



**Part 1: Application type**

**INSTRUCTIONS:**

- Completion of this form is a statutory requirement under s.54(1)(a) of the *Environmental Protection Act 1986 (WA) (EP Act)* for works approval applications; s.57(1)(a) for licence and licence renewal applications; s.59B(1)(a) for applications for an amendment; and under r.5B(2)(a) of the *Environmental Protection Regulations 1987 (WA) (EP Regulations)* for applications for registration of premises.
- The instructions set out in this application form are general in nature.
- A reference to 'you' in these instructions is a reference to the applicant.
- The information provided to you by the Department of Water and Environmental Regulation (DWER) in relation to making applications does not constitute legal advice. DWER recommends that you obtain independent legal advice.
- Applicants seeking further information relating to requirements under the EP Act and/or EP Regulations are directed to the Parliamentary Counsel's Office website ([www.legislation.wa.gov.au](http://www.legislation.wa.gov.au)). Schedule 1 of the EP Regulations contains the categories of prescribed premises.
- For prescribed premises where activities fall within more than one category, ALL applicable categories must be identified. This applies for existing prescribed premises seeking renewal or amendment, as well as new prescribed premises.
- The application form must be completed with all relevant information attached. Attachments can be combined and submitted as one or more consolidated documents if desired, provided it is clear which section of the application form the information / attachments relate to. Where attachments are submitted separately, avoid duplicating information. Ensure that any cross-references between the application form and the supporting document(s) are accurate.
- If an application form has been submitted which is incomplete or materially incorrect, the Chief Executive Officer of DWER (CEO) will decline to deal with the application and advise the applicant accordingly.
- On completing this application form, please submit it to DWER in line with the instructions in Part 15 of the form.

1.1 **This is an application for:**  
*[Select one option only. Your application may be returned if multiple options are selected.]*

under Part V, Division 3 of the EP Act.

Please see the:

- [Guideline: Industry Regulation Guide to Licensing](#)
- [Procedure: Prescribed premises works approvals and licences](#)

for more information to assist in understanding DWER's regulatory regime for prescribed premises.

- Works approval
- Licence  
Existing registration number(s):  
Existing works approval number(s):
- Renewal  
Existing licence number: [ ]
- Amendment  
Number of the existing licence or works approval to be amended: L9375/2023/1
- Registration (works approval already obtained)  
Existing works approval number(s): [ ]

1.2 **For a works approval amendment or licence amendment, are there less than 90 business days until the expiry of the existing works approval or licence?**

Only active instruments can be amended. Applications to amend a works approval or licence must be made 90 business days or more prior to the existing works approval or licence expiring to ensure there is adequate time to assess the amendment.

Yes

Part 1: Application type	
<p>1.3 This application is for the following categories of prescribed premises: <i>(specify all prescribed premises category numbers)</i></p>	<p><b>Category 62:</b> Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use, other than in the course of operating —</p> <p>(a) a refund point (as defined in the Waste Avoidance and Resource Recovery Act 2007 section 47C(1)) (a refund point); or</p> <p>(b) a facility or other place (an aggregation point) for the aggregation of containers that have been returned to refund points until those containers are accepted for processing or disposal.</p> <p><b>Category 73:</b> Bulk storage of chemicals etc.: premises on which acids, alkalis or chemicals that —</p> <p>(a) contain at least one carbon to carbon bond; and</p> <p>(b) are liquid at STP (standard temperature and pressure), are stored.</p> <p><b>Amendment of Administrative Requirements</b></p> <p>Amend the definition of the annual reporting period and the dates for the submission of annual and biennial reports, as set out in Attachment 3B, to allow for the coordination of annual reporting across BHP Western Australia Nickel operations.</p>
	<p><input checked="" type="checkbox"/> All activities that meet the definition of a prescribed premises as set out in Schedule 1 of the EP Regulations have been specified above (tick, if yes).</p>

Completion Matrix			
The matrix below explains what sections are required to be completed for different types of applications.			
Application form section	New application / registration	Renewal	Amendment
Part 1: Application type	•	•	•
Part 2: Applicant details	•	•	•
Part 3: Premises details	•	•	△
Part 4: Proposed activities	•	•	•
Part 5: Index of Biodiversity Surveys for Assessment and Index of Marine Surveys for Assessment	If required.	If required.	If required.
Part 6: Other DWER approvals	•	•	•
Part 7: Other approvals and consultation	•	•	•
Part 8: Applicant history	•	•	△
Part 9: Emissions, discharges, and waste	•	•	△
Part 10: Siting and location	•	•	△
Part 11: Submission of any other relevant information	•	•	If required.
Part 12: Category checklist(s)	•	•	•
Part 13: Proposed fee calculation	•	•	•
Part 14: Commercially sensitive or confidential information	•	•	•
Part 15: Submission of application	•	•	•
Part 16: Declaration and signature	•	•	•
Attachment 1A: Proof of occupier status	•	•	N/A
Attachment 1B: ASIC company extract	•	•	N/A
Attachment 1C: Authorisation to act as a representative of the occupier	•	•	•
Attachment 2: Premises map/s	•	•	△
Attachment 3A: Environmental commissioning plan	If required.	N/A	If required

Attachment 3B: Proposed activities	•	•	Δ
Attachment 3C: Map of area proposed to be cleared (only applicable if clearing is proposed)	•	•	•
Attachment 3D: Additional information for clearing assessment	If required.	If required.	If required.
Attachment 4: Marine surveys (only applicable if marine surveys included in application)	•	•	•
Attachment 5: Other approvals and consultation documentation	•	•	Δ
Attachment 6A: Emissions and discharges	If required.	If required.	If required.
Attachment 6B: Waste acceptance	If required.	If required.	If required.
Attachment 7: Siting and location	•	•	Δ
Attachment 8: Additional information submitted	If required.	If required.	If required.
Attachment 9: Category-specific checklist(s)	•	If required.	If required.
Attachment 10: Proposed fee calculation	•	•	•
Attachment 11: Request for exemption from publication	If required.	If required.	If required.

**Key:**  
 • Must be completed / submitted.  
 Δ To the extent changed / required in relation to the amendment.  
 N/A Not required with application, but may be requested subsequently depending on DWER records.  
 "If required" Sections for applicants to determine.

**Part 2: Applicant details**

**INSTRUCTIONS:**

- The applicant (the occupier of the premises) must be an individual(s), a company, body corporate, or public authority, but not a partnership, trust, or joint-venture name. Applications made by or on behalf of business names or unincorporated associations will not be accepted.
- If applying as an individual, your full legal name must be provided.
- If applying as a company, body corporate, or public authority, the full legal entity name must be inserted.
- Australian Company Number's (ACN) must be provided for all companies or body corporates.
- DWER prefers to send all correspondence electronically via email. We request that you consent to receiving all correspondence relating to instruments and notices under Part V of the EP Act (Part V documents) electronically via email, by indicating your consent in Section 2.3.
- Companies or body corporates making an application must nominate an authorised representative from within their organisation. Proof of authorisation must be submitted with the application (see Section 2.10). If you are applying as an individual, you are the representative.
- Details of a contact person must be provided for DWER enquiries in relation to your application. This contact person can be a consultant if authorised to represent the applicant. Written evidence of this authorisation must be provided.
- Details of the occupier of the premises must be provided. One of the options must be selected and if you have been asked to specify, please provide details. For example, if 'lease holder' has been selected, please specify the type of lease (for example, pastoral lease, mining lease, or general lease) and provide a copy of the lease document(s). Note that contracts for sale of land will not be sufficient evidence of occupancy status.

2.1	<b>Applicant name/s (full legal name/s):</b> The proposed holder of the works approval, licence or registration.	OZ Minerals Musgrave Operations Pty Ltd
	<b>ACN (if applicable):</b>	██████████
2.2	<b>Trading as (if applicable):</b>	N/A
2.3	<b>Authorised representative details:</b> The person authorised to receive correspondence and Part V documents on behalf of the applicant	Name ██████████
		Position ██████████

Part 2: Applicant details				
	<p>under the EP Act.</p> <p>Where 'yes' is selected, all correspondence will be sent to you via email, to the email address provided in this section.</p> <p>Where 'no' has been selected, Part V documents will be posted to you in hard copy to the postal / business address specified in Section 2.4, below. Other general correspondence may still be sent to you via email.</p>	Telephone	+ [REDACTED]	
		Email	[REDACTED]	
		<p><i>I consent to all written correspondence between myself (the applicant) and DWER, regarding the subject of this application, being exclusively via email, using the email address I have provided above.</i></p>		Yes
			<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.4	<p><b>Registered office address, as registered with the Australian Securities and Investments Commission (ASIC):</b></p> <p>This must be a physical address to which a Part V document may be delivered.</p>	[REDACTED]		
2.5	<p><b>Postal address for all other correspondence:</b></p> <p>If different from Section 2.4.</p>	[REDACTED]		
2.6	<p><b>Contact person details for DWER enquiries relating to the application (if different from the authorised representative):</b></p> <p>For example, could be a consultant or a site-based employee.</p>	Name	[REDACTED]	
		Position	[REDACTED]	
		Organisation	BHP	
		Address	[REDACTED]	
		Telephone	[REDACTED]	
		Email	[REDACTED]	
2.7	<p><b>Occupier status:</b></p> <p>Occupier is defined in s.3 of the EP Act and includes a person in occupation or control of the premises, or occupying a different part of the premises whether or not that person is the owner.</p> <p>Note: if a lease holder, the applicant must be the holder of an executed lease, not just an agreement to lease.</p>	Registered proprietor on certificate of title.	<input type="checkbox"/>	
		Lease holder (please specify, including date of expiry of lease).	<input checked="" type="checkbox"/>	
		<p>OZ Minerals Musgrave Operations Pty Ltd via its 100%-owned subsidiaries (Wirraway Metals and Mining Pty Ltd and Crossbow Resources Pty Ltd) currently hold Mining Leases, Miscellaneous Licences and Exploration Licenses over the Proposal area: M 69/149, L 69/56 and L 69/57, as defined in Schedule 2 of W6579/2021/1. Activity referenced in this amendment occurs only on M 69/149.</p> <p>M 69/149 - expires 03/07/2043</p>		
		Public authority that has care, control, or management of the land.	<input type="checkbox"/>	
		Other evidence of legal occupation or control (please specify – for example, joint venture operating entity, contract, letter of operational control, or other legal document or evidence of legal occupation).	<input type="checkbox"/>	

Part 2: Applicant details				
Attachments			N/A	Yes
2.8	<b>Attachment 1A: Proof of occupier status</b>	Copies of certificate of title, lease, or other instruments evidencing proof of occupier status, including the expiry date or confirmation that there is no expiry date, have been provided and labelled as Attachment 1A.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.9	<b>Attachment 1B: ASIC company extract</b>	A current company information extract (not the company information summary) purchased from the ASIC website(s) for all new applications / registrations has been provided and labelled as Attachment 1B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.10	<b>Attachment 1C: Authorisation to act as representative of the occupier</b>	A copy of the documentation authorising the applicant to act on the occupier's behalf as their authorised agent/representative has been provided and labelled as Attachment 1C.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 3: Premises details			N/A	Yes
3.1	<p><b>Premises description (whole or part to be specified):</b> Include the land description (volume and folio number, lot, or location number/s); Crown lease or reserve number; pastoral lease number; or mining tenement number (as appropriate), of all properties, as shown on title details registered with Landgate.</p>	<p>Prescribed premises straddle M 69/149, part of the L 69/56 and L 69/57. The facilities subject to this amendment are located on M 69/149.</p>		
	<p><b>Premises street address</b> Include the suburb.</p>	N/A		
	<p><b>Premises name (if applicable):</b></p>	N/A		
3.2	<p><b>Local Government Authority area:</b> City, Town, or Shire.</p>	Shire of Ngaanyatjaraku		
3.3	<p><b>GPS (latitude and longitude) coordinates:</b> GPS coordinates determined using the GDA 2020 (Geographic latitude / longitude) coordinate system and datum must be provided for all points around the proposed premises boundary, where the entirety of the cadastre (land parcel) or mining tenements are not used as the premises boundary.</p>	<p>GPS Coordinates as provided for Works Approval W6579/2021/1.</p>		
Attachments			N/A	Yes
3.4	<p><b>Attachment 2: Premises map(s)</b></p> <p>You must provide as an attachment to this application form, labelled Attachment 2, either:</p> <ol style="list-style-type: none"> <li>an aerial photograph, map, and site plan of sufficient scale showing the proposed prescribed premises boundary</li> <li>or</li> <li>where available, a map of the proposed premises boundary and site plan as an ESRI shapefile (accepted file types include .dbf, .shp, .prj, and .shx) with the following properties (provided on a suitable portable digital storage device, if submitting application in hard copy form): <ul style="list-style-type: none"> <li>Geometry type: Polygon Shape</li> <li>Coordinate system: GDA 2020 (Geographic latitude / longitude)</li> <li>Datum: GDA 2020 (Geocentric Datum of Australia 2020).</li> </ul> </li> </ol> <p>You must also provide a map or maps of the prescribed premises, clearly identifying and labelling:</p> <ul style="list-style-type: none"> <li>layout of key infrastructure and buildings, clearly labelled;</li> <li>the premises boundary (where the premises boundary does not align with the entirety of the cadastral boundary, identify the Lot Number for which the premises is part of);</li> <li>emission and discharge points (with precise GPS coordinates where available);</li> <li>monitoring points (with precise GPS coordinates where available);</li> <li>sensitive receptors and land uses</li> <li>all areas proposed to be cleared (if applicable).</li> </ul> <p>Maps must contain a north arrow, clearly marking the area in which the activities are carried out. The map or maps must be of reasonable clarity and have a visible scale.</p>	<p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	

**Part 4: Proposed activities**

**INSTRUCTIONS:**

- You must provide a description and the scope, size and scale of all prescribed activities of Schedule 1 to the EP Regulations including the maximum production or design capacity of each prescribed activity.
- If applying for a works approval or licence amendment involving the construction of new infrastructure, you must provide information on infrastructure to be constructed and how long construction is expected to take. You must confirm if commissioning is to occur and how long it will take.
- If applying for a works approval or licence amendment *not* involving the construction of new infrastructure, provide details of the proposed amendment.
- You must identify all emission sources on the premises map/s.
- You must also provide information on activities which directly relate to the prescribed premises category which have, or are likely to result in, an emission or discharge.
- If clearing activities are proposed provide a description and details. If a relevant exemption under Schedule 6 of the EP Act or r.5 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA) (Clearing Regulations) may apply, provide details.
- Note that in some cases, DWER may require that the clearing components of a works approval or licence (or amendment) application be submitted separately through the clearing permit application process. Refer to the [Procedure: Prescribed premises works approvals and licences](#) for further guidance.
- Please note that the requested information is critical to DWER's understanding of the proposed activities. The more accurate, specific, and complete the information provided in the application, the less uncertainty that DWER may identify in the application, therefore facilitating completion of the assessment in a more efficient and timely manner.

