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** | W6567/2021/1 |
| **Works Approval Holder** | Lynas Kalgoorlie Pty Ltd |
| **ACN** | 053 160 302 |
| **File Number** | DER2020/000366 |
| **Premises** | Lynas Kalgoorlie Rare Earths Processing Facility<br>70 Johns Road<br>YILKARI WA 6430<br><br>Legal description –<br>General Purpose Lease G26/169<br>As defined by the Premises maps attached to the Revised Works Approval |
| **Date of Report** | 17 September 2024 |
| **Decision** | Revised licence granted |

Michael Greenslade Digitally signed by Michael Greenslade
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**MANAGER, PROCESS INDUSTRIES**
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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# 1. Decision summary

Works Approval W6567/2021/1 is held by Lynas Kalgoorlie Pty Ltd (Works Approval Holder) for the Lynas Kalgoorlie Rare Earths Processing Facility (the Premises), located at 70 Johns Road, Yilkari, General Purpose Lease G26/169.

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 W6567/2021/1 has been granted.

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

# 2. Scope of assessment

## 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

## 2.2 Application summary

On 27 May 2024, the Works Approval Holder submitted an application to the department to amend Works Approval W6567/2021/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The Works Approval Holder is proposing to use treated effluent sourced from the City of Kalgoorlie-Boulder (the City) for use in dust suppression at the Lynas Kalgoorlie Rare Earths Processing Facility for the following applications:

- Dust suppression via water trailers;
- Industrial use in the processing plant with the low potential for human exposure;
- Firefighting and hose down; and
- Filter cloth wash and filter chute sprays.

Approval is also sought to extend the duration of the Works Approval for an additional two years until 7 February 2027. This proposal is due to Lynas' Malaysia operating license being extended for a period of 3 years. There has been a delayed operational requirement for gypsum storage facility – Stage 2. As a result, construction of this infrastructure item has been postponed. It is expected that this item of infrastructure will require a minimum of 12 months to construct.

This amendment is limited only to the changes listed in Table 1.

**Table 1: Proposed design or throughput capacity changes**

| Category | Current design throughput capacity | Proposed design throughput capacity | Description of proposed amendment |
|---|---|---|---|
| 44 | 162,000 tonnes (of RE concentrate, dry tonnes) per annual period, to produce 68,000 tonnes (of RE carbonate, dry tonnes) per annual period. | N/A | No changes proposed. |
| 54 | N/A | 400 $m^3$/day | Addition of new category on works approval to allow for dust suppression activities on site using treated effluent. |

### 2.2.1 Treated effluent supply

This Works Approval amendment includes the addition of Category 54 Sewage Facility of the Works Approval to allow the use of treated wastewater at the Premises. It is noted that the Works Approval Holder has already constructed the infrastructure to support the acceptance and distribution of the treated effluent.

The treated wastewater is sourced from the City is treated effluent (recycled sewage) produced at the South Boulder Wastewater Treatment Plant (SBWWTP) under licence L8560/2011/2. The SBWWTP accepts sewage from the township of Kalgoorlie-Boulder via reticulated sewage system; Controlled Waste categories K130 (sewage waste from the reticulated sewage system); and K210 (septage wastes) by road transport and condensate from adjacent premises. Recent reporting data suggests that the treated effluent (as treated and managed under the requirements of licence L8560/2011/2) meets standard effluent requirements.

Effluent is treated at the SBWWTP and then directed to several holding ponds and tanks located within Kalgoorlie-Boulder. One of these holding tanks is located approximately 4.6 km from the Premises, with a pipeline running from the tank and along Western Road where it then enters the prescribed premises boundary in the northeast corner. Treated effluent is then directed to Lynas' buffer tank as shown in Figure 1. The pipeline and tank was installed by the City and is also maintained by the City.

