the preparation and submission of a revised Air Quality Monitoring Plan (AQMP) including:
    - PM_{10} concentration trigger levels developed based on baseline ambient air quality monitoring data (obtained over a 12-month period), to support proactive management actions aimed at preventing exceedance of the 24-hour average PM_{10} standard of 50 µg/m^3, as specified in the National Environmental Protection (ambient Air Quality) Measure (NEPM).
    - A description of management actions to be implemented in response to exceedance of the PM_{10} trigger levels, including operational controls and mitigation measures to reduce particulate emissions and prevent further exceedances.
5. Conditions which allow the CEO to request an amendment to the AQMP if necessary and which require the approved AQMP to be implemented.

These changes have been initiated following a review of the Christmas Island Phosphates Air Quality Monitoring Plan Versions No: 001 and 002 which were submitted to satisfy the requirements of Condition 21 on amended Licence L8846/2014/1 which was issued on 12 June 2024.

2.3 Air Quality Monitoring Plan Assessment

As part of the licence amendment granted on 12 June 2024, the Licence Holder was required under Condition 21 to engage a suitably qualified air quality professional to design a new air quality monitoring network and prepare an AQMP for submission to the department.

On 30 September 2024, the department received Version 001 of the AQMP, along with an accompanying Dust Dispersion Model prepared by SLR Consulting Australia and dated 4 July 2024, from PRL, in accordance with Condition 21.

The AQMP identified several potential dust emission sources associated with the site operations. These potential sources are shown in Figure 1 and include:

- D13 Transfer Station
- North Cantilever (shiploading)
- South Cantilever (shiploading)
- Door of Rockbin (land-end)
- Door of Rockbin (sea-end)
- Entrance Bagging of Phosphate into Bags

Figure 1: Dust emission sources

Dispersion modelling was undertaken using a combination of the Weather Research and Forecasting (WRF), CALMET, and CALPUFF models. Three-dimensional meteorological data generated by CALMET was used within the CALPUFF dispersion model to simulate PM_{10} dispersion patterns. Nominal emission parameters were grouped and modelled to produce dispersion contours, which are presented in Figures 2 and 3.

