

Appendix 1
Environmental Scoping Document

Mr Chris Williams
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Our Ref: DWERA-000302
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Dear Mr Williams

EARL GREY LITHIUM PROJECT – ASSESSMENT NO: 2123

The Environmental Scoping Document (ESD) (attached) specifying the scope, form, content, timing and procedure of the Environmental Review Document (ERD) for the above proposal was considered by the Environmental Protection Authority (EPA) at Meeting No. 1110 on 14 December 2017. The ESD has been approved as providing an acceptable basis for the preparation of the ERD.

During the preparation of the ERD you are encouraged to consult with the Department of Water and Environmental Regulation (DWER), EPA Services assessment officer for the proposal, Nyomi Bowers, who can be contacted on phone number (08) 6364 6416. Please quote the above "Our Ref" on any further correspondence.

Yours sincerely



Dr Tom Hatton
CHAIRMAN

2 | December 2017

Encl. Endorsed ESD - 21 December 2017

DRAFT ENVIRONMENTAL SCOPING DOCUMENT

Proposal name:	Earl Grey Lithium Project
Proponent:	Kidman Resources Limited (Kidman)
Assessment number:	2132
Location:	Approximately 105 km south-southeast of Southern Cross
Local Government Area:	Shire of Yilgarn
Public review period:	Environmental Review Document – 4 weeks
EPBC reference no:	2017/7950

1. Introduction

The Environmental Protection Authority (EPA) has determined that the above proposal is to be assessed under Part IV of the *Environmental Protection Act 1986* (EP Act).

The purpose of the Environmental Scoping Document (ESD) is to define the form, content, timing and procedure of the environmental review, required by s. 40(3) of the EP Act. This draft ESD has been prepared by the EPA in consultation with the proponent, decision-making authorities and interested agencies consistent with the EPA's *Procedures Manual*.

Form

The EPA requires that the form of the report on the environmental review required under s. 40 (Environmental Review Document, ERD) is according to the [Environmental Review Document template](#).

Content

The EPA requires that the environmental review includes the content outlined in sections 2 to 6 of this ESD, and address the matters in Schedule 4 of the *Environmental Protection and Biodiversity Conservation Regulations 2000*.

Timing

Table 1 sets out the timeline for the assessment of the proposal agreed between the EPA and the proponent.

Table 1 Assessment timeline

Key assessment milestones	Completion Date
EPA approves Environmental Scoping Document	21 December 2017
Proponent submits first draft Environmental Review Document	2 January 2018 (1 wk)
EPA provides comment on first draft Environmental Review Document <i>(6 weeks from receipt of ERD)</i>	13 February 2018*
Proponent submits revised draft Environmental Review Document	20 February 2018 (1 wk)
EPA authorises release of Environmental Review Document for public review <i>(2 weeks from EPA approval of ERD)</i>	19 March 2018*
Proponent releases Environmental Review Document for public review for 4 weeks	20 March 2018
Close of public review period	17 April 2018
Summary of Submissions ** and Response to Submissions	24 April 2018 (1 wk)
EPA reviews the Response to Submissions <i>(4 weeks from receipt of Response to Submissions)</i>	22 May 2018*
EPA prepares draft assessment report and completes assessment <i>(6 weeks from EPA accepting Response to Submissions)</i>	3 July 2018*
EPA finalises assessment report (including two weeks consultation on draft conditions) and gives report to Minister <i>(6 weeks from completion of assessment)</i>	14 August 2018*

*indicative dates

**task to be completed by the proponent

Procedure

The EPA requires the proponent to undertake the environmental review according to the procedures in the *Administrative Procedures* and the *Procedures Manual*, including requirements for public review.

This draft ESD has not been released for public review. The ESD will be available on the EPA website (www.epa.wa.gov.au) upon endorsement and must be appended to the ERD.

