

Greenbushes Lithium Mine Additional Waste Rock Landforms and Salt Water Gully Dam

Application Number: **02930**Commencement Date:
22/05/2025Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Greenbushes Lithium Mine Additional Waste Rock Landforms and Salt Water Gully Dam

1.1.2 Project industry type *

Mining

1.1.3 Project industry sub-type

Other

1.1.4 Estimated start date *

01/01/2027

1.1.4 Estimated end date *

01/06/2044

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The Proposed Action involves expansion of Talison Lithium Australia Pty Ltd (Talison's) lithium mining operations at Greenbushes to the east and south of the existing site. The Proposed Action includes:

- The expansion of the existing Floyds Waste Rock Landform (WRL) to the south through construction of the S2 WRL;
- The construction of a new waste rock landform within the Salt Water Gully (SWG) /Cascades area (S8 WRL);
- The merging of five existing water dams into one larger dam (SWG Dam), located on the Lyons River within Salt Water Gully, a tributary to the Hester Brook; and
- Various required supporting infrastructure such as the construction of a haul road crossing over or under the South Western Highway to facilitate access to the S8 WRL and SWG Dam with mining equipment and material movement. The current Mine Development Envelope (existing MDE) created by approval of the existing operations under EPBC 2018/8206 for the Greenbushes mine is 1,989 ha, and the Proposed Action will increase this area by 647 ha, to a total of 2,636 ha. A Referral Development Envelope (RDE) has been developed to encompass the SWG area and the S2 WRL area, totalling 850 ha. As the S2 WRL is an extension of the existing Floyds WRL, this RDE includes a section of overlap with part of the existing MDE. While this area is included in the Proposed Action assessment, no impact beyond the scope of the existing EPBC Act approval will be undertaken during the assessment period. The approved Floyds WRL will continue to be developed within this area, as well as associated supporting mining activities as required.

The Proposed Action requires clearing of up to 162 ha of native vegetation within the RDE. The disturbance footprint (including impact to existing cleared agricultural land) will be 596 ha. Several paddock trees have also been included within the footprint classified as agricultural land, however none of these trees are considered to be potential, suitable, or known black cockatoo habitat trees.

Two areas of avoidance footprint have been included as part of the Proposed Action. These areas encompass the vegetation within 50 m of two known nesting trees that are utilised by black cockatoos.

Attachment 1 – Figure 1 depicts the Proposed Action boundaries, including the existing MDE, the RDE, and the proposed disturbance footprint. Attachment 1 – Figure 2 outlines the area of clearing of native vegetation required.

Preliminary Works

Minor preliminary works will be required to be undertaken within the Proposed Action area prior to assessment under the EPBC Act. These works are to be excluded from the Proposed Action referral, and include:

- Minor clearing required for establishment of access tracks and drill pads to enable sterilisation drilling, geotechnical drilling and test pits to be undertaken within the Proposed Action area;
- Minor clearing required for establishment of access tracks and drill pads to enable drilling and establishment of groundwater monitoring bores within the Proposed Action area. Results from groundwater monitoring will be used to enhance current understanding of the groundwater levels and water quality within the Proposed Action area; and
- Establishment of weirs within local waterways to enable measurement of natural flows.

The majority of the proposed drill sites required as part of preliminary works are located within previously cleared farmland. Two sites are within areas of State Forest and will require up to 0.15 ha of clearing for establishment of drill pads. Additionally, an access track will require up to 0.25 ha of clearing. Sites will be designed to avoid clearing where possible, with existing tracks utilised for access where possible and all potential black cockatoo habitat trees (diameter at breast height of over 50 cm) avoided.

Minimal clearing of vegetation may also be required within drainage lines to allow for establishment of the proposed weirs.

The proposed preliminary works will be undertaken in accordance with requirements of West Australian State environmental legislation, including:

- *Environmental Protection Act 1986*;
- *Mining Act 1978*;
- *Rights in Water and Irrigation Act 1914*; and
- *Aboriginal Heritage Act 1972*.

No significant impact to MNES is anticipated from the implementation of the preliminary works.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

No

1.2.4 Related referral(s)

EPBC Number	Project Title
2013/6904	Clearing of vegetation to expand the waste rock dump at Greenbushes, WA
2018/8206	Greenbushes Lithium mine expansion, 80 km SE of Bunbury, WA
2024/09900	Greenbushes Lithium Operation Dam Embankment Raises (Project)

1.2.5 Provide information about the staged development (or relevant larger project).

The larger Project includes Talison's entire Greenbushes operation, including several open pit mines, Waste Rock Landforms (WRL's) processing plants and tailings storage facilities, with associated infrastructure including roads, buildings, laydown areas and water storage dams.

The Proposed Action includes the construction of an additional water catchment dam and additional WRL, as well as supporting infrastructure such as roads, powerlines, pipelines, workshops, rehabilitation material stockpiles and laydown areas.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

This referral is being made under the *Commonwealth's Environment Protection and Biodiversity Conservation* (EPBC) Act 1999. In compiling this referral, reference has been made to key guidelines and supporting documents, including the Commonwealth's *Significant Impact Guidelines 1.1* and the *EPBC Act referral guidelines for 3 WA Threatened Black Cockatoo Species*. The Significant Impact Guidelines provide guidance as to the interpretation of significance in determining the level of impact of the project and will be used in this referral in respect of impacts on Terrestrial Fauna that have either been recorded within the Proposed Action area, or have been determined to be likely to inhabit the Proposed Action area.

Environmental approvals for this project will also be required under various Western Australian (WA) legislation. The Proposed Action has been referred under Part IV of the *Environmental Protection Act 1986* (EP Act) to the WA Environmental Protection Authority (EPA). This referral was based on a number of environmental factors, including potential impacts on terrestrial fauna, inland waters, and social surrounds.