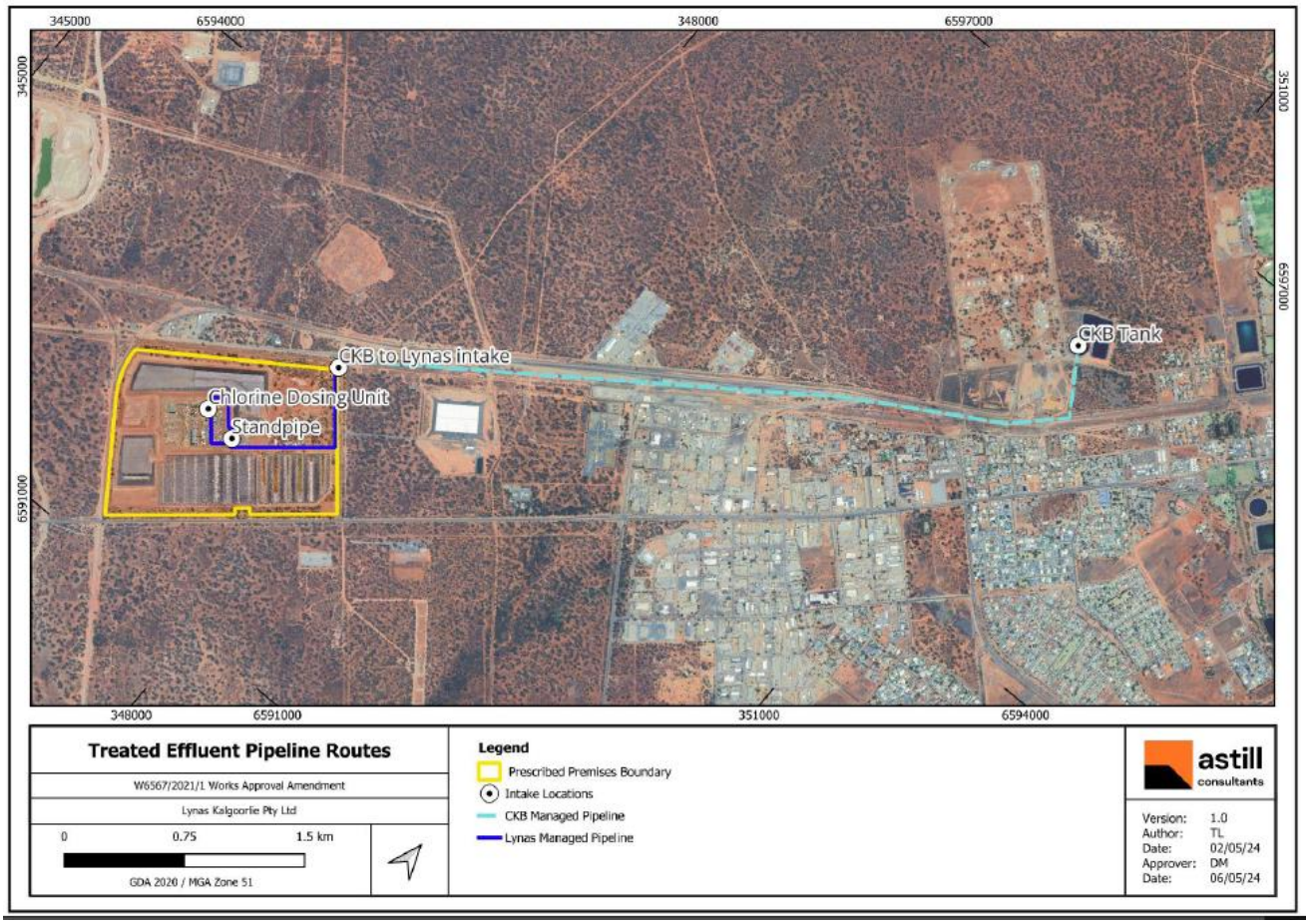


**Figure 1: Treated Effluent pipeline routes**

### 2.2.2 Onsite water treatment process

Treated effluent is further treated at the Premises via chlorine disinfection in a 20ML buffer tank which distributes the water.

The main components of Lynas' water treatment circuit includes the following process units:

- Connection pipe from the City's treated recycled water to Lynas' 20ML buffer tank;
- Chlorine disinfection unit;
- Recycled loop, free chlorine injection point and free chlorine analyser;
- Standpipe will have a diesel generator; and
- Distribution to the plant.

The residence time in the buffer tank will be 4 days minimum. Due to the presence of residual organics and potentially ammonia in the water, sufficient chlorine time is necessary to reach the break point (the point at which the chlorine demand is totally satisfied) and the chlorine has reacted with all reducing agents, organics and ammonia in the water. Figure 2 and Figure 3 show the chlorine and dosing monitoring schematic.