Matters of National Environmental Significance

The proposal was referred on 31 May 2017 and determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 17 July

2017, as the proposal has the potential to impact listed threatened species and communities (sections 18 and 18A). This proposal is being assessed as an accredited assessment under section 87 of the EPBC Act. The relevant matters of national environmental significance (MNES) for this proposal are:

- Chuditch (*Dasyurus geoffroii*) – Vulnerable
- Malleefowl (*Leipoa ocellata*) – Vulnerable

The proposal requires the clearing of up to 365 ha of native vegetation that provides habitat for these species.

- Ironcaps Banksia (*Banksia sphaerocarpa* var. *dolichostyla*) – Vulnerable

The proposal has the potential to indirectly impact the species through unintentional clearing, dust, weed invasion, habitat fragmentation and changed hydrology.

This draft ESD includes work required to be carried out and reported on in the ERD document in relation to MNES. The ERD will also address the matters in Schedule 4 of the *Environmental Protection and Biodiversity Conservation Regulations 2000*.

MNES that may be impacted by the proposal will be identified and the potential impacts on these matters addressed within each relevant preliminary environmental factor as identified in Table 2. The ERD will include a separate section which summarises the potential impacts on MNES and describes, to the extent practicable, any feasible alternatives to the proposed action and possible mitigation measures. Proposed offsets to address significant residual impacts on MNES are also to be discussed, and demonstrate how any proposed offsets are consistent with the EPBC Act *Environmental Offsets Policy*, October 2012.

2. The proposal

Background

The Mt Holland Mine Site is a historic gold mining operation centred on the Bounty Mine which forms a central infrastructure area. Between 1988 and 2001, the historic processing plant received ore from numerous open pits within an approximate 10 kilometre (km) radius of the site, including the existing Earl Grey pit.

Mt Holland was owned and operated by a number of companies during the 1980's and 90's, including Aztec Mining Company Limited, Forrestania Gold NL and Lion Ore Mining International Limited. In 1999, the Project was purchased by Viceroy Australia Pty Ltd which subsequently went into involuntary administration in 2002. The majority of leases associated with the proposal area were allowed to expire and were subsequently surrendered to the State, with associated unconditional performance bonds called in by the State. Applications for new mining leases over the respective mining areas were granted in 2004.

In 2014, Convergent Minerals Limited acquired the mining tenements and submitted an application to recommence mining at the Blue Vein Project, approximately 8km south of the Bounty Mine. A Mining Proposal was approved by the then Department of Mines and Petroleum (now Department of Mines, Industry Regulation and Safety) in 2015, however the project was not implemented, and the company went into receivership in 2016.

In 2016, Kidman Resources Limited (Kidman) acquired the mining tenements and commenced exploration and feasibility studies for the development of the Earl Grey lithium deposit. The majority of disturbance associated with the mine site is currently the liability of the State of Western Australia.

The proposal

The subject of this ESD is the Earl Grey Lithium Project by Kidman, which is for the development of a pegmatite-hosted lithium deposit at the abandoned Mt Holland Mine Site. The proposal area is located approximately 105 km south-southeast of Southern Cross, in the Shire of Yilgarn.

The proposal was referred to the EPA on 19 May 2017, and the EPA Chairman determined to assess the proposal at a level of assessment of Public Environmental Review with a four-week review period on 24 July 2017.

During preparation of this ESD the proponent identified that additional capacity was required for the tailings storage facility (TSF), and that the existing network of roads that would be utilised for the proposal were not reflected in the proposal description. The proponents also identified the opportunity to reduce direct impact on malleefowl in the proposal area through modification of the waste dump design. On 23 November 2017, the proponent provided an application and supporting information for a Change to Proposal via section 43A (s43A) of the EP Act. The s43A application was approved by the EPA Chairman on XX December 2017.

The proposal Development Envelope is 1,984 hectare (ha), with a proposal footprint of 705 ha for conventional open-cut mining of the existing Earl Grey pit, processing of the lithium ore, and transportation of lithium concentrate to a Western Australian port for export.