Approvals under the *Mining Act 1978* (Mining Act) will also be required, comprising of a Mining Proposal and Mine Closure Plan, which will likely take the form of an amendment to the current Mining Act approvals for the Greenbushes mine, to provide a consolidated whole of site approval.

Additional approvals may include licensing under *the Rights in Water and Irrigation Act 1914*, including a permit to interfere with the bed and banks of a watercourse, works approvals and licensing pursuant to Part V of the EP Act, and approval through the Department of Biodiversity, Conservation and Attractions for development within State Forest, vacant Crown Land and water access rights.

As the Proposed Action includes a crossing over the South Western Highway, approval will also be required from Main Roads WA (MRWA). A number of roads maintained by the Shire of Bridgetown-Greenbushes will also be impacted by the Proposed Action, and the Project will require Shire approval to permanently close these roads.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Stakeholder consultation regarding the Proposed Action is ongoing. The Proposed Action is part of an existing operation that has an established stakeholder engagement program, which includes identification of relevant stakeholders, undertaking appropriate levels of consultation, and maintenance of engagement records.

1. Between 17 October 2023 and 24 January 2025, Talison had multiple consultations with landholders not only within the project footprint but also within buffering lots. Negotiations for purchase of land from these landholders are ongoing, with some settles or under contract others in the counter offer stage, and others still at discussion stage.
2. Between 16 November 2023 and 4 December 2024, Talison has met with various State and Federal agencies, including the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and Department of Water and Environmental Regulation (DWER). Discussions have included provision of information by Talison about the proposed expansion, with the outcome being ongoing engagement throughout the referral and assessment process.
3. In January and February 2025 Talison informed the broader workforce of the Proposed expansion firstly via manager briefings then State of the Nation Presentations, emails and intranet news items. The purpose of this information was to inform the workforce of the Proposed Action detail and dispel rumours and misinformation. This was followed by targeted stakeholder engagement with the surrounding landholders, including face to face meetings, email and phone calls. Targeted engagement showed a strong interest in the expansion project and a willingness to understand the impacts of the Proposed Action. The engagement with workforce and surrounding landholders will be ongoing as required.

In March 2025 Talison commenced community engagement sessions with ten sessions held in Bridgetown, Greenbushes and Balingup over four days. One hundred and fifty-nine (159) people attended, raising a range of potential issues raised including dust, noise, light, and visual impact of the Proposed Action. These community engagement sessions will be ongoing to provide timely response to raised concerns and allow stakeholder input into design. Engagement will involve face to face meetings, email and phone calls as appropriate.

Talison has actively engaged at various levels with relevant government organisations throughout this time, including DCCEEW, DWER, EPA, DBCA, Shire of Bridgetown Greenbushes and will continue to do so throughout the assessment.

1.3.1 Identity: Referring party

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Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L 17 216 St Georges Tce

Referring party details

Name	Briony Sinclair
Job title	Approvals Specialist
Phone	0408284191
Email	briony.sinclair@talisonlithium.com
Address	L15 216 St George Terrace Perth WA 6000

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN 39139401308

Organisation name Talison Lithium Australia Pty Ltd

Organisation address L17 216 St George Terrace Perth WA 6000

Person proposing to take the action details

Name Nicholas Sibbel

Job title Manager Approvals and Compliance

Phone 0407445178

Email nicholas.sibbel@talisonlithium.com

Address L 17 216 St Georges Tce, Perth WA 6000

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

Talison Lithium has a satisfactory record of responsible environmental management. The Greenbushes Operation has been managed by Talison Lithium and its predecessor companies since 1983, with no major environmental incidents recorded. The Environmental Management System in place at Talison ensures that any incidents are investigated, and controls are put in place to prevent reoccurrence.

No convictions under any environmental legislation have been recorded relating to Talison Lithium Operations.

Compliance with existing EPBC approvals (see Item 1.2.4) is reported annually and available via Talison's website. Existing non-compliances are limited to non-conformance with requirements of the Dieback Hygiene Management Plan and Conservation Significant Terrestrial Fauna Management Plan associated with Ministerial Statement 1111. No impact on MNES have arisen from the non-compliances to date.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

Talison Lithium has an environmental Policy (Attachment 2 – Environmental Policy) that outlines their commitment to conduct their business in compliance with all applicable environmental obligations, as well as continual improvement of environmental performance.

Environmental Management is integrated into all work practices at Talison by ensuring environmental, social and economic considerations are incorporated into all stages of mine development, ensuring appropriate environmental controls are identified and implemented. Continuous improvement is facilitated through regular monitoring, auditing and reporting against environmental management methods.

Talison maintains ISO 14001 accreditation, which is an internationally recognised standard for environmental management systems. Additionally, Talison is currently pursuing accreditation under the Initiative for Responsible Mining Assurance (IRMA).

Open communication with local stakeholders including the surrounding community, Traditional Owners and government regulators regarding the Proposed Action also ensures transparency throughout the operation.