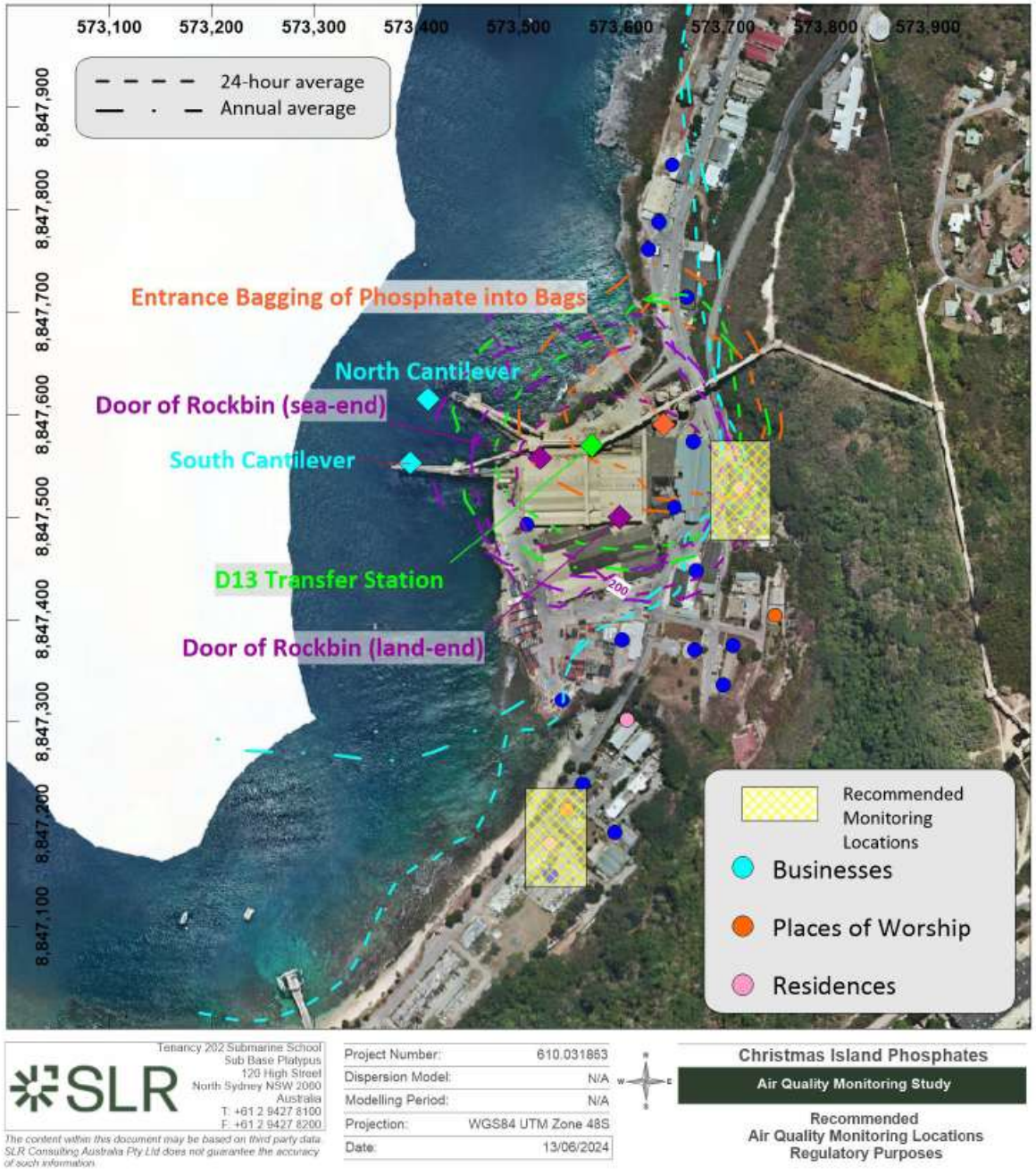

Figure 2: Dust Dispersion Modelling (24 hour and Annual Averages)