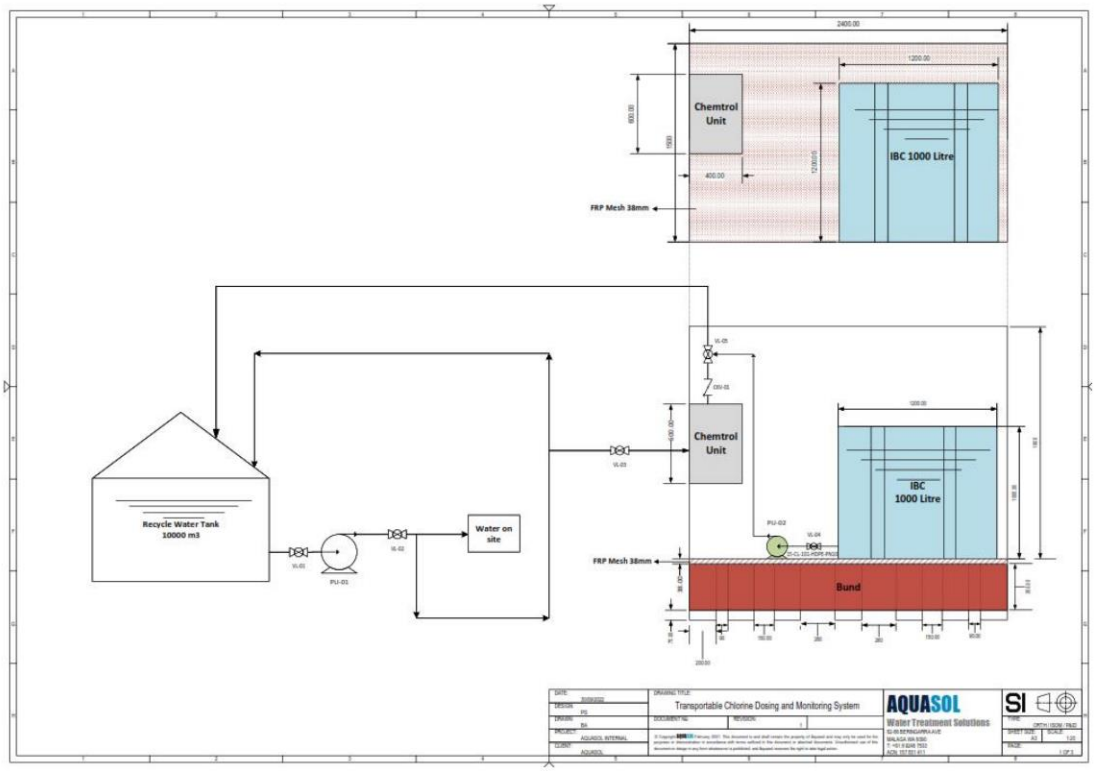


**Figure 2: Chlorine dosing and monitoring schematic – part 1**

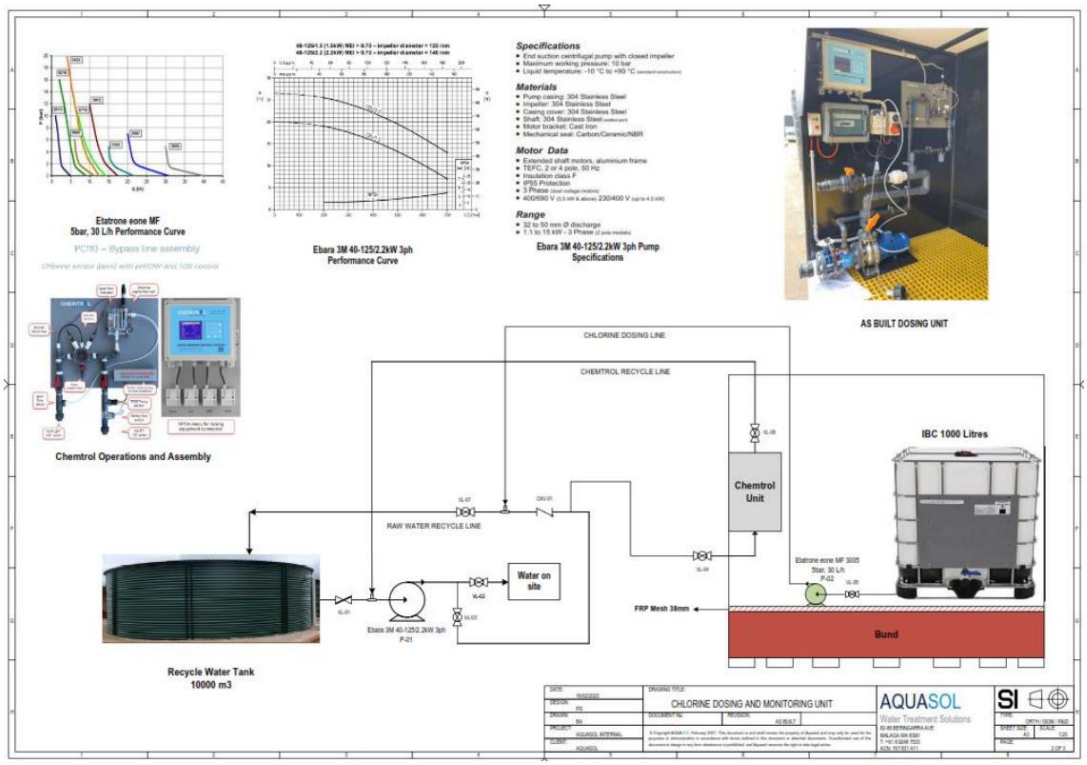


**Figure 3: Chlorine dosing and monitoring schematic – part 2**

A schematic representing the main components of the recycled water network with sample points in shown in Figure 4.