Environmental risks at Talison are managed through regular risk assessment, introduction of preventative measures, ongoing review and monitoring, and mitigation actions.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L17 216 St George Terrace Perth WA 6000

Proposed designated proponent details

Name	Nicholas Sibbel
Job title	Manager Approvals and Compliance
Phone	0407445178
Email	nicholas.sibbel@talisonlithium.com
Address	L 17 216 St Georges Tce, Perth WA 6000

1.3.4 Identity: Summary of allocation

✔ Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L 17 216 St Georges Tce
Representative's name	Briony Sinclair
Representative's job title	Approvals Specialist
Phone	0408284191
Email	briony.sinclair@talisonlithium.com
Address	L15 216 St George Terrace Perth WA 6000

✔ Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L17 216 St George Terrace Perth WA 6000
Representative's name	Nicholas Sibbel
Representative's job title	Manager Approvals and Compliance
Phone	0407445178
Email	nicholas.sibbel@talisonlithium.com
Address	L 17 216 St Georges Tce, Perth WA 6000

✔ Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

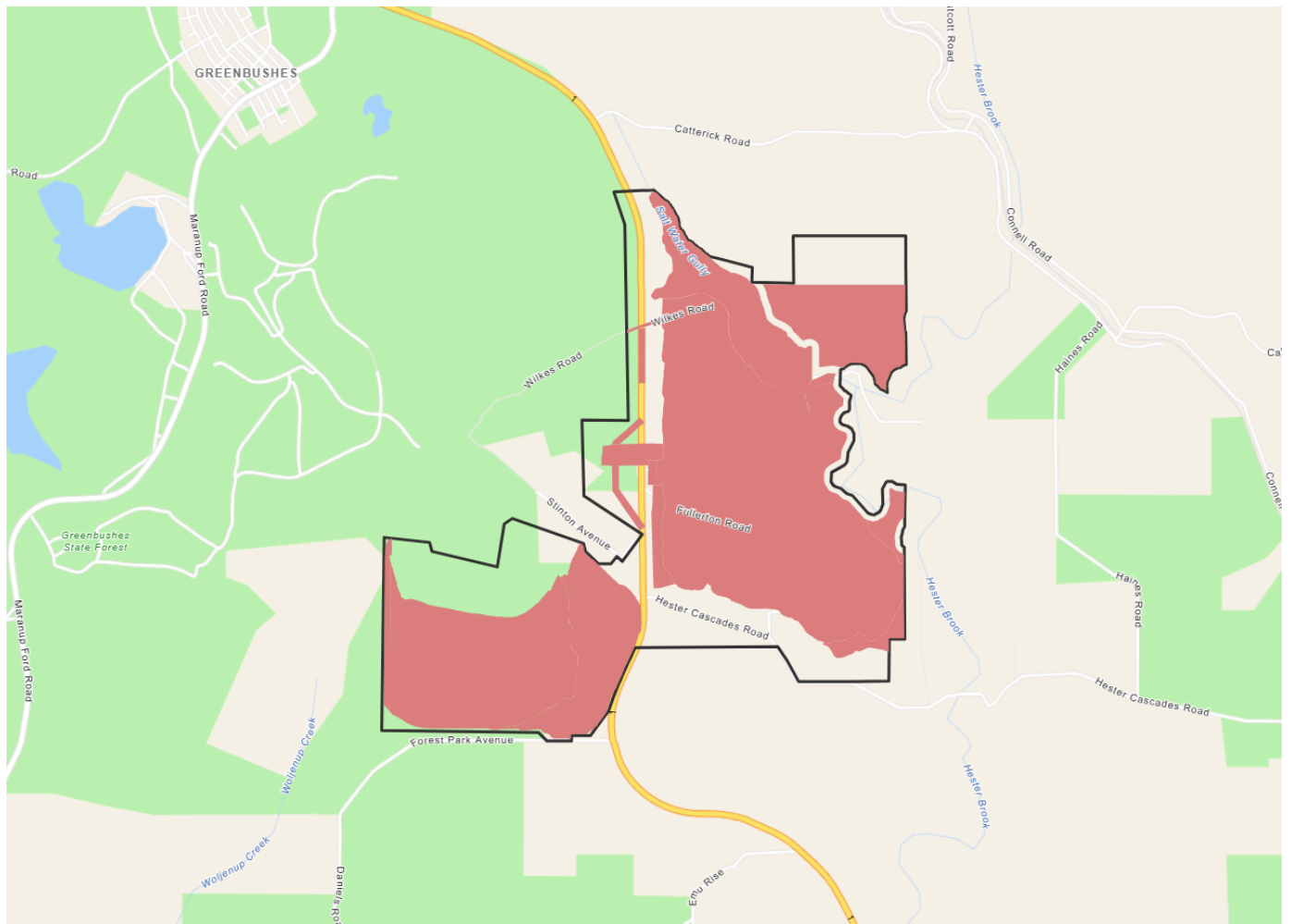
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint



Project Area: 850.44 Ha Disturbance Footprint: 593.95 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

1662 Maranup Ford Road Greenbushes, WA 6254

2.2.2 Where is the primary jurisdiction of the proposed action? *

Western Australia

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The Proposed Action is located on WA Mining Act tenure held by Talison Lithium Pty Ltd, on Mining Lease M01/10 and M01/07. Mining Act tenure allows Talison to conduct mining activities on the land. Underlying the mining tenure are several other forms of land ownership.

The majority of the Proposed Action is located on allocated crown land. Talison has engaged in consultation with the local landholders and intend to purchase all land that will be significantly impacted by the Proposed Action. Ongoing engagement will occur in this regard.

Additional land tenure in the area includes State Forest, as well as a number of crown reserves. Part of the project area for the SWG Dam overlaps with Road Reserve Land ID 3588713. Approval of development within the road reserve will be applied for through the Shire of Bridgetown-Greenbushes (the Shire) and MRWA.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The majority of the footprint of the S8 WRL is located on cleared farmland, with a section to the north located on State Forest. A history of use as farmland and past alluvia mining has degraded the vegetation condition and impacted local waterways. Part of the S8 WRL site is within State Forest, with vegetation condition ranging from good to very good. Vegetation condition within SWG Dam footprint is considered degraded or very degraded. The S2 WRL is located almost entirely within State Forest, with vegetation ranging from good to very good with some areas impacted by current and historical mining disturbance.