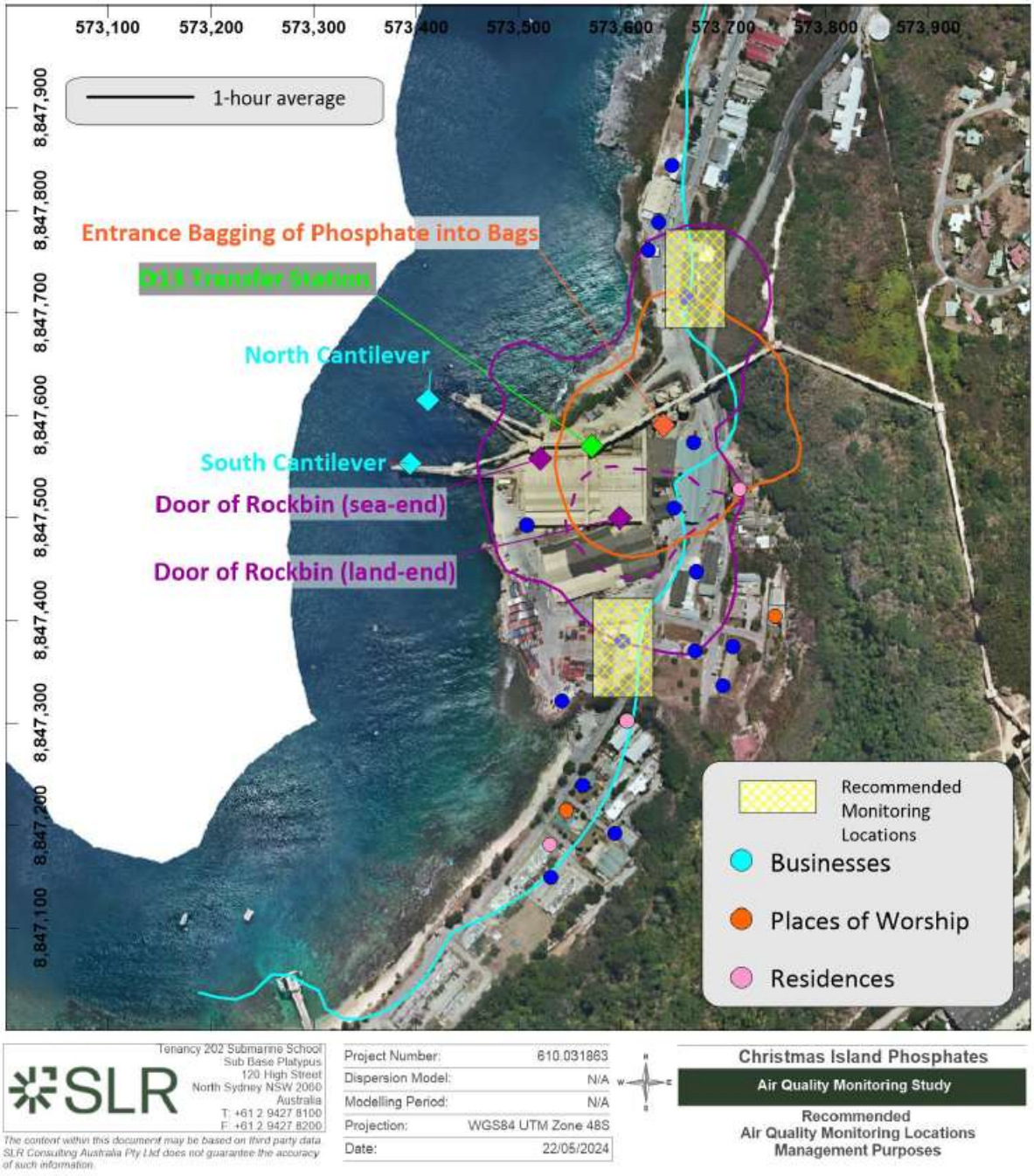

Figure 3: Dust Dispersion Modelling (1 hour average)

To support ongoing ambient air quality monitoring, the AQMP proposed the establishment of a new air quality monitoring network comprising:

- 2 x reference monitors (BAM1 and BAM2) – Focussed Photonics (FPi) BPM-200 Beta Attenuation Monitors installed at Tong Chee Road and at the Kampong. Monitors will be installed with an outdoor air-conditioned secure enclosure and heated inlets to remove condensation.
- 2 x near reference monitors (NR1 and NR2) – Oizom Dustroid Real Time PM10 Dust Monitors installed North and South of the Wharf area within two pre-existing fenced areas. The monitors will be equipped with heated inlets to remove condensation.
- 1 x Meteorological Station (MET1) – Delta OHM HD52.3D Weather Station installed

north of the Wharf area in a pre-existing fenced area.

The proposed monitor locations are shown in Figure 4.