**4.1 Prescribed premises infrastructure and equipment**

In Table 4.1 (below), provide a list of all items of infrastructure and equipment within the boundary of the prescribed premises relevant to this application, and include the following details for each:

- **relevant categories (if known)** – the categories of prescribed premises (as listed under Schedule 1 of the EP Regulations) that relate to that infrastructure or equipment;
- **site plan reference** – the location of that infrastructure or equipment (with reference to the site plan map or maps provided above in Section 3.4 and labelled as Attachment 2 – e.g. use GPS coordinates or a clear description such as “labelled as [label on premises map] on Map A”);
- **is it critical containment infrastructure (CCI)?** – indicate if the identified infrastructure or equipment would be categorised as CCI. Refer to the [Guideline: Industry Regulation Guide to Licensing](#) for further information on CCI; and
- **is environmental commissioning required?** – indicate if environmental commissioning is intended to be undertaken for that item of infrastructure or equipment. Refer to the [Guideline: Industry Regulation Guide to Licensing](#) for further information on environmental commissioning.

Add additional rows to Table 4.1 (below) as required.

**Table 4.1: Infrastructure and equipment**

	Infrastructure and equipment	Relevant categories (if known)	Site plan reference	CCI? (mark if yes)	Environmental commissioning? (mark if yes)
1.	Bulk fuel storage facilities, comprising: <ul style="list-style-type: none"> <li>• Aviation Fuel Storage</li> <li>• Accommodation Village Fuel Storage</li> <li>• Exploration Camp Fuel Storage</li> </ul>	73	Attachment 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	Waste Transfer Station	62	Attachment 2	<input type="checkbox"/>	<input type="checkbox"/>
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

<b>Part 4: Proposed activities</b>	
<b>4.2</b>	<p><b>Detailed description of proposed activities or proposed changes (if an amendment):</b>            You must provide details of proposed activities relevant to this application within the boundary of the prescribed premises, identifying:</p> <ul style="list-style-type: none"> <li>• scope, size, and scale of the project, including details as to production or design capacity (and/or frequency, if applicable);</li> <li>• key infrastructure and equipment;</li> <li>• description of processes or operations (a process flow chart may be included as an attachment);</li> <li>• emission / discharge points;</li> <li>• locations of waste storage or disposal</li> <li>• activities occurring during construction, environmental commissioning, and operation (if applicable).</li> </ul> <p>If assessment and imposition of conditions to allow environmental commissioning to be undertaken are requested, please provide an environmental commissioning plan as Attachment 3A (see 4.11 below). Additional information relating to the proposed activities may be included in Attachment 3B (see 4.12 below).</p>
<b>Construction activities (if applicable):</b>	
<p>CONSTRUCTION ACTIVITIES COMPLETED:</p> <ul style="list-style-type: none"> <li>• Construction and installation activities at the Expo fuel facility have been completed, as detailed in the Critical Containment Infrastructure Report (CCIR) provided to DWER on 29 July 2024.</li> <li>• Construction and installation activities at the Aviation Fuel facility have been completed as detailed in the CCIR provided to DWER on 23 July 2024.</li> <li>• Installation of the Accommodation Power Stations Fuel Storage facilities have been completed, as detailed in the CCIR provided to DWER on 13 September 2024.</li> <li>• Construction of the Waste Transfer Station has been completed, as detailed in the Environmental Compliance Report provided to DWER on 27 August 2024.</li> </ul>	
<b>Environmental commissioning activities (if applicable):</b>	
Refer to the <a href="#">Guideline: Industry Regulation Guide to Licensing</a> for further guidance.	
Not applicable to any of the facilities relevant to this Amendment Application.	
<b>Time limited operations activities (if applicable):</b>	
<p>Different elements of the premises may require time limited operations to commence at different times. In these circumstances, please specify the infrastructure and/or equipment for which time limited operations authorisation is being applied for.</p> <p>If time limited operations are expected to differ from future licensed operations, specify how and why this would be the case.</p> <p>Refer to the <a href="#">Guideline: Industry Regulation Guide to Licensing</a> for further guidance.</p>	
<ul style="list-style-type: none"> <li>• All the above-mentioned facilities formally entered Time Limited Operations (TLO) following submission of their respective CCIRs or ECR, as indicated above.</li> <li>• Works Approval W6579/2021/1 (the WMP Works Approval) only specifies requirements for TLO in respect of the WTS (Table 7, Line 7). As indicated in the ECR for the WTS, those TLO requirements (bundling and a roof (rain cover) have already been complied with.</li> </ul>	
<b>Operations activities (for a licence):</b>	
<ul style="list-style-type: none"> <li>• Operation of the Expo Fuel Facility for the storage of diesel and filling of mobile equipment.</li> <li>• Operation of the Aviation Fuel Facility for the storage of Jet A1 fuel and filling of aeroplanes at the aerodrome.</li> <li>• Operation of the Construction Camp Power Station bulk diesel tank as a dedicated fuel supply to diesel power generators.</li> <li>• Operation of the Living Hub 1 and Living Hub 2 Power Stations bulk diesel tanks as dedicated fuel supplies to diesel power generators.</li> <li>• Operation of the solid waste storage and transfer station (WTS) for the temporary storage, segregation and transfer of wastes, including use of the pad for bioremediation purposes, prior to recycling or final disposal at appropriately licensed facilities.</li> </ul>	



Part 4: Proposed activities	
<p>4.3 <b>Estimated operating period of the project / premises (e.g. based on estimated infrastructure life):</b></p>	<ul style="list-style-type: none"> <li>• Operation of the Expo Fuel Facility is expected for the duration of the construction and temporary suspension phases. A date for the cessation of its operation is dependent on decisions on the future development of the project.</li> <li>• Operation of the Construction Camp Power Station bulk diesel tank will extend throughout the construction and operations phases.</li> <li>• Operation of the Aviation Fuel Facility will be required for the life of the operation, both during temporary suspension and nominally for 26 years from commencement of operations.</li> <li>• Operation of the Living Hub 1 and Living Hub 2 Power Station bulk diesel tanks will be required for the life of the operation, nominally 26 years from commencement of operations.</li> <li>• Operation of the solid waste storage and transfer station (WTS) will be required for the life of the operation, nominally 26 years from commencement of operations.</li> </ul>
<p>4.4 <b>Proposed date(s) for commencement of works (if applicable):</b></p>	<p>All works have been completed and the relevant Environmental Compliance Report and Critical Containment Infrastructure Reports have been submitted.</p>
<p>4.5 <b>Proposed date(s) for conclusion of works construction (if applicable):</b>                      This date should coincide with the submission to DWER of an Environmental Compliance Report(s) and/or a Critical Containment Infrastructure Report(s) as required.                      Refer to the <a href="#">Guideline: Industry Regulation Guide to Licensing</a>.</p>	<p>All construction and installation activities have been completed.</p> <ul style="list-style-type: none"> <li>• Expo Fuel Facility Critical Containment Infrastructure Report (CCIR) provided to DWER on 29 July 2024.</li> <li>• Aviation Fuel CCIR provided to DWER on 23 July 2024.</li> <li>• Accommodation Power Stations Fuel Storage CCIR provided to DWER on 13 September 2024.</li> <li>• Waste Transfer Station Environmental Compliance Report provided to DWER on 27 August 2024.</li> </ul>

Part 4: Proposed activities		
4.6	<p><b>Proposed date(s) for environmental commissioning of works (if applicable):</b> Refer to the <a href="#">Guideline: Industry Regulation Guide to Licensing</a>.</p>	Environmental commissioning works are not applicable to the infrastructure in question.
4.7	<p><b>Proposed date/s for commencement of time limited operations under works approval (if applicable):</b> Refer to the <a href="#">Guideline: Industry Regulation Guide to Licensing</a>.</p>	Time Limited Operations for all infrastructure covered by this amendment commenced on submission of the CER and CCIRs, as detailed in Section 4.5.
4.8	<ul style="list-style-type: none"> <li>Maximum production or design capacity for each category applied for (based on infrastructure operating 24 hours a day, 7 days a week):</li> <li>Provide figures for all categories listed in Section 1.2.</li> <li>Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.</li> </ul>	<p><b>Category 62:</b> Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use: <i>Approved premises design capacity: 1800 tonnes/year.</i> <b>Infrastructure: Waste Transfer Station</b></p> <p><b>Category 73:</b> Bulk storage of chemicals etc.: premises on which acids, alkalis or chemicals ...are stored: <i>Approved premises design capacity: 8901m<sup>3</sup> in aggregate</i> <b>Infrastructure:</b></p> <ul style="list-style-type: none"> <li>Accommodation Power Stations Fuel Storage – 3 x Self-bunded 67 kL diesel tanks and associated distribution and refilling infrastructure, total capacity of 201 kL.</li> <li>Expo Fuel Facility – 4 x 110 kL self-bunded diesel tanks and associated distribution and refilling infrastructure, total capacity 440 kL</li> <li>Aviation Fuel Facility - 1 x 110 kL self-bunded Jet A1 tank and associated aeroplane refuelling and refilling infrastructure, total capacity 110 kL.</li> </ul>
4.9	<p><b>Estimated / actual throughput for each category applied for:</b> Provide figures for all categories listed in Section 1.2. Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.</p>	<p>Category 62: 1800 tonnes/year</p> <p>Category 73: <b>Accommodation Power Stations Fuel Storage</b> – Due to the temporary suspension of construction at the WMP, only the Construction Camp power station will be utilised until Q1 2027. Annual diesel consumption for the construction camp and associated infrastructure (including RO and WWTP) is estimated at 329kL/a. The two Living Hub tanks will be empty during temporary suspension. Annual usage will be confirmed when the project goes into operation.</p>

Part 4: Proposed activities				
			<p><b>Aviation Fuel Facility – Jet A1</b> consumption, based on one flight per week, is estimated at 260 kL/a.</p> <p><b>Expo Fuel Facility – Diesel</b> consumption by all mobile equipment and remote (bore) generators is estimated to be &lt;220kL/a.</p>	
Attachments			N/A	Yes
4.10	<b>Attachment 2: Premises map</b>	Emission/discharge points are clearly labelled on the map/s required for Part 3.4 (Attachment 2).	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.11	<b>Attachment 3A: Environmental commissioning plan</b>	<p>If applying to construct works or install equipment, and environmental commissioning of the works or equipment is planned, an environmental commissioning plan has been included in Attachment 3A.</p> <p>The environmental commissioning plan is expected to include, at minimum, identification of:</p> <ul style="list-style-type: none"> <li>the sequence of commissioning activities to be undertaken, including details on whether they will be done in stages;</li> <li>a summary of the timeframes associated with the identified sequence of commissioning activities;</li> <li>the inputs and outputs that will be used in the commissioning process;</li> <li>the emissions and/or discharges expected to occur during commissioning;</li> <li>the emissions and/or discharges that will be monitored and/or confirmed to establish or test a steady-state operation (e.g. identifying emissions surrogates, etc.), including a detailed emissions monitoring program for the measurement of those emissions and/or discharges;</li> <li>the controls (including management actions) that will be put in place to address the expected emissions and/or discharges;</li> <li>any contingency plans for if emissions exceedances or unplanned emissions and/or discharges occur</li> <li>how any of the above would differ from standard operations once commissioning is complete.</li> </ul> <p>Note that DWER will not include conditions on a granted instrument that authorise environmental commissioning activities where it is not satisfied that the risks associated with environmental commissioning can be adequately addressed.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.12	<b>Attachment 3B: Proposed activities</b>	Additional information relating to the proposed activities has been included in Attachment 3B (if required).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Please refer to covering letter in lieu of provision of attachment.				
Clearing activities				
4.13 to 4.19 are only required if the application includes clearing of native vegetation.				
4.13	<b>Proposed clearing area (hectares and/or number of individual trees to be removed):</b>	Not applicable. Clearing was conducted under MS1188.		
4.14	<b>Details of any relevant exemptions:</b> Refer to DWER's <a href="#">A guide to the exemptions and regulations for clearing native vegetation</a> .	NA		
4.15	<b>Proposed method of clearing:</b>	NA		