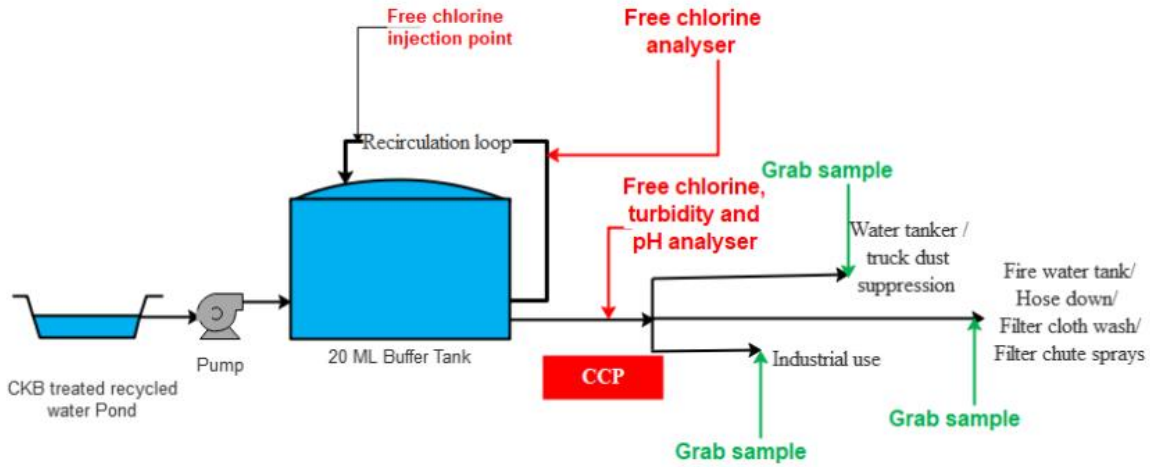


**Figure 4: Recycled water network**

The user agreement between the City and Lynas includes that the recycled water must meet the following specifications as shown in Table 2 below.

**Table 2: Recycled water specifications supply by City of Kalgoorlie-Boulder**

| Schedule 3 - Recycled Water Characteristic **Parameter** | **Compliance Value** | **Monitoring Frequency** |
|---|---|---|
| E coli | < 1000 cfu or MPN/100ml | Monthly |
| SS | 30 mg/L | Monthly |
| pH | 6 5-8.5 | Monthly |

## 2.3 Part IV of the EP Act

The Kalgoorlie Rare Earths Processing Facility has been assessed under Part IV of the EP Act by the Environmental Protection Authority (EPA).

EPA assessment report 1712 was published on 20 October 2021 (Referral information with updated referral document and additional information). A total of 3 appeals were subsequently lodged in objection to the contents and recommendations of the report. The key issues relating to the assessment of hazardous chemicals and radioactive material and consultation and inadequate regulation of these aspects.

The Minister allowed the appeal in part in December 2021, to the extent of ensuring that storage of low level radioactive iron phosphate waste at Lot 500 is temporary, and requiring the EPA to provide further advice about aspects of the proposal that it considered would be regulated by other authorities.

The project was approved by the Minister on 1 February 2022 through the issuing of Ministerial Statement 1181.

The Delegated Officer notes that there are no specific conditions listed within MS 1181 that

directly relate to the management or control of Part V prescribed activity emissions and discharges. Therefore, all emissions and discharges related to the proposed changes to Part V prescribed activities will be considered and risk assessed under this works approval amendment application.

## 2.4 Recycled Water Scheme Approvals

The treatment of effluent for the re-use for irrigation is regulated by the Department of Health (DoH) under the *Health Act 1911* via a Recycled Water Scheme Approval. Approval B28/LY000 was issued by DoH of 24 November 2023 to the works approval holder stipulates the following approved treatment uses at the Premises:

- Dust suppression via water carting;
- Firefighting and hose down;
- Filter cloth wash and filter chute sprays; and
- Industrial use (i.e. processing).

The recycled water supply agreement in place between Lynas and the City shall be kept up to date and revised in accordance with the condition of approval under B28/LY000.

# 3. Environmental siting

The premises is located approximately 8 km west of the Kalgoorlie central business district, within an emerging industrial area. The site is subject to General Purpose Lease G26/169, which is 134.7 ha in total area and comprises all of Lot 500 on Plan 63577, Great Eastern Highway, which was formerly vacant crown land prior to being purchased by Lynas.

The local area is characterised as an extensive plateau of low relief of the granitic rocks and greenstone on the Yilgarn Craton. It is considered to have a semi-desert Mediterranean climate with 9 to 11 dry months; mean annual rainfall is in the 250-300 mm range, with most tending to fall in winter. There are no permanent rivers; intermittent streamflow occurs only after major rainfall and the water runs into large claypans or playa lakes. Groundwater is saline to hypersaline, and occurs in the bedrock, palaeochannels and in overlying alluvial, colluvial and calcrete deposits. There is no fresh groundwater in the region – limited areas of brackish groundwater can occur in the upper reaches of some catchments.

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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.

Figure 5 and Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

**Table 3: Sensitive human and environmental receptors and distance from prescribed activity**

| Human receptors | Distance from prescribed activity |
|---|---|
| Residential Premises | Nearest residence approximately 115 m to the north of the Gypsum Storage Facility and 500 m to the northeast of the Process Plant.<br>Nearest town (Kalgoorlie) approximately 4 km from the eastern boundary of the premises |

| | |
|---|---|
| Industrial receptors | Industrial receptors approximately 1.9km to the east and 1.5km to the north |
| **Environmental receptors** | **Distance from prescribed activity** |
| Specified Ecosystems | N/A The nearest threatened/priority flora and/or fauna is located approximately 4km from the premises boundary. |
| Groundwater | Depth to groundwater at the site varies between 32 to 36 mbgl.<br>Saline to hypersaline groundwater – TDS at monitoring bores onsite range between 30,200 and 52,400 (Lynas, 2020)<br>Local groundwater flow is southwest towards the Hannan palaeodrainage and associated playa lakes 6.5 km southwest of the premises. |
| TECs/PECs | N/A no Threatened or Priority Ecological Communities (TECs or PECs) within 30km of the premises. |
| Remnant native vegetation | Directly outside the prescribed premises and outside of current clearing permit. |


**Figure 5: Distance to sensitive receptors**

## 3.1 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 Table 4. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Works Approval Holder has proposed mitigation measures/controls (as detailed in Table 4), 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 W6567/2021/1 that accompanies this Amendment Report authorises construction 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. sewage facility activities. 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 construction, commissioning and operation

| **Risk Event** | | | | | **Risk rating**<br>C = consequence<br>L = likelihood | **Applicant controls sufficient?** | **Conditions of works approval** | **Justification for additional regulatory controls** |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emissions** | **Potential pathways and impact** | **Receptors** | **Applicant controls** | | | | |
| **Operation** | | | | | | | | |
| Lynas managed pipeline rupture/spill | Treated effluent | **Pathway:** Direct discharge to land and infiltration to groundwater<br><br>**Impact:** contamination of soil from water | Groundwater (non-potable use)<br><br>Remnant vegetation | All pipelines have been constructed and compliance certified prior to commissioning.<br><br>Regular inspections of pipelines.<br><br>Shut off valve installed. | C = Minor<br>L = Unlikely<br>**Low Risk** | Y | Condition 20 | The delegated officer considers that the works approval holders' commitments related to managing potential rupture /leaks from the site is adequate to manage the risks.<br><br>The works approval holder's commitments have been conditioned. |
| Buffer tank spill | | | | All tank infrastructure constructed, and compliance certified prior to commissioning. | C = Minor<br>L = Unlikely<br>**Low Risk** | Y | Condition 20 | The delegated officer considers that the works approval holder controls regarding the construction and certification of storage tanks and associated pipework are generally suitable. The delegated officer considers that the risks associated with the storage of treated effluent can be adequately managed through the works approval holder's commitments, that have been conditioned on the works approval.<br><br>To ensure appropriate response to accidental spills and releases, an additional condition has been included on the works approval for the management of spills / leaks on site for the buffer tank. |

| Risk Event | | | | | Risk rating<br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions of works approval | Justification for additional regulatory controls |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emissions** | **Potential pathways and impact** | **Receptors** | **Applicant controls** | | | | |
| Use of treated effluent for dust suppression | Treated effluent | **Pathway:** Direct discharge to land and infiltration to groundwater<br><br>**Impact:** elevated nutrients /contamination of soil from water | Groundwater (non-potable use)<br><br>Remnant vegetation | Use of dribble-bar for dust suppression activities on roads.<br><br>Only treated effluent received and used for dust suppression purposes.<br><br>Recycled Water Scheme Approval between Lynas and the City of Kalgoorlie<br><br>Regular sampling and monitoring of treated effluent to ensure quality<br><br>A chlorine disinfection unit has been installed which is a Chemtrol PC110x designed for the treatment of wastewater for industrial and commercial applications. The unit is regularly maintained, serviced and results sampled to ensure it is functioning optimally.<br><br>Wind direction assessed prior to using water cart cannons/hoses when applying dust suppression to stockpiles and vegetation buffer to avoid wind dispersion to sensitive receptors.<br><br>Control sample points have been selected prior to the water being treated by the chlorine dosing plant and post-dosing to ensure chlorination is achieving the desired results. Critical control point measurements, including limits for the plant have been set for free chlorine residual and pH that will be tested with in online analyser.<br><br>A 2 m high bund wall of topsoil exists around the northeast perimeter of the | C = Minor<br>L = Unlikely<br>**Low Risk** | N | **Condition 20** | The delegated officer considers that the risk of treated effluent impacting groundwater or remnant vegetation is low, noting the controls proposed, the depth to groundwater and limited vegetation within the premises, and that the discharges of treated effluent can be adequately managed. The works approval holder's commitments have been conditioned on the works approval. To ensure the use of this treated effluent is managed appropriately, the delegated has determined that additional controls are to be included in the works approval, specifically to ensure that this water is discharged and used in a manner that prevents pooling or ponding, erosion or scouring or overspray leaving the premises. |
| | Odour | **Pathway:** Air/windborne pathway<br><br>**Impact:** Adverse impacts to human receptors | Human receptors | | C = Moderate<br>L = Unlikely<br>**Medium Risk** | *Y* | Condition 20<br><br>. | The delegated officer considers that the works approval holders' commitments related to managing potential odour emissions from the site are suitable and have been conditioned in the works approval where appropriate.<br><br>The exposure risk (level of human contact) for the use of treated effluent for dust suppression, industrial use and fire fighting is considered 'medium' in accordance with the Guidelines for non-potable uses of Recycled Water in Western Australia and these effluent compliant values |

| Risk Event | | | | | Risk rating<br>C = consequence<br>L = likelihood | Applicant controls sufficient? | Conditions of works approval | Justification for additional regulatory controls |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emissions** | **Potential pathways and impact** | **Receptors** | **Applicant controls** | | | | |
| | | | | site providing a screen towards nearby sensitive receptors.<br>The treated effluent will be treated at the WWTP to meet the Guidelines for non-potable uses of Recycled Water in Western Australia. | | | | have been conditioned in the works approval. |

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

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 |
|---|---|---|
| City of Kalgoorlie-Boulder (Local Government Authority) advised of proposal 26 June 2024 | The City of Kalgoorlie-Boulder replied on 8 July 2024 advising that in regard to the Recycled Water Supply Agreement, the City has a long term Water Supply Agreement with Lynas that is currently in place.<br>No further comments were provided on the proposed amendment. | Noted. |
| Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advised of proposal 26 June 2024 | DEMIRS replied on 28 June 2024 advising that the Works Approval Amendment has been reviewed and the activities proposed in this amendment are consistent with the approved Mining Proposal REG ID: 101853.<br>No further comments were provided on the proposed amendment. | Noted |
| Other Stakeholders:<br>Residential receptors were advised of the proposal on 26 June 2024. | The Department was contacted by one resident on 28 June 2024 and provided the following feedback in regard to this proposal:<br>1. General concerns regarding the City of Kalgoorlie-Boulder.<br>2. Concerns regarding Lynas acquiring / conducting works on other lots (P26/4548; General purpose lease G26/173; and P26/4546.<br>3. Concerns regarding the movement of waste and the water dam associated with the other Lynas premises / activities.<br>4. Other concerns not directly related to the scope of the amendment. | The Department appreciates the feedback in regard to the general concerns that were raised and acknowledges all of the feedback provided. In this case however, the concerns raised were outside of the scope of the works approval amendment assessment. |
| Works Approval Holder was provided with draft amendment on 5 September 2024 | Refer to Appendix 1 | Refer to Appendix 1 |

# 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Works Approval will be granted, subject to conditions commensurate with the

determined controls and necessary for administration and reporting requirements.

The delegated officer considers that the request to extend the duration of the works approval is acceptable and has extended the duration to 2027. Existing controls and commitments regarding the construction, commissioning and time limited operation of the facility remain the same.

## 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 |
|---|---|
| Works Approval Instrument page | Amendment to the duration of the works approval until 7 February 2027 |
| Works Approval Instrument page | Addition of Category 54 to the works approval. |
| Works Approval history | Inclusion of this amendment to the works approval history. |
| Condition 20 | Additional condition included on the works approval for the acceptance of treated effluent from the South Boulder Wastewater Treatment Plant, onsite treated effluent storage infrastructure and re-use requirements. |
| Condition 28 | Amendment to include details on the volume of treated effluent accepted onto and discharged within the premises. |
| Definitions | The following definitions have been included on the works approval - cfu or MPN/100mL and *E. coli.* |

# 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. Guidelines for the non-potable uses of recycled water in Western Australia, Department of Health