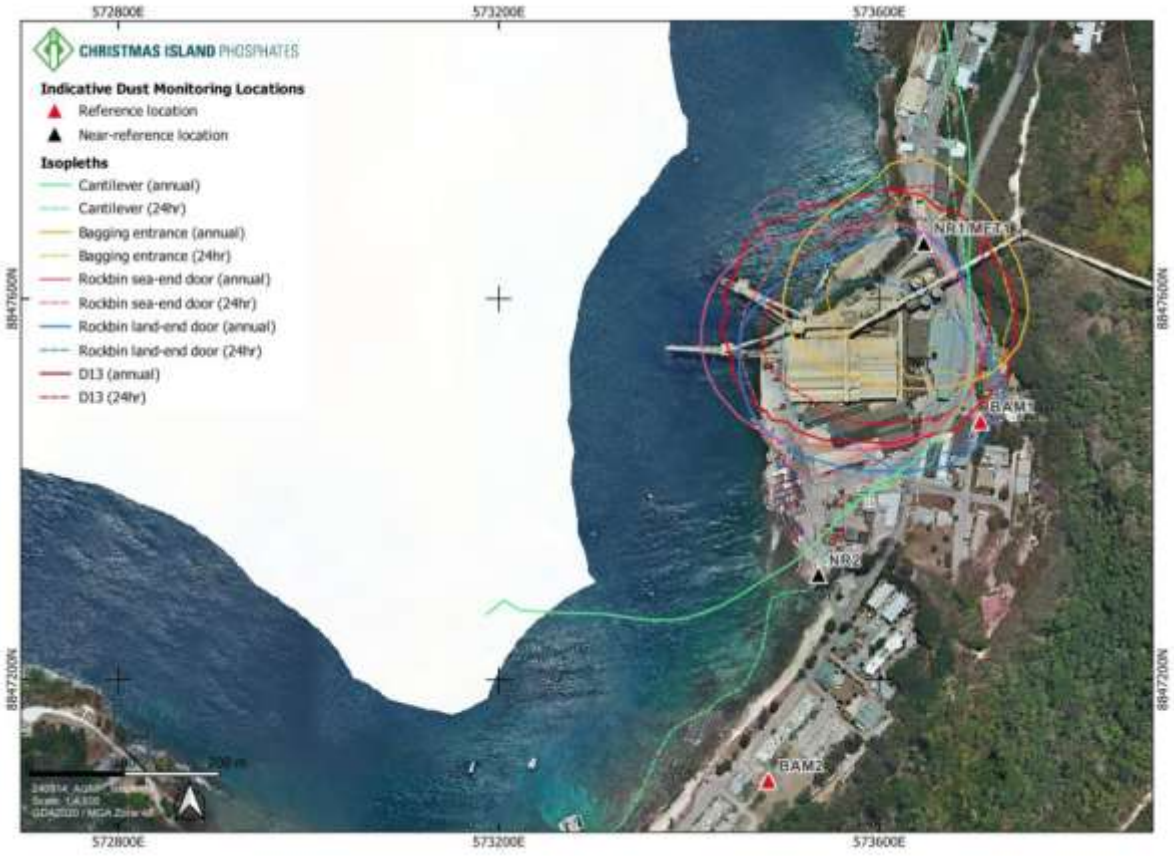

Figure 4: Indicative locations of monitoring equipment from AQMP Version 001

The department reviewed the AQMP submitted by PRL and found that the proposed monitoring equipment was generally consistent with previous recommendations. However, the AQMP did not address the department's recommendation to include a spare monitor to ensure continuity during offsite servicing, calibration, or repair. The Licence Holder has since advised that a portable dust monitor will be available to serve as a spare unit.

The proposed locations for BAM1, NR1, and NR2 were considered appropriate, as they are representative of ambient air quality near sensitive receptors. In contrast, the location initially proposed for BAM2 was assessed as unsuitable. This was due to the presence of residential and other sensitive receptors between the emission sources and the monitor, and the potential for interference from a nearby three-storey building, which could affect the accuracy of air quality monitoring results.

Consequently, the department requested that the Licence Holder propose an alternative location for BAM2. In response, PRL identified a new location adjacent to the Malay Club. This revised location was subsequently incorporated into Version 002 of the AQMP, which was submitted to the department on 2 July 2025 and includes the updated BAM2 location, as shown in Figure 5.

Following assessment, the department determined that the revised BAM2 location was appropriate. The new site is suitably positioned to detect potential impacts at sensitive receptors north of Kampong and is free from immediate obstructions that could interfere with monitoring results.

Figure 5: Indicative locations of monitoring equipment from AQMP Version 002

Legal access to the land required for installation of BAM2 is still in progress. Therefore, a condition has been specified in the licence amendment requiring the Licence Holder to obtain legal access to the land on which monitoring equipment will be located prior to installation.

The AQMP submitted by PRL does not currently include PM_{10} concentration trigger levels, stating that insufficient monitoring data is available to support their development. The plan outlines that 1-hour and 24-hour trigger levels will be established following the collection of baseline data over a 12-month period using the newly installed monitoring network.

To address this, the department has included a specified action in the licence requiring the preparation and submission of a revised AQMP. This revised plan must include:

- PM_{10} concentration trigger levels informed by 12 months of baseline ambient air quality data, to support proactive management and prevent exceedance of the NEPM 24-hour average PM_{10} standard of 50 µg/m³.
- A description of management actions to be implemented in response to trigger level exceedances, including operational controls and mitigation measures to reduce particulate emissions.

Additionally, the licence includes a condition specifying a reportable limit of 50 µg/m³ (24-hour average, measured from midnight to midnight) for PM_{10} concentrations recorded at BAM1 and BAM2. This limit aligns with the NEPM standard and is to be applied once the new air quality monitoring network is operational. The Licence Holder is required to notify the CEO in writing of any monitoring result from BAM1 or BAM2 that exceeds the reportable limit.

Once the revised AQMP incorporating PM_{10} trigger levels is received, it will be reviewed by the department. The licence includes provisions that allow the CEO to require amendments if the AQMP does not meet the specified requirements. Once approved, the Licence Holder must implement the AQMP in full.