The site is in close proximity to the town of Greenbushes, and most of the surrounding land use is agricultural, as well as mining, forestry and residential, with a significant area of State Forest. Additionally, the southwestern region of WA is a popular tourist destination, with the South Western Highway utilised as the main route between Bunbury and Albany.

3.1.2 Describe any existing or proposed uses for the project area.

The current land use in the Proposed Action area is agricultural, with a significant area of State Forest. The Proposed Action use will include water collection and storage, as well as providing capacity for waste rock storage through creation of two waste rock landforms as part of the Talison Lithium mining operation. Supporting infrastructure will also be constructed.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

No specific natural features have been identified at the Proposed Action site.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Proposed Action is located on undulating land, with a range from approximately 190 m AHD along the creek lines, with a ridge in the centre of the proposed WRL to 260 m AHD (see Attachment 1 – Figure 3)

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

The Proposed Action area has been extensively surveyed and no threatened flora listed under the EPBC Act or *Biodiversity Conservation Act 2016* (BC Act) has been recorded within the boundary. Desktop searches of the area proximal to the Proposed Action area have shown three records of threatened flora listed under the EPBC Act within a 10 km radius of the Proposed Action area (*Caladenia hoffmanii* - Endangered, *Caladenia harringtoniae* and *Diruris micrantha* - Vulnerable). One additional species listed under the EPBC Act (*Caladenia christineae* - Vulnerable) was identified as potentially occurring within 40 km of the Proposed Action area.

One flora species collected within the RDE (*Lepidosperma* sp. ONS6731) could not be identified to species level and remains unresolved. *Lepidosperma* sp. ONS6731 was recorded as a population of 13 plants within the Lyons River drainage system, with several other populations located outside the Proposed Action area. Given the location of this population on the very boundary of the Proposed Action area, the population identified is not likely to be directly impacted by the disturbance footprint.

Flora and vegetation studies over the SWG area have been included as Attachment 3, and studies over the S2 WRL area are included as Attachment 4.

Four vertebrate fauna species listed under the EPBC Act have been recorded in the vicinity of the Proposed Action area:

- Carnaby's Black Cockatoo, *Zanda latirostris* (EN);
- Baudin's Black Cockatoo, *Zanda baudinii* (EN);
- Forest Red tailed Black Cockatoo, *Calyptorhynchus banksii naso* (VU); and
- Australasian Bittern, *Botaurus poiciloptilus* (EN) (recorded approximately 500 m outside of the study area).

Numerous records of the Forest Red tailed Black Cockatoo occur within the Proposed Action area, and records of the two other black cockatoo species (Baudin's (*Zanda baudinii* – Endangered) and Carnaby's (*Zanda latirostris* – Endangered) occur within the S2 WRL area. A single record of the Australasian Bittern exists approximately 500 m downstream of the proposed DE expansion area.

Other species listed under the EPBC Act with records in the wider vicinity of the Proposed Action include:

- Curlew Sandpiper, *Calidris ferruginea* (CR, MI);
- Western Ringtail Possum, *Pseudocheirus occidentalis* (CR);
- Quokka, *Setonix brachyurus* (VU)
- Numbat, *Myrmecobius fasciatus* (EN); and
- Chuditch, *Dasyurus geoffroii* (VU).

None of these species are considered likely to be significantly impacted by the Proposed Action.

Three additional species listed under the WA *Biodiversity Conservation Act 2016* (BC Act) have been identified within the Proposed Action area:

- South-western Brush-tailed Phascogale, *Phascogale tapoatafa wambenger* (CD);
- Quenda, *Isodon fusciventer* (P4); and
- Western Brush Wallaby, *Notamacropus irma* (P4).

Fauna studies of the Proposed Action area that have been completed to date are included as Attachment 5 and Attachment 6.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Flora and vegetation studies over the SWG Dam and S8 WRL area have been included as Attachment 3, and studies over the S2 WRL are included as Attachment 4.

The SWG Dam and S8 WRL area is predominantly cleared annual pasture (farmland). Within this expansion area patches of remnant vegetation exist and eight vegetation types have been mapped, with the majority considered to be degraded to completely degraded. The SWG Dam and S8 WRL will also impact on approximately 40 ha of State Forest which ranges in condition from good to completely degraded.

The S2 WRL is located predominately on areas of State Forest, where seven vegetation types have been mapped, differentiated by subtle differences in understorey composition.

Vegetation within the Proposed Action area broadly comprises Jarrah (*Eucalyptus marginata*) and Marri (*Corymbias calophylla*) forest on lateritic hill crests and hillslopes, with Marri and Yarri (*Eucalyptus patens*) becoming more prominent on footslopes. Within the S2 WRL area, the low shrub *Bankia grandis* is common on crests and the tall shrub *Xanthorrhoea preissii* on lower slopes. The drainage line and local dams support Flooded gum (*Eucalyptus rudia*) Forest, and open woodland is associated with Marri and Yarri. Post-mining rehabilitation was also present along historical disturbed areas of the Saltwater Gully water ways.

Attachment 1 – Figure 4 depicts the mapped vegetation communities within the RDE, and Attachment 1 – Figure 5 shows the fauna habitat values of these areas.

Vegetation was determined to be well represented at the state-wide, bioregional and local government authority levels. No vegetation types align with any Commonwealth or State listed Threatened Ecological Communities (TEC's) or State listed Priority Ecological Communities (PEC's).