Part 4: Proposed activities			
4.16	<b>Period within which clearing is proposed to be undertaken:</b> For example, May 2020 – June 2020.	NA	
4.17	<b>Purpose of clearing:</b>  NA		
Clearing activities – Attachments		N/A	Yes
4.18	<b>Attachment 3C: Map of area proposed to be cleared</b> You must provide: an aerial photograph or map of sufficient scale showing the proposed clearing area and prescribed premises boundary OR if you have the facilities, a suitable portable digital storage device of the area proposed to be cleared as an ESRI shapefile with the following properties: <ul style="list-style-type: none"> <li>• Geometry type: Polygon Shape</li> <li>• Coordinate system: GDA 2020 (Geographic latitude / longitude)</li> <li>• Datum: 2020 1994 (Geocentric Datum of Australia 2020).</li> </ul>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.19	<b>Attachment 3D: Additional information for clearing assessment</b> Additional information to assist in the assessment of the clearing proposal may be attached to this application (for example, reports on salinity, fauna or flora studies or other environmental reports conducted for the site).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)			
<b>INSTRUCTIONS:</b> <ul style="list-style-type: none"> <li>• Biodiversity surveys should be submitted through the IBSA Submissions Portal at <a href="https://ibsasubmissions.dwer.wa.gov.au">ibsasubmissions.dwer.wa.gov.au</a></li> <li>• Biodiversity surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</i>.</li> <li>• Marine surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA)</i>.</li> <li>• If these requirements are not met, DWER will decline to deal with the application.</li> </ul>			
Attachments		N/A	Yes
5.1	<b>Biodiversity surveys</b> Please provide the IBSA number(s) (or submission number(s) if IBSA number has not yet been issued) in the space provided.  Note that a submission number is not confirmation of acceptance of a biodiversity survey and is not the same as an IBSA number. IBSA numbers are only issued once a survey has been accepted. Once an IBSA number is issued, please notify the department.	All biodiversity surveys submitted with this application meet the requirements of the EPA's <a href="#">Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</a> .  Submission number(s)  IBSA number(s)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)				
<b>INSTRUCTIONS:</b>				
<ul style="list-style-type: none"> <li>• Biodiversity surveys should be submitted through the IBSA Submissions Portal at <a href="https://ibasubmissions.dwer.wa.gov.au">ibasubmissions.dwer.wa.gov.au</a></li> <li>• Biodiversity surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</i>.</li> <li>• Marine surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA)</i>.</li> <li>• If these requirements are not met, DWER will decline to deal with the application.</li> </ul>				
5.2	<b>Attachment 4:</b> Marine surveys	All marine surveys submitted with this application meet the requirements of the EPA's <a href="#">Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA)</a> .	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 6: Other DWER approvals	
<p><b>INSTRUCTIONS:</b></p> <ul style="list-style-type: none"> <li>If you have applied, or intend to apply, for other approvals within DWER that may be relevant to this application, you must provide relevant details.</li> <li>If you have referred, or intend to refer, your proposal to the Environmental Protection Authority (EPA), you must provide the requested details.</li> </ul>	
<b>Pre-application scoping</b>	
<p>6.1 Have you had any pre-application / pre-referral / scoping meetings with DWER regarding any planned applications?</p>	<p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes – provide details:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Discussion of upcoming compliance reports and licence amendments that would be forwarded to the Department between M Greenslade and S Labowitch in June 2024.</p> <p>Schedule of expected submission dates from D Richter to M Greenslade dated 4/6/2024.</p> </div>
<b>Environmental impact assessment (Part IV of the EP Act)</b>	
<p>6.2 Have you referred or do you intend to refer the proposal to the EPA?</p> <p>Section 37B(1) of the EP Act defines a ‘significant proposal’ as “a proposal likely, if implemented, to have a significant effect on the environment”.</p> <p>If DWER considers that the proposal in this application is likely to constitute a ‘significant proposal’, DWER is required under s.38(5) of the EP Act to refer the proposal to the EPA for assessment under Part IV, if such a referral has not already been made.</p> <p>If a relevant Ministerial Statement already exists, please provide the MS number in the space provided.</p>	<p><input type="checkbox"/> Yes (referred) – reference (if known): [       ]</p> <p><input type="checkbox"/> Yes – intend to refer (proposal is a ‘significant proposal’) <input type="checkbox"/> Yes – intend to refer (proposal will require a s.45C amendment to the current Ministerial Statement): MS [       ]</p> <p><input checked="" type="checkbox"/> No – a valid Ministerial Statement applies: MS 1188</p> <p><input type="checkbox"/> No – not a ‘significant proposal’</p>
<b>Clearing of native vegetation (Part V Division 2 of the EP Act and Country Area Water Supply Act 1947)</b>	
<p>6.3 Have you applied or do you intend to apply for a native vegetation clearing permit?</p> <p>In accordance with the <a href="#">Guideline: Industry Regulation Guide to Licensing</a> and <a href="#">Procedure: Native vegetation clearing permits</a>, where clearing of native vegetation:</p> <ul style="list-style-type: none"> <li>is exempt under Schedule 6 of the EP Act or the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA) (refer to <a href="#">A guide to the exemptions and regulations for clearing native vegetation</a>)</li> <li>is being assessed by a relevant authority which would lead to an exemption under Schedule 6 of the EP Act, or</li> <li>has been referred under s.51DA of the EP Act and a determination made that a clearing permit is not required (refer to the <a href="#">Guideline: Native vegetation clearing referrals</a>).</li> </ul> <p>the clearing will not be reassessed by DWER or be subject to any additional controls by DWER.</p> <p>If the proposed clearing action is to be assessed in accordance with, or under, an <i>Environment Protection and Biodiversity Conservation Act</i> (Cth) (EPBC Act) accredited process, such as the assessment bilateral agreement, the clearing permit application <a href="#">Form Annex C7 – Assessment bilateral agreement</a> must be completed and attached to your clearing permit application.</p>	<p><input type="checkbox"/> Yes – clearing application reference (if known): CPS [       ]</p> <p><input type="checkbox"/> Yes – a valid EP Act clearing permit already applies: CPS [       ]</p> <p><input type="checkbox"/> No – this application includes clearing (please complete Sections 4.13 to 4.19 above)</p> <p><input type="checkbox"/> No – permit not required (no clearing of native vegetation)</p> <p><input type="checkbox"/> No – permit not required (clearing referral decision): CPS [       ]</p> <p><input checked="" type="checkbox"/> No – an exemption applies (explain why):</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Clearing is approved under MS1188.</p> </div>

Part 6: Other DWER approvals	
<p><b>6.4 Have you applied or do you intend to apply for a <i>Country Area Water Supply Act 1947</i> licence?</b></p> <p>If a clearing exemption applies in a <i>Country Area Water Supply Act 1947</i> (CAWS Act) controlled catchment, or if compensation has previously been paid to retain the subject vegetation, a CAWS Act clearing licence is required.</p> <p>If yes, contact the relevant DWER regional office for a Form 1 <i>Application for licence</i>.</p> <p><a href="#">Map of CAWS Act controlled catchments</a></p>	<p><input type="checkbox"/> Yes – application reference (if known): [       ]</p> <p><input type="checkbox"/> No – a valid licence applies: [       ]</p> <p><input checked="" type="checkbox"/> No – licence not required</p>
Water licences and permits ( <i>Rights in Water and Irrigation Act 1914</i> )	
<p><b>6.5 Have you applied, or do you intend to apply for:</b></p> <ol style="list-style-type: none"> <li>1. a licence or amendment to a licence to take water (surface water or groundwater); or</li> <li>2. a licence to construct wells (including bores and soaks); or</li> <li>3. a permit or amendment to a permit to interfere with the bed and banks of a watercourse?</li> </ol> <p>For further guidance on water licences and permits under the <i>Rights in Water and Irrigation Act 1914</i>, refer to the <a href="#">Procedure: Water licences and permits</a>.</p>	<p><input type="checkbox"/> Yes –application reference (if known): [       ]</p> <p><input checked="" type="checkbox"/> No – a valid licence / permit applies: [Groundwater Abstraction Licence Instrument No. GWL207745(2) as amended 18 September 2024. Approval to construct bores Licence Instrument No. CAW207479(1) issued 3 June 2022]</p> <p><input type="checkbox"/> No – an exemption applies (explain why):</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div> <p><input type="checkbox"/> No – licence / permit not required</p>

Part 7: Other approvals and consultation			
<b>INSTRUCTIONS:</b>			
<ul style="list-style-type: none"> <li>• Please provide copies of all relevant documentation indicated below, including any conditions, exclusions, or expiry dates.</li> <li>• “Major Project” means:                             <ul style="list-style-type: none"> <li>➢ A State Development Project, where the lead agency is the Department of Jobs, Tourism, Science and Innovation (including projects to which a State Agreement applies); or</li> <li>➢ A Level 2 or 3 proposal, as defined in the Department of Premier and Cabinet’s <a href="#">Lead Agency Framework</a>.</li> </ul> </li> </ul>			
	N/A	No	Yes
7.1	Is the proposal a Major Project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.2	Is the proposal subject to a State Agreement Act?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If yes, specify which Act:		
7.3	Has the proposal been allocated to a “Lead Agency” (as defined in the <a href="#">Lead Agency Framework</a> )?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes, specify Lead Agency contact details: Department of Jobs, Tourism, Science and Innovation Amy Vassallo amy.vassallo@jtsi.wa.gov.au		
7.4	Has the proposal been referred and/or assessed under the EPBC Act (Commonwealth)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes, please specify referral, assessment and/or approval number:		
7.5	Has the proposal obtained all relevant planning approvals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If planning approval is necessary but has not been obtained, please provide details indicating why:		

Part 7: Other approvals and consultation			
<p>If planning approval is not necessary, please provide details indicating why:</p> <p>Shire of Ngaanyatjarraku does not have a planning scheme, no planning approval required.</p>			
7.6	For renewals or amendment applications, are the relevant planning approvals still valid (that is, not expired)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.7	Has the proposal obtained all other necessary statutory approvals (not including any other DWER approvals identified in Part 6 of this application)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>If no, please provide details of approvals already obtained, outstanding approvals, and expected dates for obtaining these outstanding approvals:</p>			
		N/A	Yes
7.8	Has consultation been undertaken with parties considered to have a direct interest in the proposal (that is, interested parties or persons who are considered to be directly affected by the proposal)? DWER will give consideration to submissions from interested parties or persons in accordance with the <a href="#">Guideline: Industry Regulation Guide to Licensing</a> .	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Attachments		N/A	Yes
7.9	Attachment 5: Other approvals and consultation documentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 8: Applicant history			
<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>DWER will undertake an internal due diligence of the applicant's fitness and competency based on DWER's compliance records and the responses to Part 8 of the form.</li> <li>If you wish to provide additional information for DWER to consider in making this assessment, you may provide that information as a separate attachment (see Part 11).</li> </ul>			
		N/A	Yes
8.1	If the applicant is an individual, has the applicant previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.2	If the applicant is a corporation, has any director of that corporation previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.3	<p>If yes to 8.1 or 8.2 above, specify the name of company and/or licence or works approval number:</p> <p>L9375/2023/1</p>		
8.4	If the applicant is an individual, has the applicant ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.5	If the applicant is a corporation, has any director of that corporation ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.6	If the applicant is a corporation, has any person concerned in the management of the corporation, as referred to in s.118 of the EP Act, ever been convicted of, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Part 8: Applicant history				
8.7	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.8	With regards to the questions posed in 8.4 to 8.7 above, have any legal proceedings been commenced, whether convicted or not, against the applicant for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.9	Has the applicant had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.10	If the applicant is a corporation, has any director of that corporation ever had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.11	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has ever had a licence or other authorisation suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.12	If yes to any of 8.4 to 8.11 above, you must provide details of any charges, convictions, penalties paid for an offence, and/or licences or other authorisations suspended or revoked:			

Part 9: Emissions, discharges, and waste		
<b>INSTRUCTIONS:</b>		
<ul style="list-style-type: none"> <li>Please see <a href="#">Guideline: Risk Assessments</a> and provide all information relating to emission sources, pathways and receptors relevant to the application.</li> <li>You must provide details on sources of emissions (for example, kiln stack, baghouses or discharge pipelines) including fugitive emissions (for example, noise, dust or odour), types of emissions (physical, chemical, or biological), and volumes, concentrations and durations of emissions.</li> <li>The potential for emissions should be considered for all stages of the proposal (where relevant), including during construction, commissioning and operation of the premises.</li> </ul>		
		No      Yes
9.1	Are there potential emissions or discharges arising from the proposed activities?	<input type="checkbox"/> <input checked="" type="checkbox"/>
If yes, identify all potential emissions and discharges arising from the proposed activities and complete Table 9.1: Emissions and discharges (below).		

Part 9: Emissions, discharges, and waste	
<input type="checkbox"/> Gaseous and particulate emissions (e.g. emissions from stacks, chimneys or baghouses)	<input type="checkbox"/> Dust (e.g. from equipment, unsealed roads and/or stockpiles, etc.)
<input type="checkbox"/> Wastewater discharges (e.g. treated sewage, wash water, or process water discharged to lands or waters)	<input checked="" type="checkbox"/> Waste and leachate (e.g. emissions through seepage, leaks and spills of waste from storage, process and handling areas, etc.)
<input type="checkbox"/> Noise (e.g. from machinery operations and/or vehicle operations)	<input checked="" type="checkbox"/> Odour (e.g. from wastes accepted at putrescible landfills, storage or processing of waste or other odorous materials, etc.)
<input checked="" type="checkbox"/> Contaminated or potentially contaminated stormwater (e.g. stormwater with the potential to come into contact with chemicals or waste materials, etc.)	<input type="checkbox"/> Electromagnetic radiation <sup>1</sup>
<input type="checkbox"/> Other (please specify): [	]
<p><sup>1</sup> Note that for electromagnetic radiation, copies/details of other relevant approvals (such as from the Department of Mines, Industry Regulation and Safety or the Radiological Council) must be provided where applicable.</p>	

Details of any pollution control equipment or waste treatment system, including any control mechanisms used to ensure proper operation of this equipment, must be included in the proposed controls column of the 'Emissions and discharges table' below. Details of management measures employed to control emissions should also be included. Please provide / attach any relevant documents (e.g. management plans, etc.).

Additional rows may be added as required and/or further information may be included as an attachment (see Section 9.3).