The mining proposal would be developed in a series of stages over a 30 – 40 year period. To fully implement the proposal, it requires new clearing of 392 ha of native vegetation which is potential fauna habitat. However, the proposal would utilise some existing infrastructure and disturbed areas. The existing southern borefield, located approximately 8 km south of the processing plant, would be utilised for the mining proposal.

The regional location of the proposal is shown in Figure 1 and the Development Envelope encompassing the physical elements of the proposal is delineated in Figure 2.

The key characteristics of the proposal are set out in Tables 2 and 3. The key proposal characteristics may change as a result of the findings of studies and investigations conducted and the application of the mitigation hierarchy by the proponent.

Table 2 Summary of the proposal

Proposal title	Earl Grey Lithium Project
Proponent name	Kidman Resources Limited
Short description	<p>The proposal is to develop a pegmatite-hosted lithium deposit at the abandoned Mt Holland Mine Site, in a Development Envelope of 1,984 ha.</p> <p>The mining proposal involves disturbance of 705 ha of land, including new clearing of up to 392 ha of native vegetation, which is habitat for significant fauna species.</p>

Table 3 Location and proposed extent of physical and operational elements

Element	Existing disturbance (ha)	Proposed new clearing (ha)	Proposed extent (total) (ha)
Mine and associated infrastructure (including: mine pit, WRDs, TSF, processing plant, wastewater treatment plant, landfill, water storage, topsoil stockpiles, coreyard, workshop, explosives magazine, pipelines, powerlines, administration facilities, roads, accommodation camp.)	Up to 313	Up to 392	Up to 705

3. Preliminary key environmental factors and required work

The preliminary key environmental factors for the environmental review are:

1. Flora and Vegetation; and
2. Terrestrial Fauna.

Table 4 outlines the work required for each preliminary key environmental factor and contains the following elements for each factor:

- **EPA factor and EPA objective** for that factor.
- **Relevant activities** – the proposal activities that may have a significant impact on that factor.
- **Potential impacts and risks** to that factor.

- **Required work** for that factor.
- **Relevant policy and guidance** – EPA (and other) guidance and policy relevant to the assessment.

Table 4 Preliminary key environmental factors and required work

Flora and Vegetation	
EPA objective	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.
Relevant activities	Clearing of up to 392 ha of native vegetation to extend the existing Earl Grey pit and associated mine infrastructure.
Potential impacts and risks	<ul style="list-style-type: none"> • Further loss and fragmentation of native vegetation and habitat; • Spread of weeds and alteration of fire regimes; • Dust deposition on vegetation from mining and related activities; • Impact to flora and vegetation from overspray of hypersaline water used for dust suppression; • Changes to vegetation structure and composition through altered surface drainage flow patterns; and • Impact to flora and vegetation from spillage of tailings, hypersaline water and hydrocarbons.
Required work	<ol style="list-style-type: none"> 1. Identify and characterise flora and vegetation in the proposal area in accordance with the requirements of EPA Guidance. The survey needs to include all areas that are likely to be directly or indirectly impacted (including by changes to groundwater, or surface water flow) as a result of the proposal. 2. Provide an analysis of the vegetation and significant flora species present, and likely to be present, within the proposal area including the EPBC listed flora species <i>Banksia sphaerocarpa</i> var. <i>dolichostyla</i>, and the <i>Ironcap Hills vegetation complexes</i> (Mt Holland, Middle, North and South Ironcap Hills, Digger Rock and Hatter Hill) (banded ironstone formation) Priority Ecological Community (PEC). 3. Identify any areas in the Development Envelope where flora and vegetation surveys have not previously been undertaken, and undertake field surveys in these areas in accordance with EPA guidance. Surveys being undertaken in new areas should have a focus on identification of significant flora species such as the EPBC listed <i>Banksia sphaerocarpa</i> var. <i>dolichostyla</i>, and the <i>Ironcap Hills vegetation complexes</i> PEC.