The nearest significant ecological community is the Empodismapeatlands of southwestern Australia. The nearest identified occurrence of this ecological community lies approximately 50 km south of the Proposed Action area.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

The Proposed Action is located in Australia, and no Commonwealth heritage places overseas will be impacted. No areas within the Proposed Action area have recognised Commonwealth heritage values.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

A number of Aboriginal heritage surveys have been conducted over the current development envelope in consultation with representatives from the Karri Karrak, Wagyl Kaip and Gnaala Karla Booja (GKB) Aboriginal Corporations. No Aboriginal Heritage sites have been located within the current mine development envelope, however the Blackwood River and tributaries including Hester Brook is a site of mythological significance in association with Waugal beliefs. This site is also the only site within the Proposed Action vicinity found during the desktop search of the Aboriginal Cultural Heritage Inquiry System. The Proposed Action has been designed to avoid direct impacts on Hester Brook and the associated Blackwood River heritage site (Site ID 20434) (see Attachment 1 – Figure 6).

Further heritage consultation will be undertaken in relation to the Proposed Action area to confirm the results of the existing surveys and consultation with the Karri Karrak, Wagyl Kaip and GKB groups is underway.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

The entire Greenbushes mine including the Proposed Action area is located at the top of a catchment that leads into the Blackwood River via Norilup Brook, Woljenup Creek and Hester Brook (see Attachment 1 – Figure 7). The Proposed Action is located within the Middle Blackwood Surface Water Management area, positioned in the Hester Brook Surface water Management sub-area. The Proposed Action area does not sit within a Proclaimed Surface Water area under the RIWI Act, and is located in the Karri groundwater area, which is not within a Proclaimed Groundwater Area under the RIWI Act.

The major surface water flows that will be impacted by the Proposed Action are Lyons River, which is the proposed location of the SWG Dam, and the Cascades creek line, located to the south of the S8 WRL and the east of the S2 WRL. The current design implements a 50 m buffer between the S8 WRL boundary and local surface water bodies including Cascades, Lyons River and Hester Brook. Surface water flows from Cascades and the Lyons River drain into Hester Brook, and ultimately into the Blackwood River. Lyons River within Salt Water Gully is a permanent water course, while the Cascades Gully is an ephemeral creek. The combined catchment of the Lyons River and Cascades make up to 10% of the total Hester Brook Catchment, and the upper reaches of both water courses contain areas impacted by the existing mine and historical mining activities.

There is some level of connectivity between the surface water and ground water in the local area, with a radial flow pattern outward from the current mine site, as this is located on a ridge. This results in groundwater being discharged into the local surface water system, including Salt Water Gully, Cascades Gully and potentially as far as Hester Brook.

The hydrogeological units in the Proposed Action area can be differentiated into shallow surficial systems of alluvial material that exists above a layer of confining saprolitic clays, and intermediate systems, that occur in the transition between the saprock layer and fractured bedrock. The basement unit consists of fresh bedrock with low permeability.

Sediment sequences has been deposited in paleodrainage channels, which are embedded in the saprolite and upper bedrock. These channels have been extensively mined and backfilled with mixed sands and clays. These channels also co-exist with alluvial sand deposit that occupy the topographic lows and form a shallow alluvial aquifer that is generally located adjacent to the surface drainage channels, supporting the connection between surface and groundwater in the area.

Conceptual groundwater models have been developed for the SWG area and the S2 area. These models have been included as Attachment 7 and Attachment 8 respectively.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No world heritage properties are located within the vicinity of the Proposed Action. The nearest World heritage area is Shark Bay in Western Australia, approximately 850 km from the Proposed Action area.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The closest National Heritage place is approximately 200 km to the southeast of the Proposed Action location (Stirling Range National Park). No impacts are expected.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

There are no Ramsar wetlands within the vicinity of the Proposed Action. The nearest Ramsar wetland is the Vasse-Wonnerup System, approximately 65 km to the northwest of the Proposed Action area. No impacts are expected.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	<i>Aphelocephala leucopsis</i>	Southern Whiteface
No	Yes	<i>Botaurus poiciloptilus</i>	Australasian Bittern
No	No	<i>Caladenia harringtoniae</i>	Harrington's Spider-orchid, Pink Spider-orchid
No	No	<i>Caladenia hoffmanii</i>	Hoffman's Spider-orchid
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
Yes	Yes	<i>Calyptorhynchus banksii naso</i>	Forest Red-tailed Black-Cockatoo, Karrak
No	Yes	<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll
No	No	<i>Diuris micrantha</i>	Dwarf Bee-orchid
No	No	<i>Myrmecobius fasciatus</i>	Numbat
No	Yes	<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit
No	No	<i>Setonix brachyurus</i>	Quokka
No	No	<i>Westralunio carteri</i>	Carter's Freshwater Mussel, Freshwater Mussel
Yes	Yes	<i>Zanda baudinii</i>	Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo
Yes	Yes	<i>Zanda latirostris</i>	Carnaby's Black Cockatoo, Short-billed Black-cockatoo

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Empodisma peatlands of southwestern Australia

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The Proposed Action will directly impact on Terrestrial Fauna through clearing of native vegetation causing a reduction in available habitat. This may include clearing of important habitat for black cockatoos, including habitat trees and foraging habitat. Further direct impacts may include fauna mortalities from vehicle strike or entrapment, and there may be impacts to aquatic fauna through changes in hydrology.

Indirect impacts on fauna resulting from the Proposed Action may include the effects of dust generation, and noise, vibration, or light pollution. Additionally, the spread of weeds or forest disease may also impact the quality of fauna habitat available.