**Table 9.1: Emissions and discharges**

	Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls (include in Attachment 6A if extensive or complex)	Location (on site layout plan – see 3.4)
1.	Waste Storage Facility	Potential Hydrocarbon / Chemical release or Hydrocarbon / Chemical contaminated water release	Ad Hoc, dependent on potential accidental leaks at the facility.	<ul style="list-style-type: none"> <li>Facility is fitted with an impervious concrete floor and bunded all around (trafficable bunds on the northern and southern ends).</li> <li>It is covered by a dome shelter and walled by shipping containers on the western and eastern sides to minimise water ingress during rain events.</li> <li>Contaminated material (e.g. hydrocarbon contaminated soil) are stored in IBCs inside the facility</li> <li>Dangerous goods, such as used batteries and used oil filters are stored in self-bunded or enclosed containers.</li> </ul>	See Attachment 3B
2.	Waste Storage Facility	Odour from the storage of Hydrocarbon contaminated soils	Ad hoc, dependent on the storage of high VOC contaminated soils, e.g. those contaminated by SAE 90 (gearbox oil) or diesel.	<ul style="list-style-type: none"> <li>Covering of containers of contaminated soil with tarps when not being watered or turned.</li> </ul>	See Attachment 3B
3.	Bulk Fuel Tanks	Potential fuel release or fuel contaminated water release	In failure, upset or abnormal conditions only	<ul style="list-style-type: none"> <li>The bulk fuel tanks are self-bunded.</li> <li>A dipping point in the interstitial space allows for the detection of a leak from the primary containment.</li> <li>Accommodation power station tanks' valves and filling equipment are enclosed behind steel doors and fitted with a sump.</li> <li>Expo Diesel and Aviation Fuel bullet-style tanks are provided with a cowl</li> </ul>	See Attachment 3B

Part 9: Emissions, discharges, and waste																				
				and sump for the vales and filling equipment. <ul style="list-style-type: none"> <li>The sumps have a drain point to remove potentially contaminated water for disposal off-site.</li> <li>The tanks are fitted with a high-level alarm to prevent overflowing.</li> <li>Operational control procedures that direct work during filling, operation and maintenance activities aim to minimise the risk of potential spillage.</li> </ul>																
<b>9.2 Waste-related activities at the premises<sup>2</sup></b> Answer "yes" or "no" for the following questions and complete Table 9.2 (below).																				
				<table border="1"> <thead> <tr> <th>No</th> <th>Yes</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </tbody> </table>	No	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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(a)	Is waste accepted at the premises?																			
(b)	Is waste produced on the premises?																			
(c)	Is waste processed on the premises?																			
(d)	Is waste stored on the premises?																			
(e)	Is waste buried on the premises?																			
(f)	Is waste recycled on the premises?																			
(g)	Is any of the waste listed in Table 9.2 (below) also considered a 'dangerous good' for the purposes of the Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007? <sup>3</sup>																			
	Specify, if yes:	Waste mineral oils unfit for their intended use Excess waste oil and water, or hydrocarbons and water, mixtures or emulsions collected on site and stored prior to disposal off site at a facility licensed to accept that kind of waste.																		
<p><sup>2</sup> Copies / details of any other relevant approvals (e.g. from the Department of Health) must be provided where applicable.</p> <p><sup>3</sup> Wastes derived from the storage, handling, and use of dangerous goods may be considered hazardous and may need to be handled with the same precautions. Please refer to the Department of Mines, Industry Regulation and Safety's <a href="#">Dangerous Goods Safety information sheet</a> for more information.</p> <p>Solid waste types must be described with reference to <i>Landfill Waste Classification and Waste Definitions 1996</i> (as amended from time to time) and the Environmental Protection (Controlled Waste) Regulations 2004 (Controlled Waste Regulations).</p> <p>Liquid waste types must be described with reference to the Controlled Waste Regulations.</p> <p>For further guidance on the definition of waste, refer to <a href="#">Fact Sheet: Assessing whether material is waste</a>.</p>																				
Detail must be provided on storage type (for example, hardstand and containment infrastructure), capacity, likely storage volumes, and containment features (for example, lining and bunding).																				
Additional rows may be added as required and/or further information may be included as an attachment (see Section 9.4).																				
<b>Table 9.2 Waste types</b>																				

Part 9: Emissions, discharges, and waste						
	Waste type	Quantity (e.g. tonnes, litres, cubic metres)	Waste activity infrastructure (including specifications)	Monitoring (if applicable)	Location (on site layout plan – see 3.4)	
1.	Hydrocarbon contaminated solid waste (including soil, containers, filters, etc).	Less than 1,899 tonnes per year	On-site collection on the bunded concrete pad as specified in Attachment 3B and within appropriately impervious, sealed or bunded containers (such as IBCs). Temporary storage pending disposal or recycling at an appropriately licenced facility.	Volume monitoring only	At the Waste Transfer Station	
2.	Recyclable solid waste, e.g. scrap metals, plastic, cardboard??					
3.	Waste oil and water, or hydrocarbons and water, mixtures or emulsions					
4.	Waste mineral oils unfit for their intended use					
5.	Waste from grease traps					
Attachments					N/A	Yes
9.3	<b>Attachment 6A: Emissions and discharges</b> (if required)	If required, further information for Section 9.1 has been included as an attachment labelled Attachment 6A.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
9.4	<b>Attachment 6B: Waste acceptance</b> (if required)	If required, further information for Section 9.2 has been included as an attachment labelled Attachment 6B.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Part 10: Siting and location		
10.1	<p><b>Sensitive land uses</b>                      What is/are the distance(s) to the nearest sensitive land use(s)?                      A sensitive land use is a residence or other land use which may be affected by an emission or discharge associated with the proposed activities.</p>	<p>The project is a remote site. The nearest sensitive receptors are located 26 km north in the Jameson community.</p> <p>See Attachment 7 of existing Works Approval application for more details.</p>
10.2	<p><b>Nearby environmentally sensitive receptors and aspects</b>                      Identify in Table 10.2 (below):</p> <ul style="list-style-type: none"> <li>all instances of environmentally sensitive receptors that are known or suspected to be present within, or within close proximity to, the proposed prescribed premises boundary;</li> <li>the nature of the sensitive receptors (e.g. type of Threatened Ecological Community, species or threatened flora or fauna, etc.);</li> <li>their actual or approximate known distance and direction from the premises boundary (at the closest point/s); and</li> <li>if applicable, what measures have been or will be taken to ensure that sensitive receptors are not adversely impacted by any emissions or discharges from the premises.</li> </ul> <p>Refer to the <a href="#">Guideline: Environmental siting</a> for further guidance.</p> <p><b>Table 10.2: Nearby environmentally sensitive receptors and aspects</b></p>	

Part 10: Siting and location				
Type / classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)	
Environmentally Sensitive Areas <sup>1</sup>	As per the below and refer to Attachment 7 of the Works Approval application.			
Threatened Ecological Communities	There are no Threatened Ecological Communities (TEC) nor Priority Environmental Communities (PEC) in the proximity of the WTS or any of the bulk diesel tanks	<ul style="list-style-type: none"> <li>• Closest TEC is over 800 km southwest</li> <li>• Closest PEC is located over 400 km west</li> </ul>	N/A	
Threatened and/or priority fauna	<ul style="list-style-type: none"> <li>• Great Desert Skink (<i>Egernia kintorei</i>) listed as vulnerable</li> <li>• The Priority fauna species in the Development Envelope</li> </ul>	Great Desert Skink, Striated Grass Wren, Brush-tailed Mulgara and Southern Marsupial Mole recorded within or adjacent to the WMP area, although not in proximity to the WTS or the bulk diesel tanks.	Potential impacts on these species have been addressed in the Part IV EP Act assessment, including consideration of a range of mitigation measures.	
Threatened and/or priority flora	No threatened flora, as listed under the <i>Environment Protection and Biodiversity Conservation Act</i> (EPBC Act) or the <i>Biodiversity Conservation Act</i> (BC Act) were recorded. Twelve Department of Biodiversity, Conservation and Attractions (DBCAs) listed Priority flora taxa were recorded in the WMP area	8 priority flora species have been observed inside the premises boundary, although not in proximity to the WTS or the bulk diesel tanks.	Potential impacts on significant species have been addressed in the Part IV EP Act assessment, including consideration of a range of mitigation measures.	
Aboriginal and other heritage sites <sup>2</sup>	The WMP is located entirely within the Ngaanyatjarra Lands of central Western Australia	A number of potential archaeological sites and archaeological locations have been identified in the prescribed premises boundary, although not in proximity to the WTS or the bulk diesel tanks.	Potential impacts on cultural heritage and amenity have been addressed in the Part IV EP Act assessment, including consideration of a range of mitigation measures.	
Public drinking water source areas <sup>3</sup>	Jameson (Mantamaru) community utilises an existing groundwater supply comprising a groundwater bore, approximately 3.7 km north-north-east of the township.	<ul style="list-style-type: none"> <li>• Jameson bore, approximately 28 km from the WMP area</li> <li>• Linton bore, approximately 20 km south-east of the WTS and bulk diesel tank locations.</li> </ul>	Potential impacts on the groundwater bores have been addressed in the Part IV EP Act assessment, including consideration of a range of mitigation measures.	
Rivers, lakes, oceans, and other	There are no surface water bodies in the WMP area	N/A	N/A	

Part 10: Siting and location				
	bodies of surface water, etc.			
	Acid sulfate soils	The WMP area has an extremely low probability of occurrence of acid sulphate soils	N/A	N/A
	Other	The proposed project is located within the 98,000 km <sup>2</sup> Ngaanyatjarra Indigenous Protected Area (IPA) ID314989	The prescribed premises overlaps the IPA.	Potential impacts on cultural heritage and amenity have been addressed in the Part IV EP Act assessment, including consideration of a range of mitigation measures.
<p><sup>1</sup> Environmentally Sensitive Areas are as declared under the <i>Environmental Protection (Environmentally Sensitive) Notice 2005</i>. Refer to DWER's website ("<a href="#">Environmentally Sensitive Areas</a>") for further information.</p> <p><sup>2</sup> Refer to the <a href="#">Department of Planning, Lands and Heritage website</a> for further information about Aboriginal heritage and other heritage sites.</p> <p><sup>3</sup> Refer to <a href="#">Water Quality Protection Note No.25: Land use compatibility tables for public drinking water source areas</a> for further information.</p>				
10.3	<b>Environmental siting context details</b> Provide further information including details on topography, climate, geology, soil type, hydrology, and hydrogeology at the premises.			
	Refer to Attachment 7 of the Works Approval Application.			
<b>Attachments</b>			<b>N/A</b>	<b>Yes</b>
10.4	<b>Attachment 7: Siting and location</b>	You must provide details and a map describing the siting and location of the premises, including identification of distances to sensitive land uses and/or any specified ecosystems.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Part 11: Submission of any other relevant information				
<b>Attachments</b>			<b>No</b>	<b>Yes</b>
11.1	<b>Attachment 8: Additional information submitted</b>	Applicants seeking to submit further information may include information labelled Attachment 8. If submitting multiple additional attachments, label them 8A, 8B, etc.  Where additional documentation is submitted, please specify the name of documents below.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	List title of additional document(s) attached:			

Part 12: Category checklist(s)				
Attachments			N/A	Yes
12.1	<b>Attachment 9: Category checklist(s)</b>	<p>DWER has developed category checklists to assist applicants with preparing their application. These checklists are available on <a href="#">DWER's website</a>.</p> <p>The relevant category-specific checklist(s) must be completed and included with the application, labelled as Attachment 9. If attaching multiple category checklists, label them 9A, 9B, etc.</p> <p>Do not select "N/A" unless:</p> <ul style="list-style-type: none"> <li>• a relevant category checklist is not yet published on DWER's website, or</li> <li>• the application is for an amendment that does not propose changes to the method of operation, or change the inputs, outputs, infrastructure, equipment, emissions, or discharges of / from the premises.</li> </ul> <p>Note that that a category checklist(s) may still be required for renewal applications. You will be advised in your renewal notification letter (sent approximately twelve months before the licence expiry date) if you are required to provide the information identified in a category checklist.</p> <p>Where a category checklist is submitted, please specify which checklist(s) in the space below.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
List title(s) of category checklists attached:				



Part 13: Proposed fee calculation	
<p><b>INSTRUCTIONS:</b></p> <p>Please calculate the prescribed fee using the relevant online fee calculator linked below.</p> <ul style="list-style-type: none"> <li>• Licence: <a href="http://www.der.wa.gov.au/LicenceFeeCalculator">www.der.wa.gov.au/LicenceFeeCalculator</a></li> <li>• Works approval: <a href="http://www.der.wa.gov.au/WorksApprovalFeeCalculator">www.der.wa.gov.au/WorksApprovalFeeCalculator</a></li> <li>• Amendment: <a href="https://www.wa.gov.au/government/publications/works-approval-and-licence-amendment-fee-calculator">https://www.wa.gov.au/government/publications/works-approval-and-licence-amendment-fee-calculator</a></li> </ul> <p>Different fee units apply for different fee components. Fee units may also have different amounts depending on the period in which the calculation is made.</p> <p>Once DWER has confirmed that the application submitted meets the relevant requirements of the EP Act, you will be issued an invoice with instructions for paying your application fee.</p> <p>Further information on fees can be found in the <a href="#">Fact Sheet: Industry Regulation fees</a>, and on <a href="#">DWER's website</a>.</p>	
<p>13.1 Only the relevant fee calculations are to be completed as follows: <i>[mark the box to indicate sections completed]</i></p>	<p><input type="checkbox"/> Section 13.3 for works approval applications</p> <p><input type="checkbox"/> Section 13.4 for licence / renewal applications</p> <p><input type="checkbox"/> Section 13.5 for registration applications</p> <p><input checked="" type="checkbox"/> Section 13.6 for amendment applications</p> <p><input type="checkbox"/> Section 13.7 for applications requiring clearing of native vegetation</p>
13.2	<p>All information and data used for the calculation of proposed fees has been provided in accordance with Section 13.8. <input checked="" type="checkbox"/></p>
<p><b>13.3 Proposed works approval fee</b></p> <p>Proposed works approval fee (see Schedule 3 of the EP Regulations)</p> <p>Fees relate to the cost of the works, including all capital costs (inclusive of GST) associated with the construction and establishment of the works proposed under the works approval application. This includes, for example, costs associated with earth works, hard stands, drainage, plant hire, equipment, processing plant, relocation of equipment and labour hire.</p> <p>Costs exclude:</p> <ul style="list-style-type: none"> <li>- the cost of land</li> <li>- the cost of buildings to be used for purposes unrelated to the purposes in respect of which the premises are, or will become, prescribed premises</li> <li>- costs for buildings unrelated to the prescribed premises activity or activities</li> <li>- consultancy fees relating to the works.</li> </ul>	
<b>Fee component</b>	<b>Proposed fee</b>
Cost of works: \$	N/A

13.4 Proposed licence fee (new licences and licence renewals)		
<b>Detailed licence fee calculations</b>		
<p><b>Part 1 Premises component</b> (see r.5D and Part 1 of Schedule 4 of the EP Regulations)</p> <p>The production or design capacity should be the maximum capacity of the premises. For most categories, the production or design capacity refers to an annual rate. The figure should be based on 24 hour operation for 365 days, unless there is another regulatory approval or technical reason that restricts operation.</p> <p>The premises component fee applies to the category in Part 1, Schedule 4 incurring the higher or highest amount of fee units in accordance with r.5D(2) of the EP Regulations.</p> <p>List all categories (insert additional rows as required). Use only the higher or highest amount of fee units to determine the Part 1 fee component.</p>		
Category	Production or design capacity	Fee units
Using the higher or highest amount of fee units, Part 1 component subtotal		
<p><b>Part 2 Waste</b> (see r.5D(1a)(b) and Part 2 of Schedule 4 of the EP Regulations)</p> <p>If your premises includes one or more of the following categories specify any applicable Part 2 waste amounts. Do not include Part 3 waste components of these discharges in the below calculations.</p> <p>Categories: 5, 6, 7, 8, 9, 12, 14, 44, 46, 53, 54A, 70, 80, or 85B</p> <p>Part 2 waste means waste consisting of –</p> <ul style="list-style-type: none"> <li>(a) tailings; or</li> <li>(b) bitterns; or</li> <li>(c) water to allow mining of ore; or</li> <li>(d) flyash; or</li> <li>(e) waste water from a desalination plant.</li> </ul> <p>If the premises does not fall into one of the categories listed above, or there are no applicable Part 2 waste amounts, the sub total for this section will be \$0.</p> <p>Insert additional rows as required. Sum all Part 2 waste fees to determine the sub total.</p>		
Discharge quantity (tonnes/year)	Fee units	
Part 2 component subtotal		\$ 0.00
<p><b>Part 3 Waste – Discharges to air, onto land, into waters</b> (see Part 3 of Schedule 4 of the EP Regulations)</p> <p>Choose the appropriate location of the discharge and enter the discharge amount(s) in the units specified in the EP Regulations. This should be the amount of waste expected to be discharged over the next 12 months, expressed in the units and averaging period applicable for that waste kind (for example, g/minute or kg/day). Amounts can be measured, calculated, or estimated and can be based on data acquired over the previous 12 months, but should be based on the maximum premises capacity and not the forecast operating hours.</p> <p>Where there are discharges, all prescribed waste types must be considered in the fee calculation. If a specified waste type is not present in the discharge, this must be justified using an appropriate emission estimation technique (for example, sampling data, industry sector guidance notes, National Pollution Inventory guides and emission factors).</p>		