	<ol style="list-style-type: none">4. Undertake baseline weed mapping in all areas likely to be directly or indirectly impacted by the proposal.5. Provide figures of the proposed clearing and predicted indirect impact to vegetation and significant flora species including threatened/priority ecological communities, threatened/priority flora, and significant flora and significant vegetation as defined by EPA guidance.6. Assess the direct and indirect impacts from the proposed mining. Discuss the significance of the direct and indirect impacts from the mining activities on flora and vegetation at a local and regional level.7. Provide a detailed description of the cumulative impacts associated with the proposal, and demonstrate that practicable measures have been taken to reduce both the area of the proposed disturbance footprint, and the Development Envelope, based on proposal design and understanding of the environmental impacts.8. Demonstrate that the proposal has been designed to avoid and minimise impacts, such as that placement of access roads and infrastructure has had regard to utilising existing areas of disturbance, and risk from stormwater runoff and impediments to surface and sheet flow drainage, have been considered.9. Discuss proposed management, monitoring and mitigation methods to be implemented demonstrating that the proposal has addressed the mitigation hierarchy, and ensure residual impacts (direct and indirect) are not greater than predicted.10. Describe the proposed rehabilitation methodology for areas within the Development Envelope, including but not limited to:<ol style="list-style-type: none">a. characteristics of soil and soil profile;b. topsoil management;c. retention or reuse of vegetative material (where feasible);d. return of species and communities (where feasible) consistent with the pre-existing composition of the affected area; ande. timeframes for rehabilitation.11. Prepare a Rehabilitation and Closure Plan consistent with the DMP and EPA (2015) Guidelines for Preparing Mine Closure Plans. The Plan should include but not be limited to:<ol style="list-style-type: none">a. Areas previously disturbed which would be rehabilitated;b. closure objectives and completion criteria (qualitative at this stage) addressing post mining landforms and soil profile reconstruction, native vegetation and habitat for conservation significant fauna; and
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	<p>c. identify vegetation and fauna reference and analogue sites, to inform completion criteria.</p> <p>12. Demonstrate and document in the ERD how the EPA's objective for this factor can be met.</p> <p>13. Determine and quantify any significant residual impacts by applying the Residual Impact Significance Model (page 11) and WA Offset Template (Appendix 1) in the WA Environmental Offsets Guidelines (2014) and include reference to the Commonwealth Assessment Guide for any MNES.</p> <p>14. Where significant residual impacts remain, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines. Spatial data defining the area of significant residual impacts should also be provided.</p>
<p>Relevant policy and guidance</p>	<p><i>EPA policy and guidance</i></p> <p>Environmental Factor Guideline – <i>Flora and Vegetation</i> (EPA, 2016);</p> <p>Technical Guide – <i>Flora and Vegetation Surveys for Environmental Impact Assessment</i> (EPA, 2016);</p> <p>Guidance Statement No. 6 – <i>Rehabilitation of Terrestrial Ecosystems</i> (EPA, 2006);</p> <p>Statement of Environmental Principles, Factors and Objectives (EPA, 2016).</p> <p>EPA Policy and Guidance Guidelines for Preparing Mine Closure Plans (DMP and EPA, 2015);</p> <p>Instructions on how to prepare an Environmental Review Document (EPA, 2016); and</p> <p>Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA, 2016).</p> <p><i>Commonwealth policies and guidance</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p>Environmental Offsets Policy (Department of Sustainability, Environment, Water, Population and Communities, 2012); and</p> <p>Threatened Species Scientific Committee (2008). <i>Commonwealth Conservation Advice on Banksia sphaerocarpa var. dolichostyla</i> (Ironcaps Banksia). Department of the Environment, Water, Heritage and the Arts. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/10518-conservation-advice.pdf</p> <p><i>Other policy and guidance</i></p> <p>WA Environmental Offsets Policy (Government of Western Australia, 2011); and</p>

	WA Environmental Offsets Guidelines (Government of Western Australia, 2014).
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Terrestrial Fauna	
EPA objective	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
Relevant activities	Clearing of native vegetation that supports significant fauna species to extend the existing Earl Grey pit and associated mine infrastructure.
Potential impacts and risks	<ul style="list-style-type: none"> • Further loss and fragmentation of habitat from vegetation clearing; • Death, injury and displacement from construction and mining operations, vehicle strikes and changed fire regimes; • Increased feral fauna from increased access into areas from new tracks and roads, and attraction to rubbish tips; and • Secondary impact from dust, noise and vibration during construction and mining operations.
Required work	<p>15. Conduct a desktop study, including a literature review, in accordance with EPA guidance. The desktop study needs to identify terrestrial vertebrate fauna and short range endemic (SRE) invertebrate fauna in the region, and those likely to be present in the Development Envelope.</p> <p>16. Undertake Level 2 surveys for terrestrial vertebrate fauna in all areas proposed to be impacted in accordance with EPA guidance. Identify from the desktop study any areas in the Development Envelope that have not previously been subject to fauna surveys. Consolidate historical and new survey data to place the impacts of the proposal into local and regional contexts and provide a Figure illustrating records of conservation significant fauna within the Development Envelope and the surrounding area.</p> <p>17. Determine the likelihood of the habitats within the Development Envelope to support SRE invertebrate fauna and undertake surveys for SRE fauna in accordance with EPA guidance. Provide Figures illustrating the locations of SRE fauna in relation to the impacted areas.</p> <p>18. Conduct Level 2 targeted surveys for EPBC Act listed fauna species (Chuditch, Malleefowl) in accordance with EPA and EPBC Act guidance.</p> <p>19. Provide justification that the completed desktop study and field surveys are representative of the current conditions in the Development Envelope and determine the likelihood of occurrence</p>

	<p>of other conservation significant fauna potentially occurring in the Development Envelope.</p> <p>20. Assess direct, indirect and cumulative impacts on fauna and fauna habitats from past, current and approved exploration and mining activities and outline the uncertainties, if any, with determining the impacts.</p> <p>21. Provide Figures showing the likely extent of the loss of habitat types. This is to be based on quantitative data from relevant local and regional surveys.</p> <p>22. Demonstrate that the proposal has been designed to avoid and minimise impacts to terrestrial fauna and fauna habitat, including the placement of any access roads, TSFs and other infrastructure, and that placement has had regard to utilising existing areas of disturbance.</p> <p>23. Describe the proposed management, monitoring and mitigation methods to be implemented to address direct and indirect impact on fauna, including actions to prevent fauna death, injury and displacement as a result of the proposal.</p> <p>24. Demonstrate that the proposed management, monitoring and mitigation methods to be implemented addressed the mitigation hierarchy, and ensure residual impacts (direct and indirect) are not greater than predicted.</p> <p>25. Demonstrate and document in the ERD how the EPA's objective for these factors can be met.</p> <p>26. Determine and quantify any significant residual impacts by applying the Residual Impact Significance Model (page 11) and WA Offset Template (Appendix 1) in the WA Environmental Offsets Guidelines (2014) and include reference to the Commonwealth Assessment Guide for any MNES.</p> <p>27. Where significant residual impacts remain, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines. Spatial data defining the area of significant residual impacts should also be provided.</p>
Relevant policy and guidance	<p><i>EPA policy and guidance</i></p> <p>Environmental Factor Guideline – <i>Terrestrial Fauna</i> (EPA, 2016);</p> <p>Technical Guide – <i>Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i> (EPA, 2010);</p> <p>Guidance Statement No. 20 – <i>Sampling of Short Range Endemic Invertebrate Fauna for Environmental Impact Assessment in Western Australia</i> (EPA, 2009);</p> <p>Statement of Environmental Principles, Factors and Objectives (EPA 2016);</p>

EPA Policy and Guidance Guidelines for Preparing Mine Closure Plans (DMP and EPA, 2015);

Instructions on how to prepare an Environmental Review Document (EPA, 2016); and

Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA, 2016).

Commonwealth policies and guidance

Survey guidelines for Australia's threatened birds (Commonwealth Department of the Environment, Water, Heritage and the Arts, 2010);

Survey guidelines for Australia's threatened mammals (Commonwealth Department of the Sustainability, Environment, Water, Population and Communities, 2011);

Chuditch (*Dasyurus geoffroii*) National Recovery Plan: Wildlife Management Program No. 54, (Department of Environment and Conservation, 2012);

Threat abatement plan for predation by feral cats, (Commonwealth Department of the Environment, 2015);

Threat abatement plan for competition and land degradation by rabbits, (Commonwealth Department of the Environment and Energy, 2016);

Threat abatement plan for predation by the European red fox, (Commonwealth Department of Environment, Water, Heritage and the Arts, 2008);

Environment Protection and Biodiversity Conservation Act 1999
Environmental Offsets Policy (Department of Sustainability, Environment, Water, Population and Communities, 2012); and

Benshemesh, J. (2007). *National Recovery Plan for Malleefowl *Leipoa ocellata**. Adelaide, South Australia: Department for Environment and Heritage.

Available from:

<http://www.environment.gov.au/biodiversity/threatened/publications/recovery/malleefowl/index.html>

Other policy and guidance

WA Environmental Offsets Policy (Government of Western Australia, 2011); and

WA Environmental Offsets Guidelines (Government of Western Australia, 2014).

4. Other environmental factors or matters

The EPA has identified the following other environmental factors or matters relevant to the proposal that must be addressed during the environmental review and discussed in the Environmental Review Document:

- **Terrestrial Environmental Quality** – if water is present in the existing TSF1, placing waste material on the TSF to construct WRD1 may increase hydraulic pressure (head) resulting in an increase in the rate of seepage. Therefore, if water is present in the existing TSF, the proponent is required to determine if placing the TSF on top of an existing facility would change the seepage rate.
- **Subterranean Fauna** – provide comment using site characteristics (geology and groundwater salinity) if there are likely to be stygofauna present on the site and impacted by the proposal. If stygofauna are likely to be present and would be impacted by the proposal, undertake stygofauna work in accordance with EPA guidance.
- **Social Surroundings** – investigate if the proposal is likely to result in an adverse impact, or reduction in access, to the Holland Track. If it is, implement actions that ensure access to the Holland Track is maintained for all users.
- **Air Quality (Greenhouse Gas Emissions)** – provide an estimate of the annual GHG emissions as a result of the proposal, and any mitigation measures committed to by the proponent.

It is important that the proponent be aware that other factors or matters may be identified during the course of the environmental review that were not apparent at the time that this ESD was prepared. If this situation arises, the proponent must consult with the EPA to determine whether these factors and/or matters are to be addressed in the ERD, and if so, to what extent.

5. Stakeholder consultation

The proponent must consult with stakeholders who are affected by, or are interested in the proposal. This includes the decision-making authorities (see section 6), other relevant state (and Commonwealth) government agencies and local government authorities, the local community and environmental non-government organisations.

The proponent must document the following in the ERD:

- identified stakeholders;
- the stakeholder consultation undertaken and the outcomes, including decision-making authorities' specific regulatory approvals and any adjustments to the proposal as a result of consultation; and
- any future plans for consultation.

