Government of Western Australia
Department of Water and Environmental Regulation

# Amendment Report

## Application for Works Approval Amendment

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

| | |
|---|---|
| **Works Approval Number** | W6641/2022/1 |
| **Works Approval Holder** | Iluka Rare Earths Refinery |
| **ACN** | 654 487 662 |
| **File Number** | INS-0002523 (APP-0033449) |
| **Premises** | Eneabba Rare Earths Refinery<br>Part of Mining Lease M267SA<br>ENEABBA WA 6518<br>As defined by the premises maps attached to the revised works approval |
| **Date of Report** | 28 May 2026 |
| **Decision** | Revised works approval granted |

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# 1. Decision summary

Works approval W6641/2022/1 is held by Iluka Rare Earths Pty Ltd (works approval holder) for the Eneabba Rare Earths Refinery (ERER) at the Eneabba Mineral Sands Mine (the premises), located in the Shire of Carnamah, 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 construction and operation of the premises. As a result of this assessment, revised works approval W6641/2022/1 has been granted.

# 2. Scope of assessment

## 2.1 Regulatory framework

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

## 2.2 Background

The Eneabba Project was created to facilitate the processing of rare earth concentrate that has been historically stored within the Eneabba Monazite Pite (EMP) at the premises.

Eneabba Phase 1 (EP 1) of the Eneabba Project included the construction of a Wet Separation Plant (WSP) for the initial recovery and processing of the stored rare earth minerals from the Eneabba Monazite Pit (EMP) to produce mineral sands concentrate (MSC). Eneabba Phase 2 (EP 2) involved the construction of a concentrator processing plant which processes the MSC generated by the WSP to produce both 90% monazite product and heavy mineral concentrate (HMC). EP 1 and EP 2 were constructed under works approvals W6251/2019/1 and W6468/2020/1 respectively and are currently operated under licence L9369/2023/1.

In 2022, this works approval (W6641/2022/1) was granted for the construction, commissioning and time limited operations of the ERER. The refinery has been constructed to process the 90% monazite product from the concentrator as well as feedstock from third-party sources.

## 2.3 Application summary

On 28 January 2026, the works approval holder submitted an application to the department to amend works approval W6641/2022/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The amendments being sought are outlined in Section 2.3.1. This amendment is limited only to changes to Category 44 activities from the existing works approval. No changes to the existing design or throughput capacity are proposed in this amendment.

### 2.3.1 Air emission point changes

The works approval holder proposed to make the following changes to the current authorised ERER air emissions points to align with the finalised refinery design:

- The removal of the magnesia recovery circuit scrubber (ammonia scrubber 2) and redirect emissions from this circuit to the atmosphere via new vents.

  The ammonia vapour concentrations from the magnesia recovery tank vents were found to be lower than anticipated when the works approval holder analysed refinery operating conditions. Therefore, the works approval holder has proposed to remove ammonia scrubber 2 from the refinery scope.

- Minor amendments to the coordinates of the existing stack locations to align with the final refinery equipment locations, as shown in Figure 1.
- Increase the minimum stack heights for the ammonia scrubber, kiln burner stacks A-D, calciner exhaust stacks, dryer exhaust stacks, off-gas stacks and rare earth (RE) concentrate delivery extraction system.
- Increase the maximum stack diameters for the off-gas treatment system stack, calciner exhaust stacks, dryer exhaust stacks, off-gas stacks, ammonia scrubber and RE concentrate delivery extraction system.
- Decrease the maximum stack diameters for the kiln burner stacks A-D, boiler stacks 1-3 and $CO_2$ absorber exhaust stack.
- Amend the emission parameters to align with the updated air emissions modelling for the kiln burner, boiler, calciner and dryer stacks and associated off-gas stacks, outlined in Section 3.2.

The works approval holder has confirmed the controls previously implemented on the works approval will remain the same, with the exception of the removal of ammonia scrubber 2.

The works approval holder has also requested that the NOx monitoring requirements in Table 4 of the works approval for kiln burner stacks A-D are removed, noting that updated air emissions modelling (ETA, 2026) indicates NOx is not emitted at detectable levels at those stacks.