Threatened Species – Flora

Threatened flora species that have the potential to occur in the Proposed Action area include *Diuris micrantha*, *Caladenia harringtoniae* and *Caladenia hoffmanii*. Records of these species have been found in historic surveys to the west of the existing mine site. Extensive flora and vegetation surveys have been conducted over the Proposed Action area including targeted surveys for conservation significant species in areas of potentially suitable habitat within the vicinity of the MDE. No Threatened flora species have been located, and no direct or indirect impacts are expected. No suitable habitat for these species are located within the Proposed Action area.

Threatened Species – Fauna

Calidris ferruginea – The Curlew Sandpiper is considered unlikely to inhabit the Proposed Action area, as no records exist in close proximity. Additionally, this species has a habitat preference for intertidal mudflats and ephemeral and permanent lakes, which will not be impacted by the Proposed Action.

Pseudocheirus occidentalis – Scats from the Western Ringtail Possum may have been identified in historic surveys to the west of the Proposed Action area, however targeted surveys have failed to locate the species and no previous surveys conducted over the Greenbushes mining leases have recorded any confirmed sightings of the species. Additionally, the habitat in the general area is considered marginal for the species, meaning impacts resulting from the Project are unlikely to directly impact on Western Ringtail Possum populations. The Western Ringtail Possum has been located within the vicinity of the Proposed Action, with the nearest record from 2014 within approximately 320 m of the existing MDE. Should the species remain present in the vicinity of the Proposal the Western Ringtail Possum may still be affected by indirect impacts, including noise, light, and dust resulting from the Project.

Setonix brachyurus – The Quokka is considered possible to occur within the Proposed Action area, and is listed as Vulnerable under the EPBC Act. There are recent records of this species within the vicinity of the Proposed Action, however habitat is limited, meaning direct impacts to Quokka populations are unlikely. The Quokka may still be affected by indirect impacts, including noise, light, and dust resulting from the Proposed Action.

Myrmecobius fasciatus – The numbat may occur within the Proposed Action area, as historic records from 2006 exist within 10 km, and suitable habitat is present within the Proposed Action area. However, it is considered unlikely that numbat are present as there are no recent records within the general area. The species may be affected indirectly over the broader Greenbushes area through impacts from dust, noise and light from the Project.

Calyptorhynchus banksia naso – The Forest Red Tailed Black Cockatoo has been recorded on numerous occasions within the Proposed Action area. This species is dependent on the use of hollows in large trees for breeding habitat, a number of which are located within the Proposed Action footprint. The Proposed Action may also impinge on foraging habitat for this species, and indirect impacts may include changes to population distribution resulting from light and noise emitted from the Proposed Action. Indirect impacts may also be realised through changes in weed and forest disease dispersal in the Proposed Action area.

Zanda latirostris – The Carnaby's Black Cockatoo has been noted as present within the Proposed Action area, as part of a flock observed flying overhead. Calls and feeding residue from this species has also been recorded. As with the other two local species of Black Cockatoo, Carnaby's Black Cockatoos are dependent on hollows within large trees for breeding habitat, and the species is known to breed within 50 km of the Proposed Action area. Although there is no direct evidence of Carnaby's Black Cockatoo breeding within close proximity to the Proposed Action area there are large areas of suitable breeding habitat for both species within 12 km of the Proposed Action area. The Proposed Action area intersects with a number of trees with large hollows that may be suitable for breeding, as well as larger areas of foraging habitat. The Proposed Action may also have indirect impacts on Carnaby's Black Cockatoo including changes in population distribution resulting from light and noise emitted from the Proposed Action.

Zanda baudinii - Baudin's Black Cockatoo has not been directly observed within the study area, but has been recently observed from adjacent survey areas. As with the other two local species of Black Cockatoo, Baudin's Black Cockatoos are dependent on hollows within large trees for breeding habitat, and the species is known to breed in the general area. The Proposed Action area intersects with a number of these trees, as well as larger areas of foraging habitat. The Proposed Action may also have indirect impacts including changes in population distribution resulting from light and noise emitted from the Project.

Dasyurus geoffroii – The Chuditch is listed as Vulnerable under the EPBC Act, and desktop surveys list the Chuditch as likely to occur in the Proposed Action area. Records of this species from February 2018 exist several kilometres to the west of the Proposed Action area, likely consisting of one individual based on pattern analysis. Earlier data from prior to 2018 shows up to 35 records within 21 km of the MDE, however no individuals have been located within the Proposed Action area despite a number of surveys being conducted. Given the home range of the Chuditch, and the fact that numerous trapping events have not found any records of the Chuditch within the vicinity of the Proposed Action footprint, the likelihood of this species being present within the Proposed Action area has been revised to unlikely, based on advice from Onshore Environmental. The Proposed Action area contains suitable habitat for this species, which will be impacted directly through clearing. The species may also be indirectly impacted through noise, dust and light emissions resulting from the Project.

Botaurus poiciloptilus - The Australasian Bittern is listed as Endangered under the EPBC Act and the BC Act, and was recorded along the main drainage channel of Salt Water Gully approximately 160 metres (m) from the Proposed Action area. It is likely to utilise tributaries of the Blackwood River but prefers areas of dense riparian vegetation. Riparian vegetation within the study area has been heavily disturbed historically and the current condition is rated as degraded, meaning direct impacts to this species are not considered to be likely. However the potential for downstream impacts to waterways and the associated vegetation means indirect impacts to this species are a possible result of implementation of the Proposed Action.

Threatened Ecological Communities

Empodisma peatlands of southwestern Australia- This ecological community has not been identified within the Proposed Action area. The nearest identified occurrence of this ecological community lies approximately 50 km south of the Proposed Action area, and no direct or indirect impacts are expected as a result of the Proposed Action.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?