Discharges to air			
Discharges to air	Discharge rate (g/min)	Discharges to air	Discharge rate (g/min)
Carbon monoxide		Nickel	
Oxides of nitrogen		Vanadium	
Sulphur oxides		Zinc	
Particulates (Total PM)		Vinyl chloride	
Volatile organic compounds		Hydrogen sulphide	
Inorganic fluoride		Benzene	
Pesticides		Carbon oxysulphide	
Aluminium		Carbon disulphide	
Arsenic		Acrylates	
Chromium		Beryllium	
Cobalt		Cadmium	
Copper		Mercury	
Lead		TDI (toluene-2, 4-di-iso-cyanate)	
Manganese		MDI (diphenyl-methane di-iso-cyanate)	
Molybdenum		Other waste	
Part 3 component subtotal		\$	
Discharges onto land or into waters			Discharge rate
1. Liquid waste that can potentially deprive receiving waters of oxygen (for each kilogram discharged per day) —	(a) biochemical oxygen demand (in the absence of chemical oxygen demand limit)		
	(b) chemical oxygen demand (in the absence of total organic carbon limit)		
	(c) total organic carbon		
2. Bio-stimulants (for each kilogram discharged per day) —	(a) phosphorus		
	(b) total nitrogen		
3. Liquid waste that physically alters the characteristics of naturally occurring waters —	(a) total suspended solids (for each kilogram discharged per day)		
	(b) surfactants (for each kilogram discharged per day)		
	(c) colour alteration (for each platinum cobalt unit of colour above the ambient colour of the waters in each megalitre discharged per day)		
	(d) temperature alteration (for each 1°C above the ambient temperature of the waters in each megalitre discharged per day) — (i) in the sea south of the Tropic of Capricorn (ii) in other waters		

4. Waste that can potentially accumulate in the environment or living tissue (for each kilogram discharged per day) —	(a) aluminium	
	(b) arsenic	
	(c) cadmium	
	(d) chromium	
	(e) cobalt	
	(f) copper	
	(g) lead	
	(h) mercury	
	(i) molybdenum	
	(j) nickel	
	(k) vanadium	
	(l) zinc	
	(m) pesticides	
	(n) fish tainting wastes	
	(o) manganese	
5. <i>E. coli</i> bacteria as indicator species (in each megalitre discharged per day) —	(a) 1,000 to 5,000 organisms per 100 ml	
	(b) 5,000 to 20,000 organisms per 100 ml	
	(c) more than 20,000 organisms per 100 ml	
6. Other waste (per kilogram discharged per day) —	(a) oil and grease	
	(b) total dissolved solids	
	(c) fluoride	
	(d) iron	
	(e) total residual chlorine	
	(f) other	
Part 3 component subtotal		
<b>Summary – Proposed licence fee</b>		
Part 1 Component		
Part 2 Component		
Part 3 Component		
Total proposed licence fees:		
<b>13.5 Prescribed fee for registration</b>		
A fee of 24 units applies for an application for registration of premises, unless the occupier of the premises holds a licence in respect of the premises, in accordance with r.5B(2)(c) of the EP Regulations.		<input checked="" type="checkbox"/> (Tick to acknowledge)

<b>13.6 Amendment fee (works approval or licence)</b>		
<p>The fee prescribed for an application for an amendment to a works approval or licence is calculated in accordance with r.5BB(1)(a) of the EP Regulations:</p> <ul style="list-style-type: none"> <li>for a single category of prescribed premises to which the works approval or licence relates, by using the fee unit number corresponding to the prescribed premises category and relevant design capacity threshold in Schedule 4 Part 1 of the EP Regulations.</li> <li>for multiple categories of prescribed premises to which the works approval or licence relates, by using the highest fee unit number corresponding to the prescribed premises categories and design capacity threshold in Schedule 4 Part 1 of the EP Regulations.</li> </ul>		
Fee Units	Proposed fee	
■	■	
<b>13.7 Prescribed fee for clearing permit</b>		
<p>In accordance with the <a href="#">Guideline: Industry Regulation Guide to Licensing</a> and <a href="#">Procedure: Native vegetation clearing permits</a>, where approval to clear native vegetation is sought as part of an application for a works approval or licence, DWER may elect to either jointly or separately determine the clearing component of the application. Where DWER separately determines the clearing component of an application, the application will be deemed to be an application for a clearing permit under s.51E of the EP Act and processed accordingly.</p> <p>Note: If a clearing permit application has been separately submitted and accepted by DWER, a refund for the clearing permit application will not be provided where DWER determines to address clearing requirements as part of a related works approval application.</p>		<input type="checkbox"/> (Tick to acknowledge)
<b>13.8 Information and data used to calculate proposed fees</b>		
<p>The detailed calculations of fee components, including all information and data used for the calculations are to be provided as attachments to this application, labelled as <b>Attachment 10</b>, with an appropriate suffix (for example 10A, 10B etc.). Please specify the relevant attachment number in the space/s provided below.</p>		
Proposed fee for works approval	Attachment No.	
Details for cost of works	N/A	
Proposed fee for licence	Attachment No.	
Part 1: Premises	N/A	
Part 2: Waste types	N/A	
Part 3: Discharges to air, onto land, into waters	N/A	
<b>Part 14: Commercially sensitive or confidential information</b>		
<p><b>NOTE:</b>                  Information submitted as part of this application will be made publicly available. If you wish to submit commercially sensitive or confidential information, please identify the information in Attachment 11, and include a written statement of reasons why you request each item of information be kept confidential.                  Information submitted later in the application process may also be made publicly available at DWER's discretion. For any commercially sensitive or confidential information, please follow the same process as described above.                  DWER will take reasonable steps to protect genuinely confidential or commercially sensitive information. However, please note that DWER cannot commit to redacting all personal information from all supporting documents. You are advised to ensure that all personal information, including signatures, are removed from supporting documents prior to submitting them to the department. Please note that all submitted information may be the subject of an application for release under the <i>Freedom of Information Act 1992</i>.</p>		
All information which you would propose to be exempt from public disclosure has been separately placed in a redacted version of the application form and its supporting documentation. Note that this is in addition to the unredacted version(s) provided to DWER for its assessment. Grounds for claiming exemption in accordance with Schedule 1 to the <i>Freedom of Information Act 1992</i> must be specified in Attachment 11 (located at the end of this form).	Attached	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>Part 15: Submission of application</b>	
<p><b>INSTRUCTIONS:</b>                      Check one of the boxes below to nominate how you will submit your application.                      Files larger than 50MB cannot be received via email by DWER. Files larger than 50MB can be sent via File Transfer. Alternatively, email DWER to make other arrangements.</p>	
<p>A full, signed, electronic copy of the application form including all attachments has been submitted via email to <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>;  <b>OR</b></p>	<input type="checkbox"/>
<p>A signed, electronic copy of the application form has been submitted via email to <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a> and attachments have been submitted via File Transfer, or electronically by other means as arranged with DWER;  <b>OR</b></p>	<input checked="" type="checkbox"/>
<p>A full, signed hard copy has been sent to:                      APPLICATION SUBMISSIONS                      Department of Water and Environmental Regulation                      Locked Bag 10                      Joondalup DC WA 6919</p>	<input type="checkbox"/>

**Part 16: Declaration and signature**

**General**

I / We confirm and acknowledge that:

- the information contained in this application is true and correct;
- I / we have legal authority to sign on behalf of the applicant (where authorisation provided);
- I / we have not altered the requirements and instructions set out in this application form;
- I / we have provided a valid email address in Section 2.3 for receipt of correspondence electronically via email from DWER in relation to this application;
- that successful delivery to my / our server constitutes receipt of correspondence sent electronically via email from DWER in relation to this application; and
- I / we have provided a valid postal and/or business address in Section 2.4 for the service of all Part V documents.
- giving or causing to be given information that to my knowledge is false or misleading is an offence under s.112 of the EP Act and may incur a penalty of up to \$100,000.

**Publication**

I / We confirm and acknowledge:

- this application (including all attachments apart from the sections identified in Attachment 11) is a public document and may be published;
- marine surveys provided in accordance with Part 5 will be published and used, for the purposes of the IMSA project, in accordance with your declaration made in the *Metadata and Licensing Statement*;
- all necessary consents for the publication of information have been obtained from third parties;
- information considered exempt from public disclosure has been noted by redaction of a separately provided copy of the completed application form and its supporting documentation (in accordance with Part 14), with reasons as to why the information should be exempt in accordance with the grounds specified in Schedule 1 to the *Freedom of Information Act 1992 (WA)* being provided in Attachment 11;
- subsequent information provided in relation to this application will be a public document and may be published unless written notice has been given to DWER by the applicant, at the time the information is provided, claiming that the information is considered exempt from public disclosure; and
- the decision to not publish information will be at the discretion of the CEO of DWER and will be made consistently with the provisions of the *Freedom of Information Act 1992 (WA)*.

Signature	01-Oct-2024
Name 	Date
Position 	---
Signature ----	Date
Name ---	
Position ---	

**NOTE: This form may be signed:**

- if the applicant is an individual, by the individual;
- if the applicant is a corporation, by:
  - the common seal being affixed in accordance with the *Corporations Act 2001 (Cth)*; or
  - two directors; or
  - a director and a company secretary; or
  - if a proprietary company has a sole director who is also the sole company secretary, by that director; and
- by a person with legal authority to sign on behalf of the applicant.

**ATTACHMENT 11 – Confidential or commercially sensitive information**

Request for exemption from publication			
Information which you consider should not be published, on the grounds of a relevant exemption found in Schedule 1 to the <i>Freedom of Information Act 1992</i> (WA), must be specified in this Attachment. Add additional rows as required.			
<b>NOT FOR PUBLICATION IF GROUNDS FOR EXEMPTION ARE DETERMINED TO BE ACCEPTABLE</b>			
Section of this form:	N/A	Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	
<p>_____</p> <p>Full Name</p> <p>_____</p> <p>Signature <span style="margin-left: 200px;">_____</span></p> <p style="margin-left: 200px;">Date</p>			



# West Musgrave Copper and Nickel Project

## Licence Amendment Application – Bulk Fuel Storage and Waste Transfer Station

### Attachment 3B Project Activities

September 2024

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## DOC CONTROL NO: WM-0000-APR-APL-0035

Rev	Originator	Checked by	Approved by	Signature	Date
0	Danie Richter – Senior Advisor- Environment Systems and Compliance	[Redacted] [Redacted] [Redacted] [Redacted] [Redacted]	[Redacted] [Redacted] [Redacted]	[Redacted Signature] <small>09:31 GMT+10</small>	01-Oct-2024

## Disclaimer

This Attachment 3B Project Activities (Document) supporting the Licence Amendment Application (Bulk Diesel Tanks and Waste Transfer Station) for the West Musgrave Copper and Nickel Project has been prepared by OZ Minerals Musgrave Operations Pty Ltd (OZ) for submission to the Government of Western Australia's Department of Water and Environment Regulation (DWER).

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This Document includes "forward-looking statements". These statements relate to expectations, beliefs, intentions or strategies regarding the future. These statements are identified by the use of words like "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "would," "should," "seek," and similar expressions. The forward-looking statements reflect views and assumptions concerning future events as of the date of this Document and are subject to future conditions, and other risks and uncertainties, including but not limited to economic and political conditions and sovereign risk. Any forward-looking statements are subject to various risk factors that could cause the project's actual results to differ materially from the results expressed or anticipated in these statements. Such statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors (including the risks set out in this document), many of which are beyond the control of OZ and its directors and management. OZ does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this Document will actually occur and cautions individuals not to place undue reliance on these forward-looking statements. OZ has no intention of updating or revising forward-looking statements, regardless of whether new information, future events or any other factors affect the information, contained in this Document, and which may affect the finding or projections contained in this document, except where required by law. All sections in this Document should be viewed in the context of the entire Document.

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## 1. INTRODUCTION

### 1.1 Background

OZ Minerals Musgrave Operations Pty Ltd (OZ) is proposing to develop the West Musgrave Copper and Nickel Project, referred to as the West Musgrave Project (WMP) or the project.

The WMP is located in the West Musgrave Ranges of Western Australia approximately 1,300 km north-east of Perth near the intersection of the borders between Western Australia, South Australia and the Northern Territory. The WMP is within the Ngaanyatjarra Native Title determination, and Class A Reserve No. 17614 (for the Use and Benefit of Aboriginal Inhabitants). The nearest towns include the Indigenous Communities of Jameson (Mantamaru) 26 km north, Blackstone (Papulankutja) 50 km east, and Warburton (Milyirrtjarra) 110 km west of the project (see Figure 1).

The project, with a current expected life of approximately 26 years<sup>1</sup>, will consist of:

- Mining of copper and nickel ore from two open cut mine pits using conventional blast, load and haul methods.
- Placement of mine waste into permanent Waste Rock Dumps (WRDs) and dedicated Tailings Storage Facility (TSF) adjacent to mine pit voids.
- Milling and processing of ore using dry grinding (Vertical Roller Mills (VRM)) and flotation to produce two separate copper and nickel concentrates.
- Temporary electric power generation facility using thermal (fossil fuel) power generation to enable plant commissioning activity while the permanent thermal electric power generation facility is being brought into commercial operation.
- Permanent electric power generation facility using a combination of renewable power infrastructure (solar photovoltaic panels, wind turbines and battery energy storage) supported by thermal (fossil fuel) power generation.
- Development of a process/potable water supply borefield that may include a combination of overland and/or underground pipelines for use during construction and operations.
- Miscellaneous infrastructure, including stormwater management infrastructure (bunds and drains), internal roads and service tracks, a dedicated site access road, accommodation village (approximately 450 beds during operations and 1,100 during construction), airstrip, wastewater treatment, landfill and other supporting infrastructure including offices, warehouses and workshops.
- Concentrate will be transported to Esperance via existing roads and rail networks.