3. Consultation

The Licence Holder was provided with the draft CEO initiated amendment on 21 November 2025. PRL provided comments in relation to the draft on17 December 2025, which are provided in Table 1.

Table 1: Consultation

Condition	Licence Holder's comment	Department response
1, Table 1, row 10 (b)	As outlined in previous email correspondence, PRL proposed that the backup portable dust monitor maintained on site would be the Dust Trak II 8530 aerosol monitor which has previously been used by PRL for compliance with L8846/2014/2 air quality monitoring. This unit is not equipped with a heated inlet. Given this, PRL respectfully requests the reference to the heated inlet be removed from the condition, as the DustTrak II 8530 has historically been accepted for compliant monitoring.	The requirement for a heated inlet on the backup portable dust monitor is based on the need to ensure accurate and reliable air quality measurements in the high-humidity environment of Christmas Island. Elevated humidity can cause condensation within the sampling system, leading to erroneous or spurious readings. While the DustTrak II 8530 has previously been used for monitoring, past data from the premises was found to be insufficient and compromised by equipment performance issues and environmental conditions. Incorporating a heated inlet significantly reduces the risk of moisture interference, thereby improving data integrity. For these reasons, the Delegated Officer considers it essential that the backup portable dust monitor is equipped with a heated inlet and therefore the condition will be retained in the licence.
2, Table 2, row 1	PRL request a minimum of **90** days from the date of obtaining legal access to the land on which equipment will be located. This timeframe is required to coordinate availability of our consultant and secure flights to Christmas Island. Note: there have been occasions when flights have been booked out in advance of 90 days but all reasonable efforts - such as waitlisting - will be made to comply with the 90-day timeframe.	The Delegated Officer acknowledges the challenges associated with coordinating consultant availability and securing flights to Christmas Island. In consideration of these logistical constraints, the requested timeframe of 90 days from the date of obtaining legal access to the land is accepted and will apply to this condition.
3	PRL requests an extension to the 30-day timeframe to **60** days for compliance with 3a (undertaking the compliance audit) and to **90** days for compliance with 3b (submission of the Environmental Compliance Report). The extended timeframe is sought to allow sufficient time to conduct the audit and compile the required information to an appropriate standard.	The Delegated Officer acknowledges the additional time required to undertake the compliance audit and prepare the Environmental Compliance Report to an appropriate standard, particularly given the logistical challenges on Christmas Island. Accordingly, the timeframe for completion of the audit and submission of the report has been extended to 90 days.

32	PRL requests clarification of the process and potential regulatory implications if the 50 µg/m3 (24-hour average) are exceeded within the 12-month baseline period. Specifically, PRL seeks confirmation on whether recorded levels over 50 µg/m3 (24-hour average) will be considered exceedances for the purpose of the AER/AACR? PRL requests confirmation that the reporting of the baseline data is for reference purposes only and will not be treated as a non-compliance.	The requirement under Condition 41 is for notification of any exceedance of the 24-hour average PM_{10} reportable limit (50 µg/m^3) detected by BAM1 or BAM2. Such exceedances are not considered a breach of licence conditions. This approach reflects that the baseline period is intended to collect reference data to inform the development of PM_{10} trigger levels for proactive management rather than enforce compliance. The purpose of this requirement is to ensure the department is informed of any exceedances and the actions taken to address them. Condition 41 has also been updated to remove reference to Form N1, which is now redundant, and to specify reporting requirements for notifications made under Condition 32.
34, Table 15	PRL requests clarification regarding the submission of the revised Air Quality Monitoring Plan required by Action 1 in Table 15. Specifically, PRL seeks confirmation on whether the 12-month timeframe starts on the date of the final physical completion of the installation (the installation of the BAM1 and BAM2 monitors) or the date the Environmental Compliance Report required as per Condition 3 is accepted?	The 12-month timeframe starts on the date of the final physical completion of the installation of all equipment listed in Table 2 (i.e. the date the final piece of equipment is installed).
34, Table 15, Action 1	PRL requests clarification in the expectations for the management actions to be included in the revised AQMP, as per Action 1(b) in Table 15. Specifically, PRL seeks guidance on: Level of detail: what level of detail is required in the description? Is a high-level overview of actions sufficient or are detailed, step-by-step procedures expected?	The department expects that the management actions included in the revised Air Quality Monitoring Plan (AQMP) under Action 1(b) are described in sufficient detail to demonstrate how exceedances of PM_{10} trigger levels will be managed effectively. A high-level overview is not considered adequate. The description should outline specific actions, operational controls, and mitigation measures, including when and how these actions will be implemented. This level of detail is necessary to ensure the AQMP provides a practical and actionable framework for responding to exceedances and preventing further emissions.