# 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 |
|---|---|---|
| - | Updates to Registered Business Address | This registered business address was confirmed on the ASIC website and has been updated as requested. |
| - | Prescribed Premises Category Description table:<br>Category 85: Sewage facility assessed production / design capacity of 95$m^3$day.<br>On review of the project's dust suppression volume requirements, it has been identified there could be a need beyond the 95kL/day limit to meet dust management controls and obligations.<br>Lynas propose that 400kL (400$m^3$/day) could be a sufficient volume to ensure fugitive dust emissions are adequately suppressed to meet dust management obligations and respectfully request a change to the assessed production / design capacity and / or category permissible within this application. No new infrastructure is required to assess the increased water volumes beyond 95kL/day for use in dust suppression – a standpipe fitted with flowmeter would be accessed on a more regular basis throughout the day. | The prescribed premises category has been amended to Category 54 Sewage Facility to be inline with the requested increase of throughput from 95kL/day to 400kL/day.<br>Under the Environmental Protection Regulations 1997, the previously requested category 85 has a production or design capacity no more than 100$m^3$/day, therefore the Category has been amended to Category 54 Sewage facility with a design capacity of 100$m^3$/day or more.<br>The proposed changes are not considered likely to change the previous risk assessment given there is no change to the proposed infrastructure or treatment and the controls and conditions currently in place will be sufficient in managing potential risks of treated effluent being accepted and used onsite. |
| 20<br>(Table 6) | a) Table 6: Treated effluent re-use requirements – suggested correction to typographical error.<br>Lynas have limited operational control over water quality that is accepted onto site. Lynas have commercial water supply agreement with the City of Kalgoorlie-Boulder (CKB) who are accountable for supplying water quality advice in accordance with the commercial agreement and in accordance with the CKB's approvals and licence. Lynas has assurance from CKB that the City will use its best endeavours to provide treated water to the Rare Earth Processing Facility according to specifications within Condition 1(b) of Table 6. Should water be supplied to Lynas outside of the water quality outlined in 1(b) despite CKB's best endeavours, Lynas will record this as an environmental event for reporting within the Environmental Commissioning Report provided to DWER. | a) Table 6: 1 (b) (ii) amended accordingly<br>b) The Department acknowledges the limited operational control that the applicant has of the treated effluent quality prior to it being accepted onsite. The condition remains on the works approval and any exceedances can be investigated as necessary. |

| Condition | Summary of Works Approval Holder's comment | Department's response |
|---|---|---|
| | Secondary treatment via Lynas' chlorine disinfection unit improves the water quality for uses described in item 2(a) of Table 6. Lynas does not intend to use treated water supplied by CKB for activities listed in 2(b), without first performing secondary treatment onsite. | |
| 20<br>(Table 6) | Table 6: Treated effluent re-use requirements – suggested correction to wording | Table 6 1. (e) amended to correct unintentional wording error. |
| 20<br>(Table 6) | Table 6: Treated effluent re-use requirements.<br>To provide clarity for acceptable uses of treated water on site, Lynas respectfully proposes that construction activities are also listed within the condition.<br>- Moisture conditioning of construction materials in order to achieve minimum compaction requirements at the design moisture content in accordance with geotechnical specifications.<br>Treated water is proposed to be used in the construction of Kieserite Pond 1, Stage 2 Gypsum and establishment of suitable foundations of roads within the process plant prior to sealing. | Table 6: 2 (a) (v) has been amended to allow for the additional use of treated effluent as requested. This activity is not considered to change the existing risk assessment associated with the use of treated effluent on site. |
| 20<br>(Table 6) | Table 6: Treated effluent re-use requirements.<br>Lynas propose to control any fugitive dust emissions from stockpiled material including but not limited to iron phosphate (IP) dry stacked within the Iron Phosphate Byproduct Storage Facility (BSF) via water cart. Given the iron phosphate is stored within an engineered containment facility, Lynas understands this activity (whereby dust suppression via water cart within the IP BSF) is not considered a discharge to land, rather discharge to an engineered containment facility.<br>To ensure clarify, Lynas respectfully propose the following amendment to 2(b) to read:<br>"Treated effluent discharged for dust suppression outside engineered containment infrastructure must not exceed 95kL/day". | Table 6: 2. (b) has been amended to specify that treated effluent for dust suppression must not exceed 95kL/day outside an engineered containment infrastructure. This is unlikely to impact the risk of treated effluent use on site given that the water will be within a contained infrastructure. |