A summary of the key project characteristics is presented in Table 1.

---

<sup>1</sup> The WMP is currently in temporary suspension, and a decision on the future development of the project will be made in 2027. If the decision is to proceed with the current project design, the indicated life of mine would apply.

**Table 1: Key Project Characteristics**

Elements	Location	Proposed Extent Authorised
<b>Physical Element</b>		
Mine and associated infrastructure		Clearing of up to 4,213.3 ha of native vegetation within a Development Envelope of 21,680 ha.
<b>Operational Element</b>		
Mining voids		Below water table mining Nebo pit void to be backfilled above water table post-closure Babel pit void to be a permanent and episodic pit lake post-closure
Mineral processing plant (MPP)	Figure 2	Processing of up to 13.5 million tonnes of metallic ore through: Primary and secondary crushing Grinding Flotation, product and waste circuits Concentrate storage Water storage infrastructure
Mining waste (waste rock)		Placement of waste rock into permanent WRDs
Ore processing waste (tailings)		Disposal of tailings into a TSF and/or Nebo pit void
Temporary electric power generation facility		Up to 60 MW (instantaneous load requirement) of fossil fuel electricity generation.
Permanent electric power generation facility		Up to 60 MW (instantaneous load requirement) of fossil fuel electricity generation. Up to 100 MW of solar photovoltaic electricity generation. Up to 100 MW of wind turbine electricity generation. Up to 100 MW of battery energy storage.
Water supply		Abstraction of up to 7.5 GL/a of groundwater from the borefield and through dewatering



Figure 1: Site Location

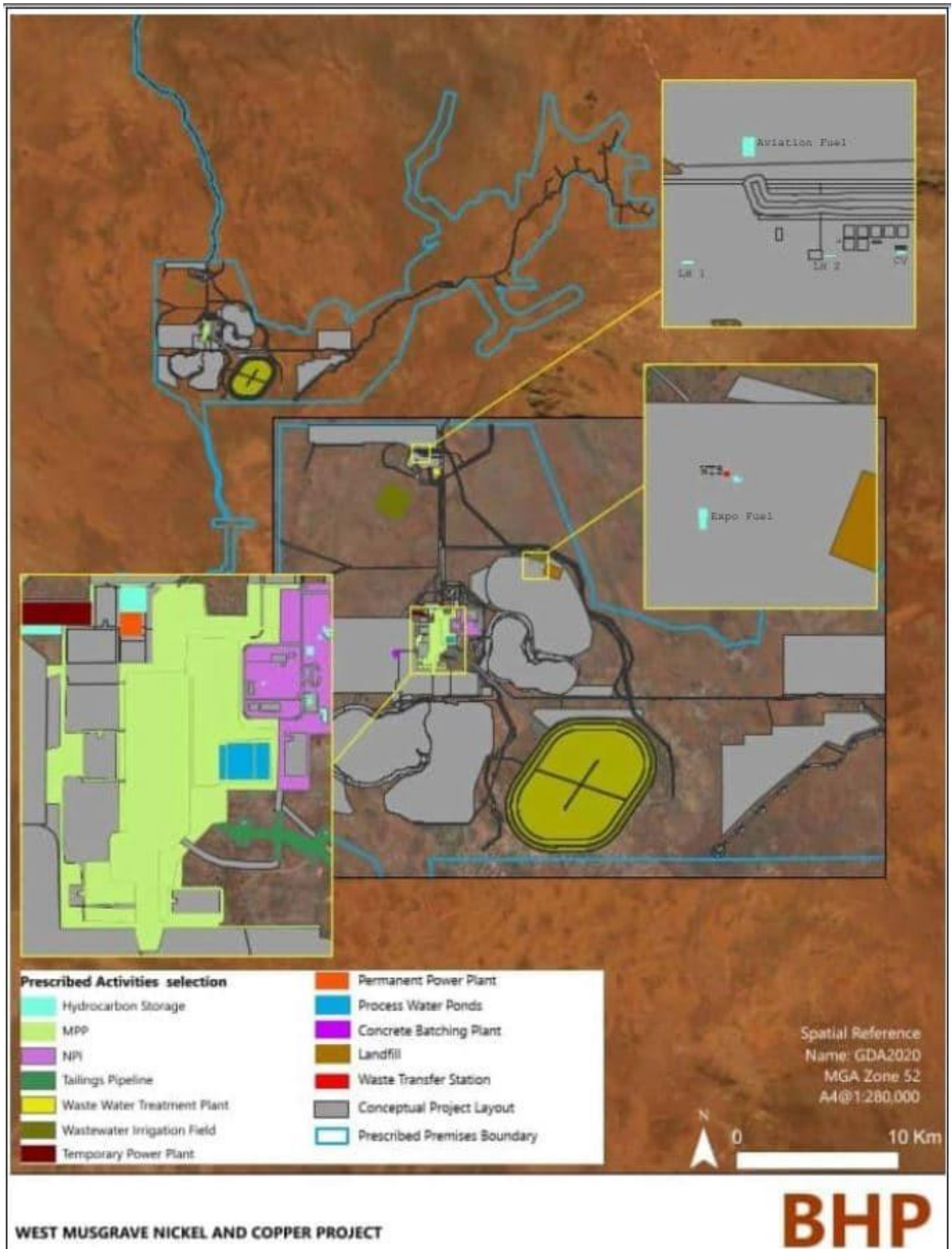


Figure 2: Location of Key Physical and Operational Elements



## 1.2 Purpose

### 1.2.1 Additional infrastructure

This Licence Amendment deals with the installation and construction of the following infrastructure, approved under Works Approval W6579/2021/1 (the WMP Works Approval), as amended on 17 July 2024:

- Expo Fuel Facility - Construction and installation activities at the Expo fuel facility have been completed, as detailed in the Critical Containment Infrastructure Report (CCIR) provided to DWER on 29 July 2024
- Aviation Fuel Facility - Construction and installation activities at the Aviation Fuel facility have been completed as detailed in the CCIR provided to DWER on 23 July 2024
- Waste Transfer Station - Construction of the Waste Transfer Station has been completed, as detailed in the Environmental Compliance Report provided to DWER on 27 August 2024
- Accommodation Power Stations Fuel Storage facilities - Installation of the Accommodation Power Stations Fuel Storage facilities have been completed, as detailed in the CCIR provided to DWER on 13 September 2024.

This application seeks approval to amend the existing License (L9375/2023/1) under the requirements of Section 57 of the Environment Protection Act 1986 (EP Act) to include the operation of the abovementioned facilities. The information presented in this document aims to assist DWER in assessing the Licence amendment application by summarising information relevant to compliance with the conditions of the WMP Works Approval.

### 1.2.2 Administrative Change

The application also seeks to amend the definition of the annual reporting period and the dates for the submission of annual and biennial reports, as set out in Section 2.3, to allow for the coordination of annual reporting across BHP Western Australia Nickel operations.

### 1.2.3 Existing infrastructure

This Licence Amendment application also seeks to deal with the amendment of the existing Wastewater Treatment Plant (WWTP) infrastructure, approved under the existing Licence (L9375/2023/1) to reflect the amended Department of Health (DoH) approval. The WWTP has consistently achieved the DoH and DWER requirements without the use of ozone, refer to attached annual recycled water compliance report submitted to DoH August 2024, and as such, given the risk to human health arising from an excess of ozone, the decision has been made to remove this from the disinfection process without compromising the treated effluent water quality

## 1.3 Project Summary

### 1.3.1 Location

The WMP is located in the West Musgrave Ranges of Western Australia, approximately 1,300 km northeast of Perth, near the intersection of the borders between Western Australia, South Australia and the Northern Territory. The nearest towns include the Indigenous Communities of Jameson (Mantamaru) 26 km north, Blackstone (Papulankutja) 50 km east, and Warburton (Milyirrtjarra) 110 km west of the project (Figure 1).

## 1.3.2 Tenure

OZ, via its subsidiaries, currently holds Mining Leases, Miscellaneous Licences and Exploration Licences over the Prescribed Premise area (Table 2 and Figure 3).

**Table 2: Tenements for the West Musgrave Project**

Tenement	Area (ha)	Grant Date	Expiry Date
M69/149	11,464	04/07/2022	03/07/2043
L 69/42	13,539	24/07/2019	23/07/2040
L 69/44	1,467	8/05/2019	7/05/2040
L 69/45	76,634	9/11/2018	7/05/2040
L 69/56	1,635	24/02/2023	23/02/2044
L 69/57	7,281	24/02/2023	23/02/2044

\*Renewal being processed. Expiry date will be updated.

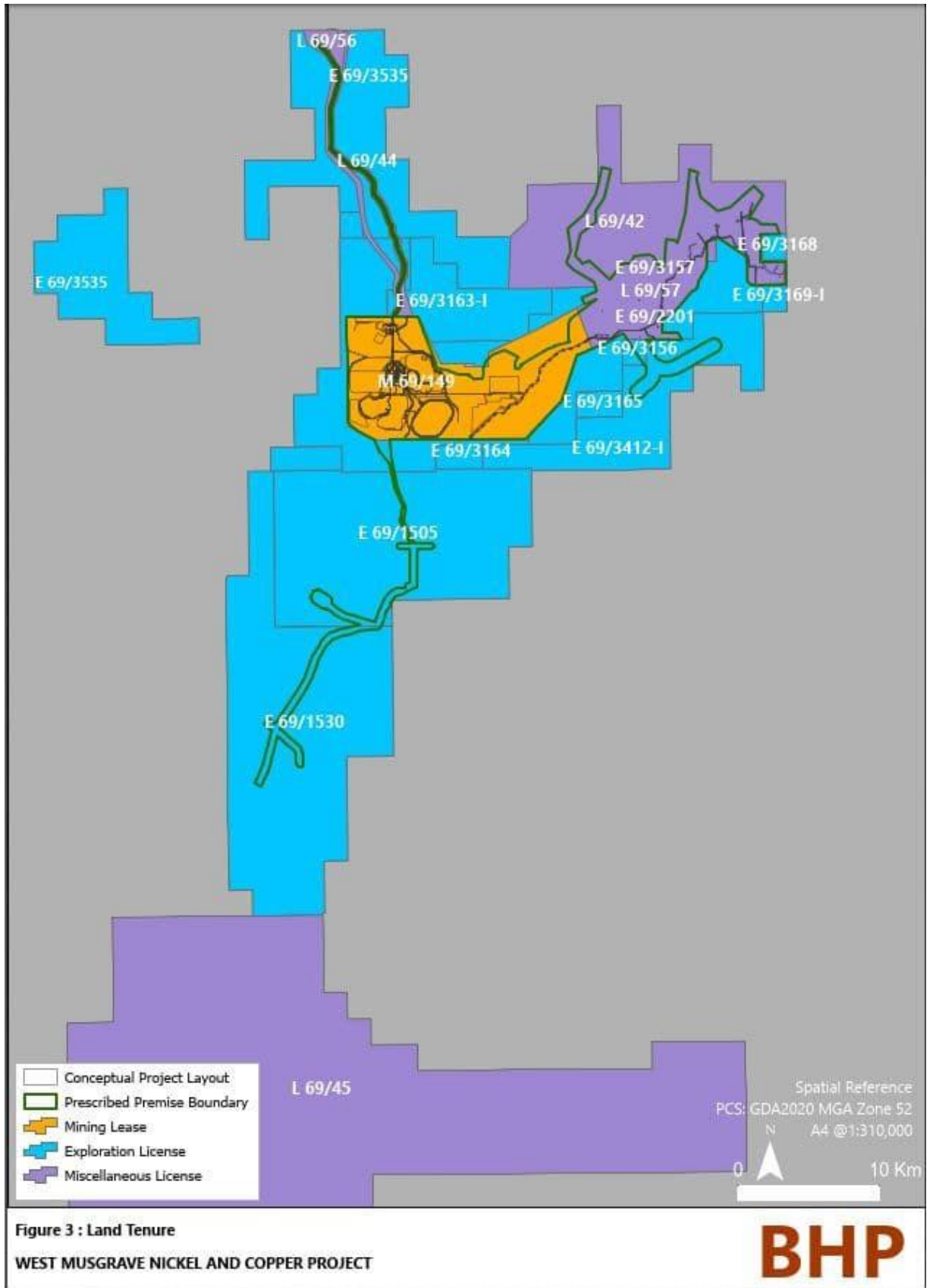


Figure 3: Land Tenure

### 1.3.3 Licensee and Occupier Premises

The project proponent is OZ Minerals Musgrave Operations Pty Ltd, previously a subsidiary of OZ Minerals. OZ Minerals was acquired by BHP in May 2023, but the details of the proponent did not change.

The proponent and key contact details are outlined in Table 3.

**Table 3: Proponent and Key Contact Details**

Proponent	
Name:	OZ Minerals Musgrave Operations Pty Ltd
Address:	Level 18, 171 Collins Street, Melbourne, Victoria 3000
Email:	[REDACTED]
ABN	[REDACTED]
ACN	[REDACTED]
Key Contact	
Name:	[REDACTED]
Company:	BHP
Position:	[REDACTED]
Address:	[REDACTED]
Phone:	[REDACTED]
Email:	[REDACTED]

### 1.3.4 Prescribed Premise Categories

The WMP Works Approval authorises the prescribed premises categories summarised in Table 4. WMP Infrastructure relevant to this application are indicated in bold font.