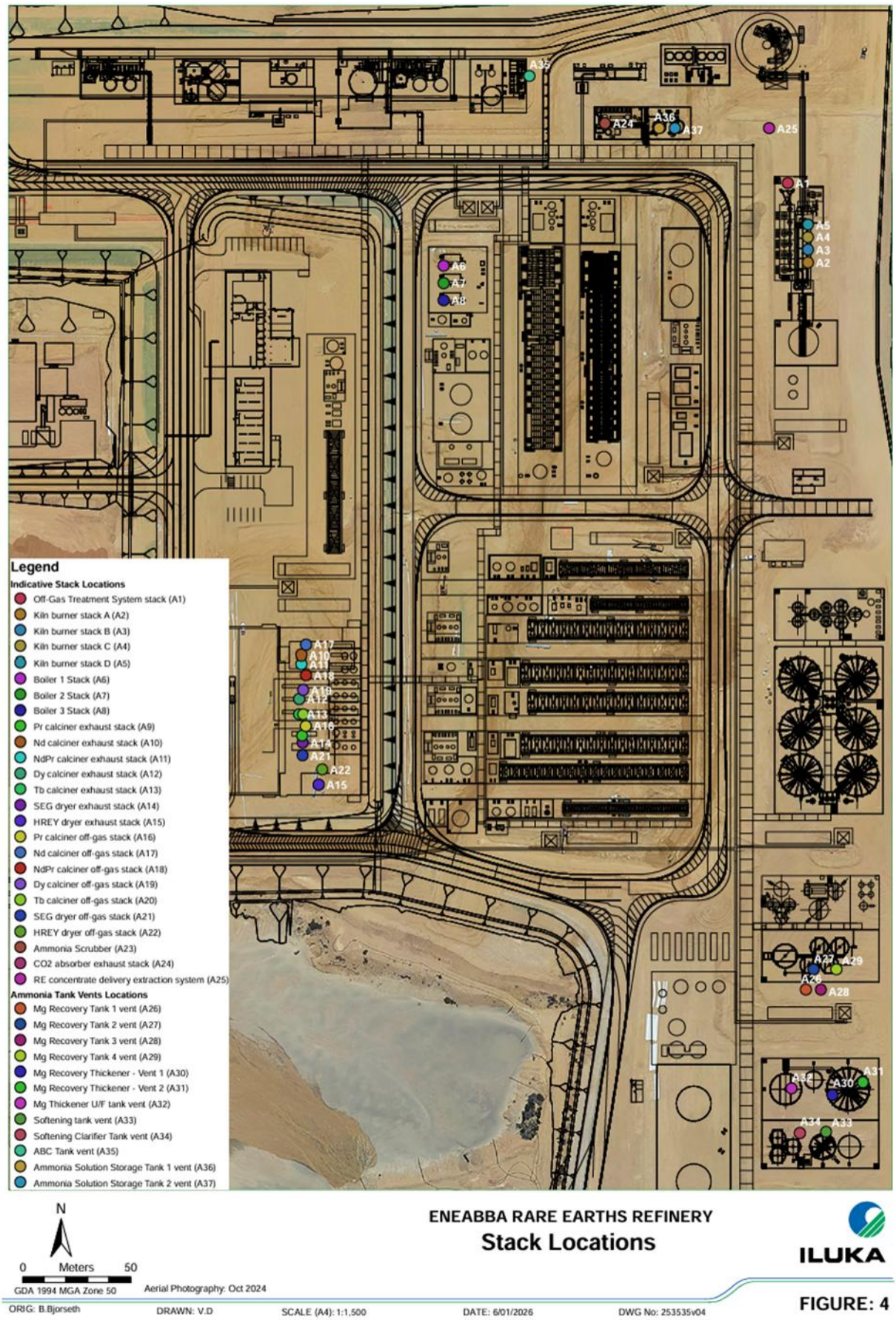


**Figure 1: Updated ERER emission source locations.**

# 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 2020b).

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

## 3.1 Source-pathways and receptors

### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this amendment report are detailed in

Table 1 below.