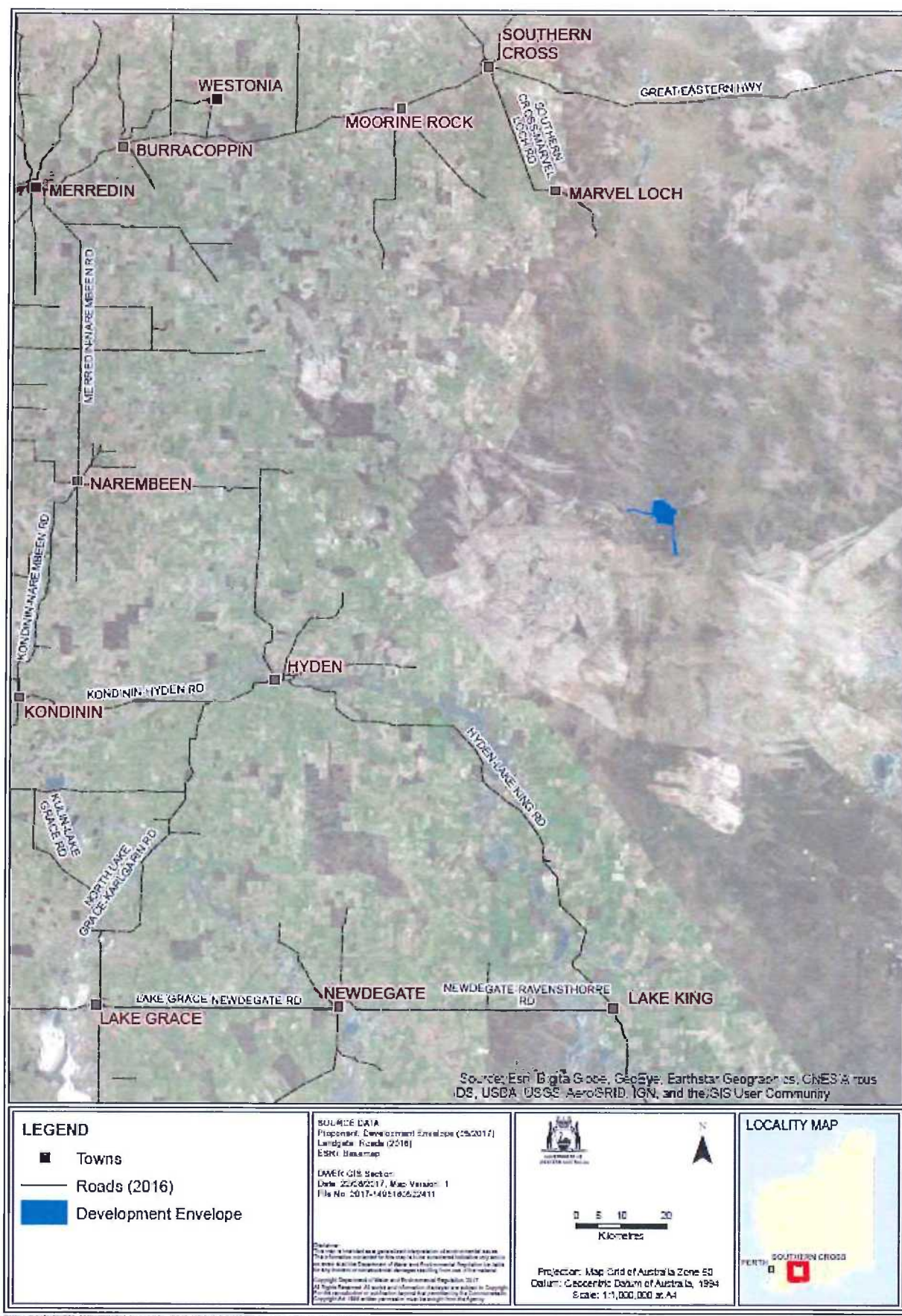
6. Decision-making authorities

At this stage, the EPA has identified the authorities listed in Table 4 as decision-making authorities (DMAs) for the proposal. Additional DMAs may be identified during the course of the assessment.

Table 5 **Decision-making authorities**

Decision-making authority	Relevant legislation
1. Minister for Environment	<i>Wildlife Conservation Act 1950</i>
2. Minister for Mines and Petroleum	<i>Mining Act 1978</i>
3. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i>
4. Department of Mines, Industry Regulation and Safety	<i>Mining Act 1978</i> <i>Dangerous Goods Safety Act 2004</i> <i>Mines Safety and Inspection Act 1994</i>
5. Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i>
6. Commonwealth Department of the Environment and Energy	<i>Environment Protection and Biodiversity Conservation Act 1999</i>

Figure 1 – Regional location



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