**Table 4: Prescribed Premise Categories for WMP**

Category Number	Description of Category	Assessed production/design capacity	WMP Infrastructure
5	Processing or beneficiation of metallic or non-metallic ore; premises on which: a) Metallic or non-metallic ore is crushed, ground, milled or otherwise processed b) Tailings from metallic or non-metallic ore are reprocessed	13.5 million tonnes per year	Minerals Processing plant (MPP) and TSF

Category Number	Description of Category	Assessed production/design capacity	WMP Infrastructure
	c) Tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam		
52	Electric power generation: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel	60 MW	Temporary and permanent thermal (diesel fuel) electric power generation sets
57	Used tyre storage (general): premises (other than premises within category 56) on which used tyres are stored	500 tyres	Used tyre storage area
62	<b>Solid waste depot; premises on which waste is stored or sorted, pending final disposal or re-use, other than in the course of operating:</b> a) a refund point (as defined in the <i>Waste Avoidance and Resource Recovery Act, 2007</i> (WA) section 47C(1)) (a refund point) or b) a facility or other place (an aggregation point) for the aggregation of containers that have been returned to refund points until those containers are accepted for processing or disposal	1,800 tonnes per year	Waste transfer station
73	<b>Bulk storage of chemicals, etc: premises on which acids, alkalis or chemicals that:</b> a) contain at least one carbon to carbon bond and b) are liquid at STP (standard temperature and pressure), are stored.	8901 m <sup>3</sup> in aggregate	<ul style="list-style-type: none"> <li>• Permanent electricity generation fuel storage area</li> <li>• Temporary electricity generation fuel storage area</li> <li>• NPI Bulk Fuel Farm</li> <li>• Aviation Fuel Storage</li> <li>• Accommodation Village Fuel Storage</li> <li>• Exploration Camp Fuel Storage</li> <li>• Reagents storage area</li> <li>• Waste oil storage</li> <li>• Bulk Logistics yard</li> <li>• MPP Fuel storage</li> <li>• Mobile fuel storage</li> </ul>

## 1.3.5 Current Licence

The following prescribed premises have been licenced under License L9375/2023/1:

**Table 5 - Currently licenced prescribed premises**

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production / design capacity
Category 12: Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	1,500,000 tonnes per year
Category 54: Sewage facility: premises — (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	275 m3/day
Category 64: Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial. 2,300 tonnes per year	2,300 tonnes per year 150,000 tonnes per year
Category 77: Concrete batching and cement products manufacturing: premises on which cement products or concrete are manufactured for use at places or premises other than those premises.	150,000 tonnes per year

### 1.3.6 Timeline for Development

The development of West Musgrave Project is subject to the broader review of NiW business by 2027, which will determine the commencement dates for the production. The current life of mine (LoM) is estimated at approximately 26 years.

The proposed schedule for the project elements subject to this Works Approval is described in Table 5. The infrastructure dealt with by this application is indicated in bold font.

**Table 6: Proposed Schedule for the West Musgrave Project**

Infrastructure	Proposed Construction Commencement	Commissioning Period (weeks)
MPP (including TSF and associated containment infrastructure and pipelines)	Construction commenced 2023, currently suspended until 2027, when the project will be re-evaluated.	26 weeks
Mobile crushing and screening plant (infrastructure construction)	Completed, Licenced	N/A
Concrete batching plant	Completed, Licenced	N/A
Thermal electricity generation facility (gen-set engine hall)	Commencement suspended until 2027 when the project will be re-evaluated.	26 weeks
SBR WWTP and irrigation field	Decommissioned	Completed
Passive WWTP	Completed, Licenced	Completed
Used tyre storage area	Commencement suspended until 2027 when the project will be re-evaluated.	N/A
<b>Waste transfer station</b>	<b>Completed, ECR Submitted</b>	<b>N/A</b>
Landfill facility	Completed, Licenced	N/A
Permanent electricity generation fuel storage area	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks
Temporary electricity generation fuel storage area	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks
<b>Aviation fuel storage</b>	<b>Completed, CCIR Submitted</b>	<b>N/A</b>
NPI Bulk Fuel Farm)	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks
Reagents Storage Area	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks
<b>Accommodation Village Fuel Storage</b>	<b>Completed, CCIR Submitted</b>	<b>N/A</b>
<b>Exploration Camp Fuel Storage</b>	<b>Completed, CCIR Submitted</b>	<b>N/A</b>
Bulk Logistics yard	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks

Infrastructure	Proposed Construction Commencement	Commissioning Period (weeks)
MPP Fuel storage	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks
Mobile fuel storage	Commencement suspended until 2027 when the project will be re-evaluated.	10 weeks

N/A indicates that commissioning is not anticipated to be required for the nominated infrastructure.

### 1.3.7 Existing Environment

A description of the existing environment at the project site is provided in Attachment 7 to the Works Approval Application and is not repeated here.



## 2. DETAIL OF LICENCE AMENDMENT APPLICATION

The key characteristics of the project are provided in Table 1. The following sections detail the content of this Licence Application.

### 2.1 Chemical storage (Category 73)

#### 2.1.1 Works Approval

##### 2.1.1.1 Facility-specific design and construction/Installation requirements

This amendment application deals with the following bulk fuel storage infrastructure authorised under the WMP Works Approval:

- Exploration Camp Fuel Storage (Table 2, Line 10 of the WMP Works Approval), including:
  - (a) 4 x self-bunded bullet style 110 kL diesel tanks and associated distribution and refilling infrastructure for heavy vehicles;  
but not including:
    - (b) 2 x self-bunded bullet style 55kL diesel tanks and associated distribution and refilling infrastructure for heavy vehicles; and
    - (c) 1 x self-bunded bullet style 50 kL diesel tanks and associated distribution and refilling infrastructure for light vehicles.
- Accommodation Village Fuel Storage (Table 2, Line 9 of the WMP Works Approval), including:
  - 3 x self-bunded bullet style 67 kL diesel tanks and associated distribution and refilling infrastructure, total capacity of 201 kL.
- Aviation Fuel Storage (Table 2, Line 8 of the WMP Works Approval), including:
  - (a) Aviation fuel storage area containing a self-bunded tank with total capacity of 110 kL;
  - (b) Fuel unloading and refueling areas constructed with reinforced concrete slab graded to drain to a low point with collection sump to contain spills and leaks.

##### 2.1.1.2 General fuel storage and delivery areas requirements

Table 2, Line 4 of the WMP Works Approval specifies the following requirements for all bulk fuel storage areas.

*All bulk fuel storage and handling to be constructed in accordance with AS 1940 and AS 3833, and:*

- (a) fitted with leak detection system and alarms;*
- (b) equipped with high level alarms to prevent overflow during operation;*
- (c) designed to be able to transfer potentially contaminated stormwater within bunded areas to an oily water separator.*

### 2.1.2 Bulk Fuel Storage Construction/Installation Compliance

On completion of the construction of the abovementioned facilities, the Critical Containment Infrastructure Reports required under Conditions 7 and 8 of the WMP Works Approval was submitted to the Department as follows:

- Expo Fuel Facility Critical Containment Infrastructure Report (CCIR) provided to DWER on 29 July 2024.
- Aviation Fuel CCIR provided to DWER on 23 July 2024.
- Accommodation Power Stations Fuel Storage CCIR provided to DWER on 13 September 2024.

The reports demonstrate that the relevant facilities had been constructed in general compliance with the conditions of WMP Works Approval. The only deviation noted was in respect of the aviation fuel facility. There the filling area for the tank was provided with a drive-over sump, and the aircraft refuelling area with fuel-resistant membrane on the runway, instead of the sloped concrete and sump arrangement specified by the WMP Works Approval membrane.

The various CCIRs demonstrate that the facilities comply with all the other requirements of the WMP Works Approval as set out in 2.1.1.1 and 2.1.1.2, above.

## 2.2 The Solid waste storage and transfer area (Category 62)

The solid waste storage and transfer area, known as the Waste Transfer Station (WTS) was approved under the design and construction/installation requirements specified in Table 1 (10) (Category 62) of the WMP Works Approval, as follows:

*Solid waste transfer area constructed over a covered and bunded concrete pad to prevent stormwater access.*

### 2.2.1 Waste Transfer Station Construction/Installation Compliance

The Waste Transfer Station Environmental Compliance Report was provided to DWER on 27 August 2024 and demonstrates that the construction of the WTS complies with the requirements of the WMP Works Approval. The location of the WTS is indicated in Figure 2.

## 2.3 Administrative change

As the WMP has now transferred to BHP’s Western Australia Nickel division, and to simplify statutory reporting requirements across operations in the division, the following administrative changes are requested.

**Table 7 - Requested administrative amendments to Licence No. 9375/2023/1**

Licence condition/Section	Current condition	Assessed production/design capacity	WMP Infrastructure
Definitions 'annual period', page 11	annual period: a 12 month period commencing from 1 January until 31 December of the immediately following year.	annual period: a 12 month period commencing from 1 <b>July until 30 June</b> of the immediately following year.	To align with all other BHP Western Australian Nickel Part V reporting requirements.
10 b), page 7	The licence holder must: b) prepare and submit to the CEO by no later than 30 days after the end of that.	The licence holder must: b) prepare and submit to the CEO by no later than <b>30 September</b> an Annual Audit Compliance Report in the approved form.	To align with all other BHP Western Australian Nickel Part V reporting requirements.

Licence condition/Section	Current condition	Assessed production/design capacity	WMP Infrastructure
	annual period an Annual Audit Compliance Report in the approved form.		
11 (b), page 8	The licence holder must: b) submit that environmental report to the CEO by no later than 1 March in each year after the end of every second annual period (the first report being due on 1 March 2024, then biennially thereafter).	The licence holder must: b) submit that environmental report to the CEO by no later than <b>30 September</b> after the end of every second annual period (the first report being due on <b>30 September 2026</b> , then biennially thereafter).	To align with all other BHP Western Australian Nickel Part V reporting requirements.

## 2.4 Existing Infrastructure

An application is currently with the Department of Health (DoH) to modify the existing Recycled Water Scheme Approval to remove the use of ozone from the approved disinfection process. The system currently operates using UV and chlorine treatment only and consistently achieves results of E. Coli <1 cfu (mg/L), which indicates that the additional ozone disinfection is unnecessary. (refer to appended annual recycled water scheme compliance report). Additionally, the use of ozone in the disinfection process presents risks associated with human health arising from its toxicity. As the removal of ozone disinfection from the process has no detrimental effect on the level of disinfection, it is proposed to by-pass and lock out the ozone disinfection circuit to reduce health and safety risk.

**A1. DoH RECYCLED WATER SCHEME ANNUAL COMPLIANCE REPORT**



**Report to the Department of Health  
for the  
BHP – West Musgrave Project Passive  
WWTP  
for the period  
1 July 2023 to 30 June 2024**

## 1. Introduction

Section 25 of the West Musgrave Project Recycled Water Scheme requires the submission of an annual report in accordance with the Department of Health's *Recycled Water Annual Report Template*, as set out below.

An overall summary of the annual results is provided in Table 1, with more complete analysis provided in Table 2.

**Table 1- Summary of the West Musgrave Project recycling scheme**

Name of Scheme	<b>West Musgrave Project Recycled Water Scheme</b>
Approval Number	<b>H68/00000</b>
Date of Approval	<b>10 November 2023</b>
Local Government	<b>Shire of Ngaanyatjarra</b>
Address of Scheme Owner	<b>Level 18, 171 Collins Street, Melbourne, VIC 3000</b>
Scheme Information	<b>Recycled water is approved for use as Mining Process Water and for Dust Suppression.</b>
Location	<b>West Musgrave Copper and Nickel Project, Blackstone-Warburton Road, Mantamaru (Jameson)</b>
Source of recycled water	<b>West Musgrave Passive Wastewater Treatment Plant</b>
Volumes of recycled water produced per year	<b>Approved under DWER Licence: 100,375m<sup>3</sup>/year) Actual: 30,839 m<sup>3</sup>/ (July 2023 to June 2024)</b>
End uses of the recycled water	<b>Dust Suppression Mineral Processing Plant Process Water</b>
% of recycled water used in each one of the proposed end uses	<b>Dust Suppression: 100% Mineral Processing: 0%</b>
Type of treatment system	<b>Primary treatment in Anaerobic Baffled Reactor tanks (8 x 95kL tanks). Secondary treatment in 6 x 1,022 m<sup>2</sup> ABSORB™ biological filter bed units Tertiary treatment by chlorination, ozone disinfection and ultraviolet disinfection.</b>
Location of the WWTP	<b>Directly south of the construction village at the West Musgrave Copper and Nickel Project</b> <ul style="list-style-type: none"> <li>• <b>WWTP pump skid – -26.059959, 27.703096</b></li> <li>• <b>WWTP green pre-treatment tanks – -26.059959, 127.703096</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>WWTP control container – -26.05903, 127.703186</b></li> <li>• <b>WWTP treatment beds – -26.05906, 127.702576</b></li> <li>• <b>Chlorine contact tanks– -26.059101, 127.703096</b></li> </ul>
Minimum, average and maximum flows per day	<b>Minimum flow: July 2023: Ø54.1 kL/day</b> <b>Average flow: 84.5kL/day</b> <b>Maximum flow: Ø157.7kL/day</b>
Peak inflow of the plant	<b>June 2024: Ø157.7kL/day (4,612 kL for month)</b> <b>(Peak Design Inflow: 275m<sup>3</sup> (kL)/day)</b>
Number of people using the recycled water	<b>Used for dust suppression on roads only.</b>
Irrigation area in m <sup>2</sup>	<b>No water is irrigated.</b>
Risk exposure level	<b>Medium</b>

## 2. Quality of recycled water

### 2.1 Recycled water quality sampling results

Commissioning samples were taken on the following dates:

- 23 and 28 June 2023
- 12, 14, 19, 21, 26 and 28 June 2023
- 2, 9, 17, 25 and 30 August 2023

Post commissioning, monthly sampling was conducted for the full range of analytes<sup>1</sup> required under this Recycled Water Scheme and under the DWER Licence for the WWTP.

The full monthly sampling results are provided In Appendix 1 and the Ecosafe summary report as Appendix 2.

A summary of the sampling results is provided in Table 2.

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<sup>1</sup> Sampling is conducted monthly for E. coli, pH, nitrogen, phosphorous, suspended solids, algae and cyanobacteria, as indicated in the monitoring results in Appendix 1. Reporting



**Table 2 - Summary of laboratory recycled water quality results**

Location (site code)	Parameter	Unit	Limit	Frequency of sampling (e.g. weekly, monthly)	Total No of samples	Min	Max	Mean	Median	Complying (Yes/No)
WMWW Z0501	E. coli	CF U/100 ml	<10	Monthly, Quarterly *	15	<1	~1	<1	<1	Yes
WMWW Z0501	pH (field)		6.5 – 8.5	Monthly, Quarterly *	14	3.83	8.15	6.65	7.16	Yes
WMWW Z0501	Residual Chlorine (field)	Mg/l	0.2 - 2.0	Monthly, Quarterly *	14	0.1	3.2	0.5	0.2	Yes
WMWW Z0501	Turbidity	NTU	95%<2 Max<5	Monthly, Quarterly *	9	0.6	2.8	1.4	1.3	Yes

\* During commissioning (June – August 2023) multiple samples were taken per month. After approval of the RWS in November 2023, sampling was done monthly

## 2.2 Analysis of results

This Section provides a performance comparison against guidelines, and a performance summary is provided in Table 3, below.