*

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

The Proposed Action area contains suitable and potential black cockatoo breeding habitat including nesting trees with appropriate hollows for breeding. Under the “Referral guideline for 3 WA Threatened Black Cockatoo Species” any Proposed Action that involves the loss of any known, suitable or potential nesting trees for either of the two Endangered species (*Zanda latirostris* and *Zanda baudinii*) or one species listed as Vulnerable (*Calyptorhynchus banksii naso*) has a high risk of resulting in a significant impact.

While a number of additional threatened species may occur in the Proposed Action area (Section 4.1.4.2), the low likelihood of occurrence and limited impact on habitat of value to these species means the Proposed Action is unlikely to result in a significant impact on populations of these species.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

The Proposed Action includes impact on (clearing) of habitat to listed fauna species.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

Talison have applied the following mitigation hierarchy to the Proposed Action:

1. Avoid
2. Minimise
3. Rehabilitate
4. Offset

Key mitigating actions relating to the impacts on flora and fauna in the area include:

- Siting of infrastructure (particularly the S8 WRL) to avoid significant flora and vegetation;
- Avoidance zones around known habitat trees within the RDE where possible;
- Minimisation of significant land clearing through location of infrastructure on cleared farmland where practicable;
- Hester Brook and associated riparian vegetation has been avoided, with a 50 m buffer from all infrastructure to ensure the function of Hester Brook for local MNES is maintained;
- Clearing to be undertaken in stages as required for operational purposes;
- Clearing to be undertaken in accordance with site ground disturbance permitting procedures;
- Mapping of dieback infested areas, with controls put in place to minimise spread;
- Identification of potentially problematic mined materials and appropriate segregation and encapsulation to ensure minimal impact to the receiving environment;
- Measures introduced to minimise spread of weeds and forest disease, including vehicle hygiene procedures and restriction of access where required;
- Dust management procedures;
- Site inductions to include training on conservation significant fauna species and terrestrial fauna values with the local area;
- Implementation of the site Terrestrial Fauna Management Plan;
- Imposition of speed limits to minimise potential for vehicle strikes;
- Implementation of existing Talison Light Spill Management Procedures;
- Implementation of the Talison Disease Hygiene Management Plan;
- Rehabilitation to include consideration of use of artificial fauna habitats;
- S8 WRL and Floyds WRL including the S2 extension to be progressively rehabilitated over the Life of Mine to retain as much public amenity as possible and encourage early establishment of vegetation; and
- Measures will be implemented to offset any significant residual impacts on MNES arising from the Proposed Action.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

Talison's Offset Strategy will be focussed on providing net positive outcomes and will be guided by a Species Needs Analysis (i.e., conservation planning document) for three species of conservation significant black cockatoos. Talison will execute the Offset Strategy through a combination of strategic land acquisition for protecting and improving habitat, and revegetation projects. Opportunities in close proximity to the mine will be given higher priority. Talison will engage local landcare groups and Aboriginal Corporations for the opportunity to undertake on-ground components.

Talison are under conditional contract to purchase existing black cockatoo habitat with the intent to cede to the State for inclusion into the conservation estate. Talison are undergoing detailed due diligence on the properties to confirm offset suitability, including ecological surveys, subdivision, and Foreign Investment Review Board (FIRB) approval. Once acquired, Talison will undertake appropriate management actions to improve existing black cockatoo habitat quality over the life of the offset. Some properties will also require revegetation to create black cockatoo habitat where existing vegetation condition is considered degraded.

Talison are also investigating multiple revegetation opportunities of cleared farmland to create black cockatoo habitat. These opportunities are at varying levels of evaluation.

Further detail on the proposed offsets will be developed as the Proposed Action progresses, and will include input from DCCEE, DWER and DBCA to ensure that the Offset Strategy is appropriate and will achieve agreed outcomes.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Motacilla cinerea	Grey Wagtail

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No migratory species are considered likely to occur in the Project area. Additionally, a large section of the Proposed Action area is cleared farmland which is likely to be of little habitat value to migratory species.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Act involves construction of a waste rock landform and a water storage dam. Neither involve concentration of naturally occurring radioactive materials (uranium and thorium).

Trace elements of thorium and uranium occur in the ore being mined, generally below detection limits. Concentration through the mineral processing operations increases the level to enable detection at times. Radiation exposures at site are below background and are not considered an issue requiring specific management on site. This Proposed Action involves no changes to the existing mineral processing operations.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action does not occur in the vicinity of any marine areas.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is in Western Australia. No impacts on the Great Barrier Reef are expected.

4.1.9 Water resource in relation to large coal mining development or coal seam gas**4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? ***

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action does not include any coal seam gas or coal mining development.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

No Commonwealth lands are proposed to be impacted as a part of the Proposed Action.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed Action is located in Western Australia.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

Alternatives to the Proposed Action have been considered, with the current iteration selected to minimise environmental impacts.

The Proposed Action is restricted by proximity to the Greenbushes mine, in order to reduce haulage routes for waste rock and pumping distances for water supply. Land use, tenure, and natural features of value (heritage places associated with creek lines) are also constraining geographic boundaries for the Proposed Action.

Water Supply Alternatives

Alternative water supply options considered including increasing the capacity of current site dams. Lifts of current dams are currently progressing to ensure both adequate storage capacity for when water is scarce, as well as sufficient buffers for periods of water excess. However this does not increase the catchments for the dams and current catchment yields are insufficient to meet site demands.

Alternative sites for the proposed dam were also considered, however upstream sites do not provide sufficient catchment volumes for the dam to be viable, and downstream sites have more potential to impact on Hester Brook and Blackwood River, both of which are registered Aboriginal Cultural Heritage Sites and have the potential to further impact other surface water users. The SWG Dam site is preferred as it is predominantly cleared, has been subject to historical disturbance for mining farming and aquaculture, and there are no downstream users on Lyons River and little stream distance between the proposed dam location and the Hester Brook.