Table 1 also details the proposed control measures the works approval holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Works approval holder controls**

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| Air emissions ($NO_2$, $SO_2$, $SO_3$, $H_2SO_4$, $NH_3$ and particulates) | Operation of refinery plant infrastructure | Air/windborne pathway | • Design and construction requirements currently specified in the works approval:<br>- Off-gas treatment stack equipped with sampling points and designed to meet emission requirements.<br>- All stacks are to meet minimum height requirements.<br>- All burners (kiln, calciner and dryer burners) to be fitted with low-NOx burners.<br>- Extracted air must be captured and directed into the off-gas treatment system prior to release.<br>- Tanks must be covered and drafted to allow steam release.<br>- Ammonia scrubber installed to capture and treat ammonia prior to discharge into atmosphere.<br>- Bag filters installed at off-gas stacks for capture and filtering of waste gas.<br>- Bagging areas constructed with air extraction and venting via bag filters.<br>- Bag filters installed at pneumatic transfer systems.<br>- Baghouse systems must be installed with broken bag detection and alert system(s) to identify bag filter failure. |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | • Commissioning requirements are included on the works approval that require monitoring of point source emissions to air to verify emissions.<br>• The works approval specifies authorised emission points to air and includes the following requirements during time limited operations:<br>- Off-gas treatment system to extract and clean air from acid mixing and roasting kiln infrastructure.<br>- Vented air must be filtered or cleaned via scrubber or baghouse filter prior release at emission points. |

### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020b), the delegated officer has excluded employees, visitors and contractors of the works approval holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

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

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

| Human receptors | Distance from prescribed activity |
|---|---|
| Townsite – Eneabba | Approx. 7.3 km north of the refinery footprint |
| Brand Highway | Approx. 4.2 km west of the refinery footprint |

## 3.2 Air quality modelling

The works approval holder submitted revised air quality modelling (ETA 2026) for the changes to air emissions outlined in Section 2.3.1. Emission sources considered in the modelling are provided in Table 3. The modelling was reviewed to determine if expectations outlined in the *Air Quality Modelling Guidance Notes* (DoE 2006) were met. The technical review identified some limitations of the modelling, however, determined they were unlikely to change the assessments' outcomes.

The previous modelling predicted ground level concentrations (GLC) for modelled pollutants (excluding ammonia) to be below 10% of the assessment criteria. The updated modelling predicts that GLC at sensitive receptors for these pollutants will remain below 10% of the air quality guidance values (AGVs) when considering the proposed design changes.

In accordance with the *Guideline: Air emissions* (DWER 2019), the AGVs are to be met at all offsite sensitive receptors in the modelling domain for criteria pollutants such as nitrogen dioxide ($NO_2$), sulphur dioxide ($SO_2$) and particulate matter ($PM_{10}$ and $PM_{2.5}$). The modelling indicated there were no predicted exceedances of the modelled pollutants at any of the sensitive

receptors.

Individual toxic pollutants, such as sulfuric acid ($SO_3/H_2SO_4$) and ammonia ($NH_3$), are to generally be met everywhere within the modelling domain excluding industry premises (anywhere outside the premises) (DWER 2019). The predicted 24-hour GLC of $SO_3/H_2SO_4$ did not exceed the assessment criteria anywhere in the modelling domain. The 1-hour GLC for $SO_3/H_2SO_4$ were predicted to be below the assessment criteria (18ug/$m^3$) outside the premises boundary.

The predicted 1-hour GLC of $NH_3$ are expected to exceed the assessment criteria in the vicinity of the project site. Considering the spatial extent of the exceedance and noting there are no sensitive receptors in the vicinity of the premises, the delegated officer considers the risk of ammonia emissions to be low. Additionally, the highest predicted 1-hour GLC of ammonia at a sensitive receptor was 12ug/$m^3$ in the updated modelling; a decrease from the previous modelling that had a highest predicted 1-hour GLC of 54.2 ug/$m^3$ at a sensitive receptor. Based on this, the delegated officer considers that the risk of ammonia emissions remains the same and has not increased as a result of the proposed design modifications.

## Table 3: ERER emission source characteristics (ETA 2026)

| Parameter | Source | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **A1** | **A2** | **A3** | **A4** | **A5** | **A6** | **A7** | **A8** | **A9** | **A10** | **A11** | **A12** |
| | **Off-gas treatment system stack** | **Kiln burner stack A** | **Kiln burner stack B** | **Kiln burner stack C** | **Kiln burner stack D** | **Boiler 1 stack** | **Boiler 2 stack** | **Boiler 3 stack** | **Pr calciner – exhaust stack** | **Nd calciner – exhaust stack** | **NdPr calciner – exhaust stack** | **Dy calciner – exhaust stack** |
| Stack height (m agl) | 50 | **16.3** | **16.3** | **16.3** | **16.3** | 15.03 | 15.03 | 15.03 | **22.6** | **22.6** | **22.6** | **22.6** |
| Stack diameter (mm) | **800** | **389** | **389** | **389** | **389** | **580** | **580** | **580** | **356** | **711** | **711** | **356** |
| Temperature (°C) | **72.7** | 320 | 320 | 320 | 320 | **132** | **132** | **132** | 730 | 770 | **600** | **600** |
| Exit velocity (m/s) | 11.9 | **24.2** | **24.2** | **24.2** | **24.2** | 14.6 | 14.6 | 14.6 | **12** | **12** | **12** | **12** |
| **Emission rate (g/s)** | | | | | | | | | | | | |
| $NO_x$ ($NO_2$ equivalent) | - | **0.183** | **0.183** | **0.183** | **0.183** | **0.250** | **0.250** | **0.250** | **0.040** | **0.150** | **0.170** | **0.060** |
| $SO_2$ | 0.813 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.0002 | 0.001 | 0.001 | 0.0003 |
| $SO_3$ | 0.407 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.0002 | 0.001 | 0.001 | 0.0003 |
| $H_2SO_4$ | 0.407 | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.0002 | 0.001 | 0.001 | 0.0003 |
| Particulates | 0.203 | 0.010 | 0.010 | 0.010 | 0.010 | **0.028** | **0.028** | **0.028** | 0.002 | 0.008 | 0.009 | 0.004 |
| Ammonia | 26.0 | - | - | - | - | - | - | - | - | - | - | - |

Note: Bolded values are amendments in parameters from the revised modelling

(Table 3 continued)

| Parameter | Source | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **A13** | **A14** | **A15** | **A16** | **A17** | **A18** | **A19** | **A20** | **A21** | **A22** | **A23** | **A24** |
| | **Tb calciner – exhaust stack** | **SEG dryer – exhaust stack** | **HREY dryer – exhaust stack** | **Pr calciner – off gas stack** | **Nd calciner – off gas stack** | **NdPr calciner – off gas stack** | **Dy calciner – off gas stack** | **Tb calciner – off gas stack** | **SEG dryer – off gas stack** | **HREY dryer – off gas stack** | **Ammonia scrubber** | **CO2 absorber** |
| Stack height (m agl) | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **22.6** | **13.6** | **25.9** |
| Stack diameter (mm) | **356** | **356** | **711** | **356** | **324** | **324** | **256** | **356** | **356** | **407** | **600** | **456** |
| Temperature (°C) | **600** | 325 | 450 | **80** | **80** | **80** | **80** | **80** | **80** | **110** | **52.7** | **30** |
| Exit velocity (m/s) | **12** | **12** | **18.1** | **12** | **12** | **12** | **12** | **12** | **12** | **12** | 18.3 | **12** |
| **Emission rate (g/s)** | | | | | | | | | | | | |
| $NO_x$ ($NO_2$ equivalent) | **0.020** | **0.040** | **0.220** | - | - | - | - | - | - | - | **-** | **0.280** |
| $SO_2$ | 0.0001 | 0.0002 | 0.001 | - | - | - | - | - | - | - | - | - |
| $SO_3$ | 0.0001 | 0.0002 | 0.001 | - | - | - | - | - | - | - | **0.016** | **0.010** |
| $H_2SO_4$ | 0.0001 | 0.0002 | 0.0001 | - | - | - | - | - | - | - | **0.016** | **0.010** |
| Particulates | 0.001 | 0.002 | **0.012** | **0.002** | **0.009** | **0.011** | **0.004** | **0.001** | **0.009** | 0.031 | - | - |
| Ammonia | - | - | - | - | - | - | - | - | - | - | 0.031 | **0.026** |

Note: Bolded values are amendments in parameters from 2025 modelling

(Table 3 continued)

| Parameter | Source | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **A25** | **A26** | **A27** | **A28** | **A29** | **A30** | **A31** | **A32** | **A33** | **A34** | **A35** | **A36** | **A37** |
| | **RE concentrate delivery extraction system** | **Magnesia recovery tank 1 vent** | **Magnesia recovery tank 2 vent** | **Magnesia recovery tank 3 vent** | **Magnesia recovery tank 4 vent** | **Mg recovery thickener – Vent 1** | **Mg recovery thickener – Vent 2** | **Mg thickener U/F tank** | **Softening tank vent** | **Softening clarifier tank vent** | **ABC tank vent** | **Ammonia solution storage tank 1 vent** | **Ammonia solution storage tank 2 vent** |
| Stack height (m agl) | **4.1** | 10.3 | 10.3 | 10.3 | 10.3 | 11.4 | 11.4 | 18.4 | 8.4 | 8.2 | 8.7 | 9.0 | 9.0 |
| Stack diameter (mm) | **580** | 150 | 150 | 150 | 150 | 200 | 200 | 250 | 200 | 150 | 100 | 300 | 300 |
| Temperature (°C) | **25** | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Exit velocity (m/s) | 8 | 3.22 | 3.22 | 3.22 | 3.22 | 1.55 | 1.55 | 0.19 | 1.86 | 3.30 | 0.57 | 0.09 | 0.09 |
| **Emission rate (g/s)** | | | | | | | | | | | | | |
| $NO_x$ ($NO_2$ equivalent) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $SO_2$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $SO_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $H_2SO_4$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Particulates | 0.038 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ammonia | - | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0003 | 0.0003 | 1.389 | 0.0006 | 0.0006 | 0.500 | 0.444 | 0.444 |

Note: Bolded values are amendments in parameters from 2025 modelling

## 3.3 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020b) 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 works approval 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 works approval holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the works approval 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 works approval W6641/2022/1 that accompanies this amendment report authorises construction, commissioning and time-limited operations. The conditions in the revised works approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. Category 44: metal smelting or refining. A risk assessment for the operational phase has been included in this amendment report, however licence conditions will not be finalised until the department assesses the licence application.

## Table 4. Risk assessment of potential emissions and discharges from the premises during operation (including commissioning & time-limited operations)

| Risk Event | | | | | Risk rating[1] C = consequence L = likelihood | Works approval holder's controls sufficient? | Conditions[2] of works approval | Justification for additional regulatory controls/DWER comments |
|---|---|---|---|---|---|---|---|---|
| **Source/ Activities** | **Potential emission** | **Potential pathways and impact** | **Receptors** | **Works approval holder's controls** | | | | |
| **Operation (including commissioning and time-limited-operations)** | | | | | | | | |
| Operation of refinery plant infrastructure | Air emissions from stacks, scrubbers, vents, etc. ($NO_2$, $SO_2$, $SO_3$, $H_2SO_4$, $NH_3$ and particulates) | **Pathway:** Air/windborne pathway<br>**Impact:** Decline in air quality for surrounding receptors | Townsite of Eneabba approx. 7.3 km north of the refinery footprint<br>Civilians on Brand Highway approx. 4.2 km west of the refinery footprint | Refer to Section 3.1.1 | C = Minor<br>L = Unlikely<br>**Low risk** | Y | Condition 1 (Table 1): Design and construction requirements (Item 1 – ERER processing infrastructure & product finishing)<br>Condition 15 (Table 4): Commissioning requirements - monitoring of point source emissions to air<br>Condition 19 (Table 5): Time limited operations requirements (Item 3 & 4)<br>Condition 120 (Table 6): Time limited operations requirements – authorised emission points to air). | Revised air quality modelling of the proposed changes in air emissions indicated that predicted ground level concentrations remain below 10% of the assessment criteria and did not exceed any AGV at sensitive receptors. Based on this, the proposed changes to stack design/locations are not expected to increase the emissions risk profile. Conditions on works approval W6641/2022/1 regarding air emission points have been updated accordingly.<br>The works approval holder requested to remove stack monitoring associated with the Kiln Burners A-D on the basis that emissions from this source are below detection levels. It was determined that retaining requirements for stack testing during commissioning is appropriate as it provides a means to verify emission estimates used in the air quality modelling and confirm that emissions are below detection levels. Based on the outcomes of the air quality modelling, the risk of emissions to air has been determined to be low, and as such no further monitoring is proposed during time limited operations following the initial emissions validation testing. |

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

Note 2: Proposed works approval 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 |
|---|---|---|
| The Department of Energy and Economic Diversification (DEED) was advised of proposal on 17 February 2026. | No comments received. | N/A |
| Works approval holder was provided with draft amendment on 29 April 2026. | Refer to Schedule 1 for comments. | Refer to Schedule 1 for response. |

# 5. Conclusion

Based on the information in the application and this assessment, the delegated officer has determined that the amendment proposal does not alter the risk profile of the ERER on the basis of the following:

- The minor amendments in the coordinate locations of infrastructure will not change the distance to sensitive receptors.
- The controls for operation (including commissioning and time limited operations) of the ERER in the works approval remain.
- The revised modelling determined there were no exceedances of AGV predicted at the sensitive receptors for any modelled pollutant and GLCs remain below 10% of the assessment criteria.

The delegated officer has therefore determined that a revised works approval will be granted to reflect ERER design changes, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements. As discussed in Table 4, requirements to undertake monitoring during commissioning have been retained as these serve to verify emission estimates and validate the outcome of the risk assessment.

Additional amendment:

Following a review of the works approval conditions, the delegated officer has also elected to amend conditions of works approval which relate to the submission and implementation of an environmental commissioning plan. The delegated officer recognises that commissioning activities for premises of this nature can be complex, however, the existing conditions do not provide for the environmental commissioning plan to be updated to reflect potential variations to commissioning activities. To allow appropriate flexibility during commissioning, the conditions have been amended to permit the submission of a revised commissioning plan and to require the implementation of any submitted revised versions. The intent of this change is not to authorise significant changes to plant design or commissioning activities but allow flexibility for minor adjustments that may be needed to support ongoing implementation.

## 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 works approval as part of the amendment process.

**Table 6: Summary of works approval amendments**

| Condition no. | Proposed amendments |
|---|---|
| Condition 1<br>Table 1: Design and construction requirements | Removal of 'magnesia recovery circuit' in a condition from Item 1: ERER processing infrastructure.<br>Added vent requirements to Item 1: ERER processing infrastructure.<br>Amended reference of 'acid recovery tank' to 'acid recovery infrastructure' in Item 1.<br>Amended reference to 'monitoring equipment' to 'sampling points' in Item 1.<br>Amended reference to 'EP2' to 'the Concentrator' in Item 1.<br>Amended Item 2 condition regarding pipeline installation location. |
| Condition 6 | Amended row numbers in condition 6(a) and 6(b) to align with updates to Table 1. |
| Condition 11 | New condition added allowing the submission of a revised environmental commissioning plan. |
| Condition 13 (previously condition 12) | Condition modified to allow environmental commissioning to occur in accordance with the latest version of the environmental commissioning plan. |
| Condition 19 (previously 18)<br>Table 5: Infrastructure and equipment requirements during time limited operations | Added '(A16 - A23 and A25)' into Item 3: ERER processing infrastructure row for clarity.<br>Amended reference of 'acid recovery tank' to 'acid recovery infrastructure' in Item 1.<br>Amended reference to 'EP2' to 'the Concentrator' in Item . |
| Condition 20 (previously 19)<br>Table 6: Authorised emission points to air | Amended the minimum stack heights and maximum stack internal diameters of the emission points.<br>Removed Ammonia scrubber 2. |
| Figure 3: Map of air emission points | Updated Figure 3 with new emission point locations and new vents. |
| Figure 4: General site layout of the premises | Updated Figure 4 with current general site layout. |

# References


1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Environment (DoE) 2006, *Air Quality Modelling Guidance Notes*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Air emissions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Environmental Siting*, Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2020b, *Guideline: Risk Assessments*, Perth, Western Australia.
6. Environmental Technologies & Analytics (ETA) 2026, *Eneabba Rare Earth Refinery – Air quality modelling assessment update*, Perth, Western Australia.
7. Iluka Rare Earths Pty Ltd 2026, *Eneabba Rare Earths Refinery - Application to amend works approval W6641/2022/1, Attachment 3B: supporting information*, Perth, Western Australia.
8. Iluka Rare Earths Pty Ltd 2026, *Application form – works approval amendment*, Perth, Western Australia.

# Appendix 1: Summary of works approval holder's comments on risk assessment and draft conditions

| Condition | Summary of works approval holder's comment | Department's response |
|---|---|---|
| Works approval comments | | |
| Table 1: Design and construction requirements (Item 1) | Works approval holder has requested to amend reference of 'acid recovery tank' to 'acid recovery infrastructure' to accurately align with the acid mixing system components. | Accepted and amended. |
| Table 1: Design and construction requirements (Item 1) | Works approval holder has requested to amend reference of 'monitoring equipment' to 'sampling points' to align with AS4323.1 compliance. | Accepted and amended. |
| Table 1: Design and construction requirements (Item 1) | Works approval holder has requested to amend reference of 'EP2' to 'the Concentrator' as EP2 was the project name and the Concentrator is the processing plant. | Accepted and amended. |
| Table 1: Design and construction requirements (Item 2) | Works approval holder has requested to amend "all pipelines within the Refinery Plant Area must be located on hardstand areas" to "all pipelines within the Refinery Plant Area must be installed either within pipe racks, buried underground, or laid at ground level within designated hardstand areas" as the proposed change will align with requirements of the *Dangerous Goods Safety Act 2004* and achieves the intent of the pipelines being located to avoid interaction with site vehicles or machinery. | The delegated officer has determined the condition will be amended as the proposed change will not alter the risk profile of the premises. |
| Table 5: Infrastructure and equipment requirements during time limited operations (Item 1) | Works approval holder has requested to amend reference of 'acid recovery tank' to 'acid recovery infrastructure' to accurately align with the acid mixing system components. | Accepted and amended. |
| Table 5: Infrastructure and equipment requirements during time limited operations (Item 2) | Works approval holder has requested to amend reference of 'EP2' to 'the Concentrator' as EP2 was the project name and the Concentrator is the processing plant. | Accepted and amended. |

| Condition | Summary of works approval holder's comment | Department's response |
|---|---|---|
| Table 5: Infrastructure and equipment requirements during time limited operations (Item 7) | Works approval holder has requested to replace conditions "slurry nominal beach slope of approximately 1V:200H" and "tailings discharged sub-aerially into the facility in thin discrete layers via a single spigot that is regularly repositioned to maximise tailings consolidation" with "tailings deposited into the facility in accordance with the deposition methods outlined in the final TSF Operating Manual". The works approval holder states a beach slope will not be formed during TLO activities but instead near the final filling of the TSF and that the final tailings deposition method will be defined in the TSF Operating Manual. | The delegated officer has determined the conditions will not be amended as this request is out of the assessment scope and will require a more detailed assessment, including a review of the final TSF Operating Manual. |
| Condition 23 (i) | Works approval holder requests the removal of Condition 23 (i) "a review of tailing deposition performance to achieve targeted beach slope' as a beach slope is not expected to be creating during TLO. | The delegated officer has determined the conditions will not be amended as this request is out of the assessment scope and will require a more detailed assessment, including a review of the final TSF Operating Manual. |
| Table 8:Definitions | Works approval holder requests the removal of condition EP2 from Table 8 to align with changes in the works approval. | Accepted and amended. |
| Figure 4: General site layout of the premises | Works approval holder requested Figure 4 is updated with a figure displaying current general site layout and alignment of pipelines. | Updated figure accepted and added. |
| Amendment report comments | | |
| Table 1: Works approval holder's controls | Works approval holder requested to amend "off-gas treatment stack equipped with monitoring equipment and designed to meet emission requirements" with "off-gas treatment stack equipped with sampling points and designed to meet emission requirements" to align with works approval changes. | Accepted and amended. |
| Table 1: Works approval holder's controls | Works approval holder requested to amend "vented air from ERER processing infrastructure to be filtered and cleaned prior to release" to "vented air must be filtered or cleaned via scrubber or baghouse filter prior to release at the emission points (A16-A23 and A25) detailed in Table 6" to align with Table 5 text of the works approval. | Accepted and amended to proposed text excluding '(A16-A23 and A25) detailed in Table 6' for the purpose of Table 1 remaining concise. |
| Table 6: Summary of works approval amendments | Works approval holder requested to amend "added '(A1-A25)' into Item 3: ERER processing infrastructure row for clarity" to Added '(A16 - A23 and A25)' into Item 3: ERER processing infrastructure row for clarity' to align with Table 5 of the works approval. | Accepted and amended. |