All E. coli tests complied with the RWMP limit of 10 CFU/100mL, consistently achieving levels <1 CFU/100mL, indicating effective disinfection of the recycled water was achieved throughout the reporting period.

All turbidity tests were below the maximum value of 5 NTU. One of the 9 turbidity samples was unusually high and exceeded the 95%ile limit of 2 NTU. Statistical analysis of the test results shows the 95th percentile of the test results to be 2.3 NTU however the small sample size makes this value uncertain.

The residual free chlorine level of recycled water is required to be between 0.2 and 2.0 mg/L. Five of 14 samples tested on site were below the minimum, while one result exceeded the maximum value. The original concept and proposal of the WTPP scheme was to have a third pipe for recycled water to be used in accommodation toilets. In accordance with WA health this required a log reduction of 6.5 for virus and 4.5 for Protozoa and 5.0 bacteria, with a maximum of 4.0 per disinfection type. To achieve the Protozoa log reductions, ozone was required. Upon application, the WA department of Health expressed a strong desire for chlorination as the primary source of disinfection. The proposed system was changed to include a chlorinated water holding tank to drastically increase the CT time of the chlorination. As such, the current tertiary treatment system utilises ozone, UV and chlorine to disinfect the treated water. Any variability on residual chlorine is corrected through the use of the ozone and UV, as demonstrated in the E-Coli results consistently achieving measurements <1cfu/100mL.

Recycled water pH is required to be between 6.5 and 8.5. There were 14 on site tests conducted for pH during the assessed period. All samples complied with the pH limits apart from 3 tests in July 2023 when there was a problem with the field pH meter calibration. The meter was recalibrated on 25 July with all subsequent test results being within the RWS limits.

**Table 3 Summary of compliant tests**

Parameter	Compliant/Total Taken	Percentage Compliant
E. coli	15/15	100%
pH (Field)	11/14	78.6%
Residual Chlorine (Field)	9/14	64.3%
Turbidity	Max < 5: 9/9 95 <sup>th</sup> ile < 2: 8/9	100% 88.9%

As the plant was commissioned in June 2023, no comparison with the previous year's data is possible.

### 3. Emergency and Incident Management

No incidents that that led to an exceedance of the E. coli limits for recycled water occurred during the reporting period.

With regard to non-compliance with the other guideline values, the following actions have been taken:

- The variability of residual chlorine levels has been investigated with the WWTP supplier and has since been addressed by the installation of new chlorine probes in May 2023.
- The frequency of calibration and the calibration procedure for the field pH meter has been addressed to improve reliability.
- The cause of the high turbidity result of 9 August 2023 (during commissioning) was identified as a defective turbidity probe. Following replacement turbidity levels were within limits.
- Results from the commissioning samples and quarterly samples taken from June 2023 to April 2024 are summarised below. Please note that no samples were collected at the WWTP from September to December 2023 due to ongoing adjustments to the WWTP and the inability to obtain a representative sample of the final treatment effluent. The last round of sampling for this financial year was in April 2024. The July 2024 results will be included in the 2025 report.

### Major Infrastructure Works Carried Out

No major infrastructure works was carried out after the commissioning of the WWTP.

### 4. Complaints

No complaints regarding the quality of the recycled water were received during the reporting period.

## 5. Audit

As the Recycled Water Quality Management Plan was only approved in November 2023, an internal or external audit is not due yet. This will be due November 2026, with an external audit scheduled for November 2029.

## APPENDIX 1 – MONTHLY SAMPLING RESULTS

Barcode	Location	Primary Identifier	Asset	Task Name	Measure Units	Result	Task Performed Date	Task Performed By	Client
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	3.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	0.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	1.11	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	35.1	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	3.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	32.1	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	8.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	75.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chroomonas spp. - Result	cells/ml	8670.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Kirchneriellaspp. - Result	cells/ml	138000.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Monoraphidium spp. - Result	cells/ml	1120.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitzschia spp. - Result	cells/ml	1330.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Oocystis spp. - Result	cells/ml	725.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	28500.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	180000.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Bacillariophytes - Result	cells/ml	1330.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	169000.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	1180.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Flagellates - Result	cells/ml	8670.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	80.9	24/06/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.0	18/06/2024 12:41	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00071122074130 00100523047193 00241022066708	12/06/2024 08:16	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070822209812 00070822170786	12/06/2024 08:16	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		8.71	12/06/2024 08:12	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	4.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	0.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	1.02	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	33.4	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	3.6	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	29.8	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	0.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	80.1	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	36000.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	0.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	175.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Lagerheimia spp. - Result	cells/ml	25.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitzschia spp. - Result	cells/ml	500.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Oocystis spp. - Result	cells/ml	6000.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	4330.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Bacillariophytes - Result	cells/ml	575.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	35400.0	26/05/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.0	15/05/2024 07:25	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		8.13	15/05/2024 07:20	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070522216845 00070822037659	15/05/2024 07:20	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00240723027441 00100523065123 00070822209813	15/05/2024 07:20	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	8.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	1.05	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	31.4	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	3.1	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	28.3	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	23.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	83.8	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Aphanocapsa spp. < 2µm - Result	cells/ml	1800.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	53300.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitzschia spp. - Result	cells/ml	22400.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Oocystis spp. - Result	cells/ml	4600.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	34700.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	130000.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Bacillariophytes - Result	cells/ml	22400.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	102000.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	5000.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	0.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	18/04/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		9.2	03/04/2024 08:51	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.0	03/04/2024 08:50	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00240723009354 00070522216154 00100523056801	03/04/2024 08:50	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070522216192	03/04/2024 08:50	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	82.6	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Aphanocapsa spp. < 2µm - Result	cells/ml	750.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	6000.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitzschia spp. - Result	cells/ml	250.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Oocystis spp. - Result	cells/ml	7450.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	24000.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	101000.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Bacillariophytes - Result	cells/ml	250.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	99900.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	750.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Lagerheimia spp. - Result	cells/ml	62000.0	31/03/2024 16:08	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	3.0	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	2.0	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	0.82	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	28.9	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	1.8	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	27.1	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	0.0	30/03/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070522216157	12/03/2024 10:22	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00070522216189 00241022066413 00100423005912	12/03/2024 10:22	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		8.77	12/03/2024 10:15	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	5.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	4.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	0.98	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	26.7	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	1.7	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	25.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	0.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	85.9	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Anagnostidinema spp. - Result	cells/ml	1050.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Aphanocapsa spp. < 2µm - Result	cells/ml	1200.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chroomonas spp. - Result	cells/ml	100.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Golenkenia spp. - Result	cells/ml	800.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Lagerheimia spp. - Result	cells/ml	50.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitzschia spp. - Result	cells/ml	10.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Oocystis spp. - Result	cells/ml	148000.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	9670.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Pseudanabaena spp. - Result	cells/ml	1300.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Sphaerocystis spp. - Result	cells/ml	500.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	162000.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Bacillariophytes - Result	cells/ml	10.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	158000.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	3550.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Flagellates - Result	cells/ml	100.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	25/02/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave



WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		9.24	06/02/2024 07:53	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.08	06/02/2024 07:52	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00100423005727 00240723008584 00070522216179	06/02/2024 07:51	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070522216153	06/02/2024 07:50	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	4.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	900.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Golenkenia spp. - Result	cells/ml	5800.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Monoraphidium spp. - Result	cells/ml	500.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	11600.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Peridinium spp. - Result	cells/ml	800.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	21200.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	20400.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	0.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Flagellates - Result	cells/ml	800.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Eudorinaspp. - Result	cells/ml	480.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Kirchneriellaspp. - Result	cells/ml	100.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Micractiniumspp. - Result	cells/ml	300.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Sphaerocystis spp. - Result	cells/ml	700.0	23/01/2024 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070822248044	10/01/2024 16:39	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Phosphorus as P - Result	mg/L	0.72	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Nitrogen as N - Result	mg/L	63.3	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	4.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	250.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	0.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Golenkenia spp. - Result	cells/ml	275.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Nitrite + Nitrate as N - Result	mg/L	60.1	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	381000.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Peridinium spp. - Result	cells/ml	375.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Pseudanabaena spp. - Result	cells/ml	630.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Kjeldahl Nitrogen (TKN) as N - Result	mg/L	3.2	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	392000.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	390000.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	1030.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Flagellates - Result	cells/ml	375.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Suspended Solids (SS) - Result	mg/L	0.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	UVT Result	%	85.0	06/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	BOD, Total Algae & Total Cyanobacteria Sample - Cold Water		00070522109622	05/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Wastewater Suite Sample (M)		00240723059134 00100423017233 00070522109630	05/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.04	05/12/2023 07:34	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		9.36	05/12/2023 07:33	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Turbidity - Result	NTU	7.3	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	3.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	6.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Potentially Toxic Cyanophytes - Result	cells/ml	0.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Flagellates - Result	cells/ml	1800.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Cyanophytes - Result	cells/ml	36400.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Chlorophytes - Result	cells/ml	83700.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Total Algae Count - Result	cells/ml	122000.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Peridinium spp. - Result	cells/ml	1800.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Pseudanabaena spp. - Result	cells/ml	36400.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Other green cells - Result	cells/ml	325.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Monoraphidium spp. - Result	cells/ml	175.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Golenkenia spp. - Result	cells/ml	83000.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Chlamydomonas spp. - Result	cells/ml	200.0	21/11/2023 11:11	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Turbidity - Result	NTU	5.1	04/10/2023 07:46	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Biochemical Oxygen Demand - Result	mg/L	5.0	04/10/2023 07:46	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

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WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli - Result	CFU/100mL	0.0	04/10/2023 07:46	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Free Chlorine Residual Test (M) - Cold Water	mg/L	0.0	03/10/2023 07:50	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	pH Test (M) - Cold Water		9.34	03/10/2023 07:48	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	Turbidity Sample - Cold Water		00070822248014 00070822049886	03/10/2023 07:46	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave
WMWWZ0505	Waste Water Treatment Plant	Turkeys Nest Sample Point	Outlet (Wastewater)	E.coli Sample - Cold Water		00241022067142	03/10/2023 07:46	ALS Laboratory-Perth-ALS_Laboratory_Perth	BHP West Musgrave

## APPENDIX 2 – ECOSAFE SUMMARY REPORT



# **BHP - West Musgrave Arris WWTP Annual Sampling Summary Report**

**Report Date: 3rd of July 2024**

**BHP**

BHP  
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## Summary of Results

Routine monitoring of recycled water from the Arris wastewater treatment plant (WWTP) is required to comply with the approved Recycled Water Management Plan (RWMP) for the West Musgrave Project. An overall summary of the annual results is displayed in Table 1 with more complete analysis provided in Table 2.

**Table 1:** Annual summary of the total compliant tests for the Arris WWTP.

Parameter	Compliant / Total Taken	Percent Compliance <sup>1</sup>	
<b>Arris Passive WWTP Final Effluent (WMWWZ0501)</b>			
<b><i>E. coli</i></b>	<b>15 / 15</b>	<b>100%</b>	
<b>pH (Field)</b>	<b>11 / 14</b>	<b>79%</b>	
<b>Residual Chlorine (Field)</b>	<b>8 / 14</b>	<b>57%</b>	
<b>Turbidity</b>	<b>8 / 9</b>	<b>89%</b>	

<sup>1</sup> < 80% compliance is categorised as red, ≥ 80% but < 90% compliance is categorised as amber, ≥ 90% to 100% compliance is categorised as green.

All *E. coli* tests complied with the RWMP limit of 10 CFU/100mL indicating effective disinfection of the recycled water was achieved.

All turbidity tests were below the maximum value of 5 NTU. One of the 9 turbidity samples was unusually high and exceeded the 95<sup>th</sup> percentile limit of 2 NTU. Statistical analysis of the test results shows the 95<sup>th</sup> percentile of the test results to be 2.3 NTU however the small sample size makes this value uncertain.

Free chlorine residual of recycled water is required to be between 0.2 and 2.0 mg/L. Five of 14 samples tested on site were below the minimum while one result exceeded the maximum value.

Recycled water pH is required to be between 6.5 and 8.5. There were 14 on site tests conducted for pH during the assessed period. All samples complied with the pH limits apart from 3 tests in July 2023 when there was a problem with the field pH meter calibration. The meter was recalibrated on 25 July with all subsequent test results being within the RWMP limits.



**Ecosafe Recommendations for non-compliant results:**

Liaise with the WWTP operator to investigate the following:

- Variability of free chlorine residual.
- Scheduled calibration of the field pH meter to improve reliability
- Possible reason for the high turbidity result on 9 August 2023.

**Table 2:** Arris WWTP commissioning sampling results from June to July 2023

Arris Passive WWTP Final Effluent (WMWWZ0501)																	
Parameter	Unit	Limit <sup>1</sup>	June 2023		July 2023							August 2023				January 2024	April 2024
			23	28	12	14	19	21	26	28	2	9	17	25	30	10	2
			EP 2308 476	EP 23087 01	EP 23093 69	EP 23094 85	EP 23097 37	EP 23098 57	EP 23100 90	EP 23102 13	EP 2310 452	EP 23107 69	EP 23112 38	EP 23116 87	EP 23119 12	EP 2400 374	EP 2404 364
<i>E. coli</i>	CFU/ 100 mL	<10	<1	<1	<1	<1	<1	<1	<1	~1	~1	<1	<1	<1	<1	<1	<1
pH (Field)		6.5 – 8.5	8.12	8.15	3.85	3.83	6.9	3.84	7.42	7.46	7.12	6.87	N/A <sup>2</sup>	7.57	7.2	7.77	7.11
Residual Chlorine (Field)	mg/L	0.2 – 2.0	0.1	0.1	0.2	0.2	0.3	0.2	<0.1	0.1	0.2	1.0	N/A <sup>2</sup>	0.4	1.6	0.1	3.2
Turbidity	NTU	95% <2 Max <5	N/A	N/A	1.0	1.5	N/A	N/A	1.8	1.3	1.4	2.8	1.1	0.6	1.2	N/A	N/A

<sup>1</sup> – RWMP Limits are for ongoing monitoring of recycled water  
<sup>2</sup> – No field measurements for pH or FRC were taken at the time of sampling.  
<sup>3</sup> – No *E. coli* sample was taken at the sample location.





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