# Appendix 2: Application validation summary

| SECTION 1: APPLICATION SUMMARY | | | |
|---|---|---|---|
| **Application type** | | | |
| Amendment to works approval | ☒ | Current works approval number: | W6567/2021/1 |
| Date application received | | 27 May 2024 | |
| **Applicant and Premises details** | | | |
| Applicant name/s (full legal name/s) | | Lynas Kalgoorlie Pty Ltd (053 160 302) | |
| Premises name | | Lynas Kalgoorlie Rare Earths Processing Facility (REPF) | |
| Premises location | | General Purpose Lease G 29/169<br>70 Johns Road, Yilkari 6340 | |
| Local Government Authority | | City of Kalgoorlie-Boulder | |
| **Application documents** | | | |
| HPCM file reference number: | | DER2021/000366 | |
| Key application documents (additional to application form): | | Supporting documents (incl):<br>• *Attachment 2: premises map*<br>• *Attachment 3B: proposed activities*<br>• *Attachment 5: Other approvals and Consultation Documentation*<br>• *Attachment 6A: Emissions, Discharges and Waste*<br>• *Attachment 7: Siting and Location*. | |
| **Scope of application/assessment** | | | |
| Summary of proposed activities or changes to existing operations. | | Works approval amendment:<br>• Use of treated effluent for use in dust suppression at the Lynas Kalgoorlie Rare Earth Processing Facility for following applications:<br>  ○ Dust suppression via water trailers;<br>  ○ Industrial use in the processing plant with the low potential for human exposure;<br>  ○ Firefighting and hose down; and<br>  ○ Filter cloth wash and filter chute sprays.<br>• Dust suppression activities utilising treated effluent sourced from City of Kalgoorlie-Boulder;<br>• Extend the duration of the works approval for additional two years until 7 February 2027.<br>20ML buffer tank<br>Process:<br>1. South Boulder Kalgoorlie WWTP (L8560/2011/1) operated by CBK;<br>2. Treated effluent from CKB tank (approximately 4.6km) with CKB operated pipeline running along Western Road to prescribed premises (at northeast corner);<br>3. Lyna's pipeline (within prescribed premises) to connect with CKB pipeline<br>4. 20 ML buffer tank will involve additional chlorine disinfection – Lynas advised a minimum 4 days in the tank due to presence of residual organics and potential ammonia in water;<br>Components:<br>• Connection pipe from CKB main pipeline to 20 ML Buffer tank;<br>• Chlorine disinfection unit;<br>• Recycled loop, free chlorine injection point and free chlorine analyser; | |

| | |
|---|---|
| | • Standpipe will have a diesel generator; and<br>• Distribution to the plant. |

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

**Table 1: Prescribed premises categories**

| Prescribed premises category and description | Proposed / Assessed production or design capacity | Proposed changes to the production or design capacity (amendments only) |
|---|---|---|
| Category 44: metal smelting or refining | **Assessed:** 162,000 tonnes (of RE concentrate, dry tonnes) per annual period<br>68,000 tonnes (of RE carbonate, dry tonnes) per annual period | N/A |
| Category 85: sewage facility to allow for treated effluent (recycled sewage) to be discharged onto land for dust suppression purposes. | **Proposed:** 95 kL($m^3$) per day treated effluent used for dust suppression | New addition |

**Legislative context and other approvals**

| | | |
|---|---|---|
| Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal? | Yes ☒ No ☐ | Managed under Part V ☒<br>Assessed under Part IV ☒<br>*Note: no referring scope of this amendment* |
| Does the applicant hold any existing Part IV Ministerial Statements relevant to the application? | Yes ☒ No ☐ | Ministerial statement No: 1181<br>EPA Report No: 1712<br>Assessment No: 2269 |
| Has the proposal been referred and/or assessed under the EPBC Act? | Yes ☒ No ☐ | Reference No: 2020/8719 – determined not to be a controlled action |
| Has the applicant demonstrated occupancy (proof of occupier status)? | Yes ☒ No ☐ | Mining lease / tenement ☒ Expiry:<br>9/10/2041 |
| Has the applicant obtained all relevant planning approvals? | Yes ☐ No ☐ N/A ☒ | *Mining Act 1978* applies. |
| Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal? | Yes ☒ No ☐ | CPS No: 8322/1<br>No additional clearing required for this amendment. |
| Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal? | Yes ☐ No ☒ | N/A – no clearing is proposed. |
| Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal? | Yes ☐ No ☒ | Licence / permit not required. |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)? | Yes ☒ No ☐ | Name: Goldfields Groundwater Area<br>Type: Proclaimed Groundwater Area<br>Has Regulatory Services (Water) been consulted?<br>Yes ☐ No ☐ N/A ☒<br>Regional office: Goldfields |
| Is the Premises situated in a Public Drinking Water Source Area (PDWSA)? | Yes ☐ No ☒ | Name: N/A<br>Priority: N/A<br>Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)?<br>Yes ☐ No ☐ N/A ☒ |

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| Is the Premises subject to any other Acts or subsidiary regulations | Yes ☒ No ☐ | *Mining Act 1978*<br>*Dangerous Goods Safety Act 20024*<br>*Environmental Protection (Controlled Waste) Regulations 2004* |
| Is the Premises within an Environmental Protection Policy (EPP) Area? | Yes ☒ No ☐ | *Environmental Protection (Goldfields Residential Areas Sulfur Dioxide) Policy and Regulations 2003* |
| Is the Premises subject to any EPP requirements? | Yes ☒ No ☒ | Condition for WA/L under s.4(2) of the EPP:<br>*The occupier must ensure that the operations on the premises are conducted in such a way as neither to cause, nor to contribute to causing, the maximum sulfur dioxide concentration permitted in the ambient air of a protected area under clause 6 of the policy to be exceeded at any place within the area.*<br>**Not relevant to the scope of this amendment.** |
| Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*? | Yes ☐ No ☒ | |