The Licence Holder was provided with a second draft amendment on 15 January 2026, followed by a revised version issued on 20 January 2026. PRL accepted the amendments in the revised draft on 4 February 2026, with the exception of the timeframe specified in Table 2 for Items 1 and 2 relating to the installation of the weather station and the two PM_{10} real time dust monitors. PRL requested that the timeframe be extended to 31 March 2026, and this extension was agreed to by the Delegated Officer.

4. 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.

4.1 Summary of amendments

Table 2 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 2: Summary of licence amendments

Condition no.	Proposed amendments
1, Table 1, row 1(b)	Condition number references have been updated to reflect renumbering of licence conditions following the inclusion of new conditions.
1, Table 1, row 3	References to figures in Schedule 1 of the licence have been updated.
1, Table 1, row 3(i)	Table reference number updated.
1, Table 1, row 8	Updates to Weather station operational requirements and location.
1, Table 1, row 9	Addition of 2 x PM_{10} Dust Monitors and associated operational requirements and locations.
1, Table 1, row 10	Addition of portable dust monitor operational requirements.
1, Table 1, row 11	Addition of 2 x Beta Attenuation Monitors (BAM) and associated operational requirements and locations.
2	Addition of a condition requiring the installation of the new ambient air quality monitoring network, including a weather station, 2 x PM_{10} Real Time Dust Monitors, and 2 x Beta Attenuation Monitors.
3	Addition of condition requiring the Licence Holder to audit their compliance with condition 2 and submit an Environmental Compliance Report on that compliance.
4	Addition of a condition specifying requirements for the Environmental Compliance Report.
5-31	Renumbered from 2-28 due to the addition of the above-mentioned 3 conditions. Table number references have also been updated to reflect the addition of a table in condition 2. Condition number references have also been updated due to the renumbering of conditions.
31	Updated to include the Real Time Dust Monitors and BAMs in the monitoring of ambient air quality table. A reportable limit has also been set within the table to prevent exceedance of the 24-hour average PM_{10} standard of 50 µg/m^3, as specified in the National Environmental Protection (ambient Air Quality) Measure (NEPM).
32	Condition added requiring the Licence Holder to notify the CEO of any ambient air quality monitoring result from BAM1 or BAM2 that exceeds the reportable limit of 50 µg/m^3 (24-hour average) for PM_{10}.

33	Location of meteorological monitoring station updated.
34	Addition of a specified action condition for the Licence Holder to prepare and submit a revised Air Quality Monitoring Plan with trigger levels and management actions should trigger levels be exceeded.
34B	Addition of a condition which allows the CEO to require the Licence Holder to amend the Air Quality Monitoring Plan if the CEO considers the matters specified in the document to be insufficient to meet the requirements of Condition 34.
34C	Addition of a condition which requires the Licence Holder to implement the Air Quality Monitoring Plan once it has been approved by the CEO in writing.
35-41	Renumbered from 31-37 due to the addition of conditions 2, 3, 4 and 34. Table number and condition number references have also been updated to reflect the changes.
41	The condition has been updated to remove reference to Form N1 which is now redundant. An additional notification requirement has been added for any exceedance of the reportable limit of 50 µg/m^3 (24-hour average for PM_{10}) recorded by BAM1 or BAM2 in accordance with condition 31.
Definitions (Table 18)	Addition of definition for AS 3580.9.11 and deletion of redundant Australian Standards AS 3580.9.6 and AS 3580.9.8. Addition of definition for “Air Quality Monitoring Plan”
Schedule 1, Figure 9	Addition of map showing ambient air quality monitoring locations.

References

- SLR Consulting Australia 2024, *Christmas Island Phosphates Dust Dispersion Model and Monitoring Recommendations*, Perth, Western Australia