The design of the SWG Dam is also currently constrained by land access. The Salt Water Gully site was favoured as it is a logical extension of the mining operations (particularly with respect to the proposed WRL), has sufficient catchment, and already has historic impacts from mining and agriculture. Alternative locations either do not have sufficient capacity to make dam construction viable or are more likely to impact on higher quality water sources, downstream users/values or heritage sites.

Water supply through the installation of groundwater bores was considered, however due to the low permeability and lack of groundwater storage in the area generally, this resource is not considered to be of extraction value.

WRL Alternatives

Talison have reviewed a number of location options for waste rock storage both within the existing mine footprint and within viable proximity to the mine.

Options considered including backfilling of existing mine voids. Backfill of the Cornwall and North Cornwall pit may be possible as the mine expands, however will account for only small volumes of waste rock placement. Backfill of the broader mine void will not be possible until late in the mine life, if at all, due to the geometry of the pit precluding concurrent backfilling and mining. Additionally, the pit does not exhaust the mineral resource, indicating potential future underground mining, further complicating pit void backfill options and risking sterilisation of lithium bearing ore.

The potential for waste rock storage over the TSFs on site (beyond currently planned waste rock capping) has also been investigated, however the current TSF locations are still in operational use for storage of tailings, as well as installation of additional plant. TSF1 is not planned to be decommissioned until 2033, and while TSF2 will be decommissioned in 2024, the northern portion will be used to convey ore from the ore sorters and crusher 4 to CGP4. Additionally, current information suggests that the TSF2 will not be able to geotechnically support the additional load of significant volumes of waste rock. The proximity of Maranup Ford Road limits options for additional buttressing of the western wall to provide additional stability.

Studies have been undertaken into the viability of WRL construction within the greater mine surrounds. Areas north of the mine were not considered suitable due to the proximity of the Greenbushes Town, North Greenbushes town and prospectivity of areas immediately north of the South Western Highway and high ecological values.

Areas to the west of the mine were not the preferred option due to large areas of high value remnant State Forest, known presence of threatened flora (*Caladenia sp.*) as well as the distance from the mine void and associated cost implications. This area is also a high value water catchment.

Additional options analysis was completed on WRL development to the east and south of the operations. The southern option (the S2 WRL) may impact prospective areas and will require further exploration and sterilisation drilling to characterise potential resources and ensure the proposed location is suitable for WRL placement.

Examination of the area to the east (the Salt Water Gully area) included various iterations, including extension of the existing Floyd's WRL over the South Western Highway, as well as a standalone option that is located mostly cleared land (S8 WRL).

The S8 WRL footprint is considered low prospectivity from existing geophysical surveys, and is planned for sterilisation drilling in Q3 2025.

The S8 WRL and the S2 expansion of the Floyd's WRL will both be required over the life of the Greenbushes mine, and as such both have been included within the Proposed Action footprint for assessment.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures 1 to 7.pdf Attachment 1 - Figures	22/05/2025	No	High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 2 - Talison Environmental Policy.pdf Attachement 8 - S2 Groundwater Modelling	22/05/2025	No	High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures 1 to 7.pdf Attachment 1 - Figures	21/05/2025		High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 3 - SWG Flora&Veg.pdf Attachment 3 - SWG Flor& Veg	22/05/2025	No	High
#2.	Document	Attachment 4 - S2 Flora&Veg.pdf Attachment 3 - SWG Flor& Veg	22/05/2025	No	High
#3.	Document	Attachment 5 - SWG Fauna Report.pdf Attachment 5 - SWG Fauna	22/05/2025	No	High
#4.	Document	Attachment 5 - SWG Fauna Report_updated.pdf Attachment 5 - SWG Fauna_updated	22/05/2025	No	High
#5.	Document	Attachment 6 - S2 Fauna Report.pdf Attachment 6 - S2 Fauna	22/05/2025	No	High
#6.	Document	Attachment 6 - S2 Fauna Report_updated.pdf Attachment 6 - S2 Fauna_updated	22/05/2025	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures 1 to 7.pdf Attachment 1 - Figures	21/05/2025		High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures 1 to 7.pdf Attachment 1 - Figures	21/05/2025		High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1 - Figures 1 to 7.pdf Attachment 1 - Figures	21/05/2025		High
#2.	Document	Attachment 7 - SWG Groundwater Modelling.pdf Attachement 7 - SWG Groundwater Modelling	22/05/2025	No	High
#3.	Document	Attachment 8 - S2 Groundwater Modelling.pdf Attachement 8 - S2 Groundwater Modelling	22/05/2025	No	High

5.2 Declarations

✔ Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L 17 216 St Georges Tce
Representative's name	Briony Sinclair
Representative's job title	Approvals Specialist
Phone	0408284191
Email	briony.sinclair@talisonlithium.com
Address	L15 216 St George Terrace Perth WA 6000

☒ Check this box to indicate you have read the referral form. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ By checking this box, I, **Briony Sinclair of Talison Lithium Australia Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	39139401308
Organisation name	Talison Lithium Australia Pty Ltd
Organisation address	L17 216 St George Terrace Perth WA 6000
Representative's name	Nicholas Sibbel

Representative's job title	Manager Approvals and Compliance
Phone	0407445178
Email	nicholas.sibbel@talisonlithium.com
Address	L 17 216 St Georges Tce, Perth WA 6000

☒ Check this box to indicate you have read the referral form. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ I, **Nicholas Sibbel of Talison Lithium Australia Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☒ Check this box to indicate you have read the referral form. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ I, **Nicholas Sibbel of Talison Lithium Australia Pty Ltd**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *