

# Wyloo North Iron Ore Mine

## Environmental Scoping Document

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## 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 Environmental Scoping Document (ESD) prescribes the key content and indicative timing of the environmental review, consistent with s. 40(3) of the EP Act.

The EPA also prescribes the form, content and procedure of the review (consistent with s. 40(3) of the EP Act) in the [EIA Practice Guide](#) and the [Instructions and Template: How to prepare an Environmental Review Document](#). The proponent is required to undertake the environmental review in accordance with these procedures and instructions.

This ESD has not been released for public review. The ESD will be available on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au)) upon endorsement and must be appended to the Environmental Review Document (ERD). The ERD is to be published for public review for a period of 4 (four) weeks.

The Proponent will undertake a review of the ERD to ensure the requirements of the relevant EPA instructions, templates and guidance have been met. The ERD will include a scoping checklist, presented as a table following [Table A1-1](#) on page 9 of the ERD Template (2025), which identifies the section(s) and page numbers of the ERD where the requirements of this ESD, as set out in Table 3 and Table 4 of the ESD, are addressed.

**Table 1: General proposal and proponent information**

Proposal information	
Proposal name	Wyloo North Iron Ore Mine
Proponent	Fortescue Ltd
Assessment number	2580
Local Government area	Shire of Ashburton
Public review period	Environmental Review Document – 4 weeks
EPBC reference no	2026/10435

The subject of this ESD is Fortescue Ltd's Wyloo North Iron Ore Mine for the construction and operation of an iron ore mine 110 kilometres (km) west of Tom Price, in the Pilbara Region of Western Australia.

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.

### 1.1 Indicative timing of the environmental review

Table 2 sets out the indicative outline of the timing of the environmental review (indicative timing) agreed between the EPA and the proponent.

**Table 2: Indicative timing of the environmental review**

Key assessment milestones	
EPA approves Environmental Scoping Document	June 2026
Proponent submits first draft Environmental Review Document	9 February 2027
EPA Services review the first draft Environmental Review Document (6 weeks from receipt of ERD)	23 March 2027
Proponent submits revised Environmental Review Document	27 April 2027
EPA Servies reviews revised Environmental Review Document and authorises for public review (if public review required) (4 weeks from receipt of revised ERD)	25 May 2027
Proponent releases Environmental Review Document for public review for 4 weeks	27 May 2027
Close of public review period	24 June 2027
EPA provides Summary of Submissions (3 weeks from close of public review period)	15 July 2027
Proponent provides Response to Submissions	12 August 2027
EPA reviews the Response to Submissions (4 weeks from receipt of Response to Submissions)	9 September 2027
EPA prepares draft assessment report and completes assessment (6 weeks from receipt of final information received for assessment)	21 October 2027
EPA finalises Assessment report (including two-week consultation on draft conditions) and gives report to Minister (6 weeks from completion of assessment)	2 December 2027

### 1.2 Commonwealth Government approvals

The Proposal has been referred under section 74 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and determined to be a controlled action under section 75 of the EPBC Act. The Proposal is being assessed as an accredited assessment under section 87 of the EPBC Act. The Matters of National Environmental Significance (MNES) relevant to this proposal include, but are not limited to, the following:

- Northern Quoll (*Dasyurus hallucatus*) - Endangered
- Ghost Bat (*Macroderma gigas*) - Vulnerable
- Pilbara Leaf-nosed Bat (*Rhinonictis aurantia*) - Vulnerable
- Pilbara Olive Python (*Liasis olivaceous barroni*) - Vulnerable
- Grey Falcon (*Falco hypoleucos*) - Vulnerable

This ESD includes work required to be carried out and reported on in the Environmental Review Document in relation to Matters of National Environmental Significance (MNES). The Environmental Review Document will also address the matters set out in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000*. MNES that may be impacted by the Proposal will be identified, and the potential impacts on those matters will be addressed within each relevant

preliminary environmental factor identified in Table 3. Any proposed offsets to address significant residual impacts on MNES will also be discussed in the Environmental Review Document.

**2. Form and content (required work)**

The EPA requires that the form and content of the report on the environmental review required under section 40 of the EP Act is in accordance with the [Instructions and Template: How to prepare an Environmental Review Document](#).

The EPA also requires that the environmental review includes the proposal specific additional content outlined in Section 2.

**2.1 Preliminary key environmental factors**

The preliminary key environmental factors to be addressed in the ERD are:

- A. Flora and Vegetation
- B. Terrestrial Fauna
- C. Subterranean Fauna
- D. Inland Waters
- E. Social Surroundings
- F. Terrestrial Environmental Quality

**2.2 Specific and/or additional work required for assessment of key environmental factors**

Table 3 outlines the proposal specific and/or additional work required as it relates to preliminary key environmental factor/s for the proposal.

**Table 3: Proposal specific and/or additional required work**

All Environmental Factors
<p><b>Required work:</b></p> <p>Work to be consistent with the requirements in the <a href="#">Instructions and Template: How to prepare an Environmental Review Document</a> and provided for each factors:</p> <ul style="list-style-type: none"> <li>A. factor objective</li> <li>B. relevant policies and guidance (including, but not limited to Appendix 1)</li> <li>C. receiving environment</li> <li>D. mitigation</li> <li>E. potential environmental impacts</li> <li>F. assessment and significance of residual impact including cumulative impacts</li> <li>G. environmental outcomes</li> <li>H. Offsets (if required)</li> </ul> <p>Work required to inform the ERD will be conducted in accordance with the requirements of the most recent EPA Environmental Factor Guidelines and Technical Guidance at the time the ERD is</p>

published for each preliminary key environmental factor, and a consolidated report of the surveys and/or investigations undertaken will be provided for each factor.

Ensure all information as required by EPA guidelines and guidance is provided in the ERD and that the content in the main document aligns with the information in the attached appendices or provide justification why this is not the case.

Any novel approaches need to be agreed to prior to submission and supported with an independent peer review to demonstrate it is fit-for-purpose. Any investigation, study or survey limitations need to be discussed, along with the methodology as to how any gaps in information have been addressed.

For each preliminary key environmental factors, the proponent is required to follow relevant recovery plans, conservation advices and/or threat abatement plans for conservation significant species, communities, habitat (supporting, significant, and critical), and ecosystems that are known to occur, or are likely to occur in the vicinity of the proposal area. Any instances where published guidance is not followed must be justified.

Where previous investigations or surveys are relied upon, justification will be provided to demonstrate that they are relevant and consistent with EPA guidance.

## **A. Flora and Vegetation**

### **Required work:**

1. Conduct flora and vegetation surveys in accordance with the [Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment](#), to identify and characterise flora and vegetation within the study area, describe significant flora and vegetation, and assess values in a clearly defined local and regional context, including clear explanation and justification of how these contexts are determined and quantified. Refer to the [Environmental factor guideline – Flora and vegetation](#) for definition of significant flora and vegetation.

If multiple surveys have been undertaken to support the assessment, a consolidated report should be provided including the integrated results from all relevant previous surveys, relevant to the proposal area.

If previous surveys are relied on for context, justification should be provided to demonstrate that they are relevant and consistent with EPA guidance.

If previous surveys and records are utilised, older specimens should be compared with newer collected specimens. Genetic analysis may be required to match and identify specimens.

2. Undertake flora and vegetation surveys within the southwestern section of the development envelope (DE).
3. Provide tables with quantitative assessments of impact:
  - a. For significant flora, this includes:
    - i. number of individuals and populations in a local and regional context, and clarify and justify the quantification of the local and regional context used in the assessment
    - ii. numbers and proportions of individuals and populations directly or potentially indirectly impacted
    - iii. numbers/proportions/populations currently protected within the conservation estate (where known).
  - b. For all vegetation units (noting threatened and priority ecological communities and

significant vegetation) this includes:

- i. area (in hectares) and proportions directly or potentially indirectly impacted
  - ii. proportions/hectares of the vegetation unit currently protected within conservation estate (where known).
4. Provide appropriate mapping and figures, including but not limited to, survey efforts, habitats, location of recorded species and/or specific vegetation types. This should include:
    - a. figures that label individual species and clearly illustrate their associated habitats.
    - b. a map showing survey effort areas, with survey extents clearly labelled and confirming their size
    - c. a large-scale inset maps or separate maps that clearly illustrate the location of the survey site and the sampling methods used
  5. Provide cumulative impacts and incorporating data from adjacent and regional proposals to inform species distributions, vegetation or habitat extents, and the predicted cumulative impacts to species and communities from multiple projects.
  6. Provide details regarding the proposal's potential impact on the flora and vegetation from altered groundwater and surface hydrology including the scale and extent of potential impacts.
  7. Discuss the impacts of groundwater abstraction, surplus water discharge and surface water management (such as, but not limited to, creek diversions) on flora species, vegetation types, habitats and communities, and how impacts will be managed during operations and post-closure with regards to the mitigation hierarchy, including timebound or measurable commitments to progressive rehabilitation (e.g. against annual clearing rates, number of hectares per five years etc).
  8. Outline the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the [EPA instructions](#).
  9. Predict the residual impacts from the proposal on flora and vegetation after considering and applying the mitigation hierarchy.

## **B. Terrestrial Fauna**

### **Required work:**

10. Conduct fauna surveys<sup>1</sup> in accordance with the [EPA Technical Guidance - Vertebrate Fauna Surveys](#) and [EPA Technical Guidance - Sampling of Short Range Endemic Invertebrate Fauna](#), to

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<sup>1</sup> The Proposal area is located within a mapped area considered likely to contain suitable habitat that may support Night Parrot (*Pezoporus occidentalis*; Critically Endangered). Targeted surveys for Night Parrot must be undertaken in accordance with the current, relevant survey guidelines.

identify vertebrate and invertebrate aquatic fauna<sup>2</sup>, and short-range endemic (SRE) invertebrate fauna and their habitats in a local and regional context, clarify and justify the quantification of the local and regional context used in the assessment. Refer to the [Environmental Factor Guideline - Terrestrial Fauna](#) for definition of significant fauna.

If multiple surveys have been undertaken to support the assessment, a consolidated report should be provided including the integrated results from all relevant previous surveys, relevant to the proposal area.

If previous surveys are relied on for context, justification should be provided to demonstrate that they are relevant and consistent with EPA guidance.

If previous surveys and records are utilised, older specimens should be compared with newer collected specimens. Genetic analysis may be required to match and identify specimens.

11. Provide a map of the survey effort applied in relation to the study area, terrestrial fauna habitats, and development envelope, identifying the direct and indirect impact areas.
12. Identify and describe the terrestrial fauna habitats identified by the studies and surveys. Describe significant fauna habitats, including but not limited to: SRE invertebrate microhabitats, refugia (including persistent pools, springs, seeps), breeding areas, key foraging habitat, movement corridors and linkages.
13. Provide figures and maps showing the extent of terrestrial fauna habitats in relation to the proposal and species distributions.
14. Identify and describe the fauna assemblages present and likely to be present within the development envelope that may be impacted by the proposal.
15. Identify significant or restricted fauna and describe in detail their known ecology, likelihood of occurrence, habitats and known threats.
16. Map the locations of significant/restricted fauna records in relation to the terrestrial fauna habitats, the study area, the development envelope, and direct and indirect impact areas.
17. Describe and quantify the extent of potential direct, indirect and cumulative impacts, including percentages, to habitats and significant species that may occur following implementation of the proposal during both construction and operations, in a local and regional context.
18. Provide a table of the proportional extents of each habitat within the study area and development envelope, and the predicted amount to be directly impacted and remaining habitat. Consider any local or regional cumulative impacts.
19. Invertebrate species to be identified to the species level or provide a justification if unable to do so. Resolve the invertebrate specimen identifications to species/operational taxonomic units (OTU), using genetic and/or morphological methods.
20. Conduct additional targeted surveys for SREs currently identified only within the Development Envelope and confined to the disturbance footprint; identify populations of those SREs outside the impact footprint; and define their extent and distribution including quantification of

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<sup>2</sup> The proposal area contains suitable habitat for Priority 4 fish *Leiopotherapon aheneus* (Fortescue grunter). Targeted surveys for Fortescue Grunter must be undertaken to inform their presence, abundance and distribution within the proposal area.

impacted habitat and remaining habitat for the species of concern.

21. Outline the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the [EPA instructions](#).
22. Predict the residual impacts from the proposal on terrestrial fauna after considering and applying the mitigation hierarchy.

### C. Subterranean Fauna

#### **Required work:**

23. Conduct subterranean fauna surveys in accordance with the [Technical Guidance - Subterranean fauna surveys for EIA](#), to identify and characterise the subterranean fauna (identified to a species level where possible), assemblages, and habitats in a local and regional context, and clarify and justify the quantification of the local and regional context used in the assessment. Refer to the [Environmental Factor Guideline - Subterranean Fauna](#) for definition of significant subterranean fauna.  
  
If multiple surveys have been undertaken to support the assessment, a consolidated report should be provided including the integrated results from all relevant previous surveys, relevant to the proposal area.  
  
If previous surveys are relied on for context, justification should be provided to demonstrate that they are relevant and consistent with EPA guidance.  
  
If previous surveys and records are utilised, older specimens should be compared with newer collected specimens. Genetic analysis may be required to match and identify specimens.
24. Provide a map of the survey effort applied in relation to the study area, subterranean fauna habitats, and development envelope, identifying the direct and indirect impact areas.
25. Identify and describe the subterranean fauna habitats:
  - a. that may be impacted directly and indirectly by the proposal during construction and operations.
  - b. describe the significance of these values in a local and regional context.
  - c. Include relevant geological and hydrological information to determine habitat suitability and connectivity, including inside and outside the impact areas.
26. Provide figures and maps showing the extent of subterranean fauna habitats in relation to the proposal and species distributions.
27. Include a table of the proportional extents of each habitat within the study area and development envelope, and the predicted amount to be directly impacted and remaining. Consider any local or regional cumulative impacts. Any graphics provided must be clearly annotated and of high resolution.
28. Identify and describe the fauna assemblages present and likely to be present within the development envelope that may be impacted by the proposal.
29. Identify significant or restricted fauna and describe their known ecology, likelihood of occurrence, habitats and potential threats.
30. Map the locations of significant/restricted fauna records in relation to the subterranean fauna habitats, the study area, the development envelope, and direct and indirect impact areas.
31. Describe and quantify the extent of potential direct, indirect and cumulative impacts, including

percentages, to subterranean fauna as a result of implementation of the proposal during both construction and operations, in a local and regional context.

32. If new or alternative techniques are used, a peer review of information, modelling, surveys conducted, and management plans developed for this factor are required to determine that EPA objectives will be met.
33. Outline the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the [EPA instructions](#).
34. Predict the residual impacts from the proposal on subterranean fauna after considering and applying the mitigation hierarchy.

#### **D. Inland Waters**

##### **Required work:**

35. Characterise the baseline hydrological and hydrogeological regimes in local and regional context, clarify and justify quantification of the local and regional context used in the assessment, including, but not limited to, catchment boundaries, water quality and quantity, water levels, water chemistry, stream flows and flood patterns. Include a detailed description of the geological framework (conceptual understanding of the groundwater environment) within the zone to be impacted by groundwater abstraction and any interdependence between surface and groundwater features/aquifers. Include, where relevant, influences on water availability.
36. Undertake a baseline surface water monitoring program (quantity<sup>3</sup> and quality) to characterise baseline water regime of surface water assets, including intermittent creeks and persistent (semi-permanent and permanent) pools, springs or soaks that may be directly or indirectly impacted by the proposal and inform landform placement and condition.
37. Identify the environmental values and beneficial uses of surface and groundwater.
38. Identify and characterise any environmental receptors that may be impacted by changes to inland waters as a result of the proposal.
39. Provide maps showing inland water values including locations of key proposal aspects.
40. Provide hydrogeological conceptualisation of groundwater systems. Include cross-sections showing all aquifers and ecohydrological receptors within the groundwater impact footprint, with groundwater levels for all aquifers (baseline, predicted and post closure).
41. Provide a detailed description of the proposal aspects that have the potential to impact inland waters.
42. Provide a conceptual mine water balance over the life of the proposal and discuss surplus

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<sup>3</sup> “Surface water quantity” requires assessment of changes to flow volumes within river catchments pre- and post-development and includes assessment of impacts to surface water pools, including changes in pool volume and the potential for loss of capacity (e.g. due to sedimentation or geomorphic change), including where water levels remain constant.

water management options.

43. Identify the location of abstraction bores, reinjection bores, and infiltration or evaporation ponds and identify and discuss any associated impacts of groundwater abstraction and drawdown, as well as groundwater reinjection and groundwater level rise.
44. Provide a hydrogeological assessment for the proposal (including detailed numerical groundwater modelling) to assess potential impacts on local and regional aquifers due to dewatering and reinjection and subsequent impacts to groundwater dependent ecosystems through an ecohydrology assessment, including but not limited to those within Duck Creek, Boolgeeda Creek, Fourty Seven Mile Creek, Pinarra Creek and Metawandy Creek catchment areas. The assessment must include a cumulative impact assessment with other nearby groundwater users. The assessment must also consider aquifer and pit lake recovery during mine closure.
45. Provide a detailed description of the design and location of the proposal and associated activities with the potential to impact surface and groundwater, and the disturbance of acid sulfate soils, if present.
  - a. Discuss seepage modelling of the waste rock in relation to inland waters. Characterise geological structures which may result in greater connectivity between potential sources of seepage (open cut pits and waste rock landforms) and sensitive receptors and describe the potential impacts on those receptors, including impacts to water quality.
46. Undertake flooding characteristics of the area using appropriate modelling taking into consideration of pre-mining, operational, and post-mining scenarios.
47. Develop surface water (flood) models to simulate a range of Annual Exceedance Probabilities (AEPs), including the Probable Maximum Flood (PMF) and future climate change scenarios.
48. Characterise groundwater conditions using appropriate modelling for pre-mining, operational, and post-mining scenarios, and predict groundwater recovery using a numerical model that incorporates pit lake formation.
49. Undertake groundwater modelling to characterise potential pit lakes as groundwater sinks, flow-through systems, or recharge features, and use results to inform landform placement and location in terms of potential seepage.
50. Undertake hydrological investigations to determine:
  - a. The effects any modified surface drainage and surface discharge, will have on surface and groundwater quality and quantity, for a range of rainfall events, including forecasted maximum precipitation in consideration of climate change, and impacts to riparian vegetation and creek pools.
  - b. The areas that are likely subject to direct and indirect impacts identified in (a).
  - c. The predicted impacts of climate change on the post-development hydrology, including cumulative impacts and a range of climatic scenarios and rainfall events, including forecasted maximum precipitation.
51. Outline the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the [EPA instructions](#).

## E. Social Surroundings

### Required work:

52. Characterise and describe the social, cultural, amenity, and heritage values within and adjacent to the Proposal area and any sensitive receptors that may be directly or indirectly impacted as a result of this Proposal. This includes any receptors that may be affected by land clearing, construction and operation activities, noise and dust emissions, traffic, access, and amenity issues. Include relevant maps to show the locations of the sensitive receptors likely to be affected by the proposal. Identify sites of cultural significance within a regional context, in consultation with the Traditional Owners.
53. Identify and assess potential environmental impacts to any pastoral leases that may occur as a result of this proposal being implemented. Consult with pastoral leaseholders and users that may be impacted, either directly or indirectly, regarding operation and closure land uses.
54. Describe and assess the potential impacts (direct, indirect and cumulative) to social surroundings as a result of changes to the environment from the Proposal considering Traditional Owners and Pastoral Stations and their activities on the land.
55. Describe how the *Aboriginal Heritage Act 1972* (AHA Act) processes will consider physical and biological impacts to Aboriginal cultural heritage values<sup>4</sup> within the proposal area.
56. Describe the likely outcomes of the AHA Act process (e.g. whether a section 18 permit or management plan will be required to authorise harm).
57. Describe how application of the AHA Act is likely to result in consistency with the EPA's objective to protect social surroundings from significant harm.
58. For areas outside the development envelope or within the development envelope but not regulated through the AHA Act, where the proposal is likely to have a physical, biological or abiotic impact to Aboriginal cultural values provide information regarding:
  - a. potential impacts (both direct and indirect, such as clearing, dust, noise, vibration or odour)
  - b. the Aboriginal cultural heritage values likely to be significantly harmed by those impacts
  - c. the extent and duration of the impacts on Aboriginal cultural heritage, taking cumulative effects into account
  - d. the proposed avoidance and mitigation of impacts to Aboriginal cultural heritage values
  - e. residual impacts to Aboriginal cultural heritage values
  - f. the proposed environmental outcomes to protect Aboriginal cultural heritage values which are likely to be significantly harmed by a direct or indirect impact from the proposal.
59. Identify the relevant Aboriginal groups and Traditional Owners who have or will be consulted.
60. Provide details on the engagement and/or consultation process that has or will be undertaken

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<sup>4</sup> The Department of Planning, Lands and Heritage (DPLH) has advised that the development envelope intersects with the boundaries of three registered Aboriginal Sites and 51 lodged Aboriginal heritage places. The disturbance footprint intersects with two registered Aboriginal Sites and 33 lodged Aboriginal heritage places. Attachment 1 provides a list of Aboriginal Sites and heritage places that coincide with the proposal footprint.

with relevant Aboriginal groups and Traditional Owners and include:

- a. evidence of consultation about the proposal and its physical, biological or abiotic impacts on Aboriginal cultural heritage values, including information about proposed avoidance and mitigation
  - b. demonstrate how a reasonable opportunity has been provided to relevant Aboriginal groups and Traditional Owners to meaningfully engage on identifying the cultural heritage values, understanding the physical, biological or abiotic impacts on those values, and contributed to the proposed avoidance and mitigation
  - c. outcomes of any consultation undertaken, including the response to matters raised
  - d. a summary of the consultation process and outcomes as it relates to the proposal's physical and/or biological impacts on Aboriginal cultural heritage values
61. Outline the proposed avoidance and mitigation measures to reduce the potential impacts of the proposal. Include proposed management and/or monitoring plans that will be implemented pre- and post-construction to demonstrate and ensure residual impacts are not greater than predicted. Management and/or monitoring plans are to be presented in accordance with the [EPA instructions](#).

## **F. Terrestrial Environmental Quality**

### **Required work:**

62. Provide details and rationale for locations of Waste Rock Landforms (WRL), stockpiles and landfills, including a detailed flood risk assessment (i.e. meteorological, geological and geographical characteristics).
63. Provide details of the stability of the site from a geotechnical and geochemical perspective.
64. Undertake and provide details of a baseline soil quality assessment of the development envelope. Assess the physical and chemical characterisation of soils to identify baseline characteristics and potential for use as a rehabilitation medium, including susceptibility to erosion and ability to support growth of native vegetation. The key parameters includes:
- a. soil salinity and pH
  - b. exchangeable cation and sodicity
  - c. plant available nutrients
  - d. soil texture
  - e. particle size distribution
  - f. soil structural stability (Emerson Test and potential for clay dispersion)
  - g. Hydraulic conductivity
  - h. propensity for hard setting
  - i. total metal concentrations
  - j. water repellence
  - k. the potential for acid sulfate soils
  - l. the volumes required for rehabilitation, with identification of any shortfalls and potential for use as a rehabilitation medium, including susceptibility to erosion and ability to support growth of native vegetation
65. Include figures of the mapped soil units and soil profile in the ERD.
66. Provide details on the presence of Potential Acid Forming (PAF) within the proposal area, and

if present details of proposed management measures to be implemented during construction and operation to minimise impacts to terrestrial environmental quality.

67. Identify where and how PAF materials may be exposed
68. Quantify volume, extent and duration of PAF exposure
69. Characterise PAF material types and acid-generation risk including
  - a. evaluate the risk pathways
  - b. mobilisation of contaminants
  - c. impacts to Inland waters and ecological values
  - d. Define measures to avoid or manage long-term PAF exposure
  - e. Conduct a detailed flood risk assessment to justify the locations of high-risk landforms such as the WRL.
  - f. Conduct chemical and physical characterisation of the waste materials.
  - g. For each processing waste stream identify:
    - geochemical properties
    - environmental risk
    - any issues with drainage.
70. Provide details of chemical and diesel storage (including quantities), and power generation and management measures, including contingencies in the event of a spill, to ensure that contamination of land does not occur.
71. Determine and document if any of the proposal is likely to be listed as a contaminated site under the *Contaminated Sites Act 2003* (WA) as a result of implementing the proposal.
72. Provide a Mine Closure Plan prepared in accordance with the [Guideline for preparing Mine Closure Plans](#) (Department of Mines, Petroleum and Exploration 2025).

### ***2.3 Cumulative impact assessment***

The ERD will include a cumulative impact assessment (CIA) to assess the Proposal's contribution to impacts on relevant environmental values. Describe, quantify and discuss the direct and indirect cumulative impacts to environmental values and objectives, within the vicinity of proposal area. The CIA will consider successive, incremental and interactive impacts of the proposal on the environment, with one or more past, present and reasonably foreseeable future activities.

Noting the increased level of development in the region, assessment of cumulative impacts will be required to demonstrate how the objectives of the environmental factors will be met. The proponent will be required to assess the cumulative impacts of this proposal in combination with the Eliwana Iron Ore Mine Project and other proposals being implemented by other operators within the Hamersley Interim Biogeographic Regionalisation for Australia (IBRA), a subregion of the Pilbara IBRA region on the preliminary key environmental factors identified in Table 3 of this ESD. The proponent will seek to use publicly available information, including the EPA website, the Clearing Permit System (CPS), and information obtained through relevant data-sharing arrangements, to inform this assessment.

Table 4 outlines the required items to be addressed in the cumulative impact assessment. If through the preparation of the ERD additional values are identified these should be included in the CIA.

**Table 4: Cumulative impact assessment requirements**

<b>Flora and Vegetation</b>	
<b>Required work:</b>	<p>73. The boundaries of assessment include the proposal development envelope, and any direct or indirect impacts that may occur outside the development envelope including but not limited to Duck Creek, Boolgeeda Creek, fourty seven mile creek and Metawandy Creek catchment areas.</p> <p>74. Environmental values include the following, which may be considered preliminary until further surveys are completed and additional values may be included (exclusion of any environmental values require justification):</p> <ul style="list-style-type: none"> <li>a. <i>Triodia pisolitica</i> Priority 3 Priority Ecological Community (PEC)</li> <li>b. Vegetation types— CfAcEm, CfApEm, and EIAbTw3.</li> <li>c. Groundwater dependent vegetation</li> <li>d. Sheet flow dependent vegetation</li> <li>e. Conservation significant species that occur within the development envelope, and outside the development envelope that may be directly or indirectly impacted by proposal activities</li> <li>f. Conservation significant species and communities that that occur within the development envelope, and outside the development envelope that may be directly or indirectly impacted by proposal activities</li> <li>g. Other environmental values as identified in future studies.</li> </ul> <p>75. Activities considered include clearing 4,954.5 hectares (ha) of native vegetation, groundwater abstraction, alteration to surface water flows and groundwater systems, and surplus water management.</p>
<b>Terrestrial Fauna</b>	
<b>Required work:</b>	<p>76. The boundaries of assessment include the proposal development envelope, and any direct or indirect impacts that may occur outside the development envelope, including but not limited to the Duck Creek, Boolgeeda Creek, fourty seven mile creek and Metawandy Creek catchment areas.</p> <p>77. Environmental values include the following, which may be considered preliminary until further surveys are completed and additional values may be included (exclusion of any environmental values require justification):</p> <ul style="list-style-type: none"> <li>a. Fauna habitat</li> <li>b. Conservation significant terrestrial fauna species (including short range endemic species and assemblages)</li> <li>c. Aquatic invertebrate species</li> <li>d. Other environmental values as identified in additional studies.</li> </ul> <p>78. Activities considered include clearing of fauna habitat, vehicle and machinery movements, dewatering, alterations and disruptions to surface water flows, surplus water management and waste disposal.</p>

<b>Subterranean Fauna</b>	
<b>Required work:</b>	<p>79. The boundaries of assessment include the proposal development envelope, and any direct or indirect impacts that may occur outside the development envelope, including but not limited to the Duck Creek, Boolgeeda Creek, Fourty Seven mile creek and Metawandy Creek catchment areas.</p> <p>80. Activities considered include mine pit excavation, ground disturbance, groundwater abstraction, surplus water discharge/reinjection, placement of infrastructure and waste landforms, exposure of potential acid forming materials and post-closure formation of pit lake.</p>
<b>Inland Waters</b>	
<b>Required work:</b>	<p>81. The boundaries of assessment include the proposal development envelope, and any direct or indirect impacts that may occur outside the development envelope, including Duck Creek, Boolgeeda Creek, Fourty Seven mile creek, Pinarra Creek and Metawandy Creek catchment areas, and other aquifers present in these locations.</p> <p>82. Environmental values include the following, which may be considered preliminary until further surveys are completed and additional values may be included (exclusion of any environmental values require justification):</p> <ol style="list-style-type: none"> <li>a. Duck Creek</li> <li>b. Boolgeeda Creek</li> <li>c. Fourty Seven mile creek</li> <li>d. Metawandy Creek</li> <li>e. Pinarra Creek</li> <li>f. Other key water features, including major drainage lines, , persistent (semi-permanent and permanent) pools, seeps, springs, local and regional aquifers and sheet flow areas, as identified in other studies.</li> <li>g. Activities considered include groundwater abstraction for water supply and mine dewatering, groundwater reinjection, construction of infrastructure, including surface water management infrastructure and alteration of surface water flows, use and storage of hydrocarbons and chemicals, storage of mine waste (waste rock), formation of pit lakes and closure-related impacts.</li> </ol>

#### **2.4 Matters of National Environmental Significance**

The proponent must address the relevant impacts on matters protected under EPBC Act in accordance with the requirements set out in the [Instructions and Template: How to prepare an Environmental Review Document](#) and any specific matters required under the EPBC Act and/or raised by the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

#### **2.5 Offsets**

Provide details of the proposed offset including but not limited to:

- objectives and outcomes
- description of actions to be undertaken
- specific and measurable success criteria

- timelines and milestones
- monitoring to assess offset implementation
- reporting details and timing
- financial arrangements
- risks and contingency measures
- governance arrangements including responsibilities and legal obligations
- provide evidence of consultation on offset with relevant stakeholders.

Identify and quantify the significant residual impacts and proposed offsets, including completing the offset template (an example is in Appendix 1 of the WA Offsets Guidelines) and the residual impact significance model table (an example is on Page 11 of the WA Environmental Offsets Guideline).

Where significant residual impacts remain, propose an appropriate offsets package and demonstrate how the proposed offset will counterbalance the significant residual impact. Demonstrate consideration of the six Principles outlined in the WA Environmental Offsets Policy and WA Environmental Offset Guideline. Outline how the offset aligns with relevant plans and policies, such as recovery plans.

Evidence that supports the success or viability of the offset (include as an appendix where required). Where a contribution to the Pilbara Environmental Offsets Fund is proposed to offset the significant residual impacts, provide an Impact Reconciliation Procedure, including the relevant spatial data, prepared in accordance with Instructions: Preparing Impact Reconciliation Procedures and Impact Reconciliation Reports (or any subsequent revisions).

Refer to the relevant guidance for further information on offsets:

- Statement of environmental principles, factors, objectives and aims of EIA
- Environmental factors: WA Environmental offsets policy and WA environmental offset guidelines.

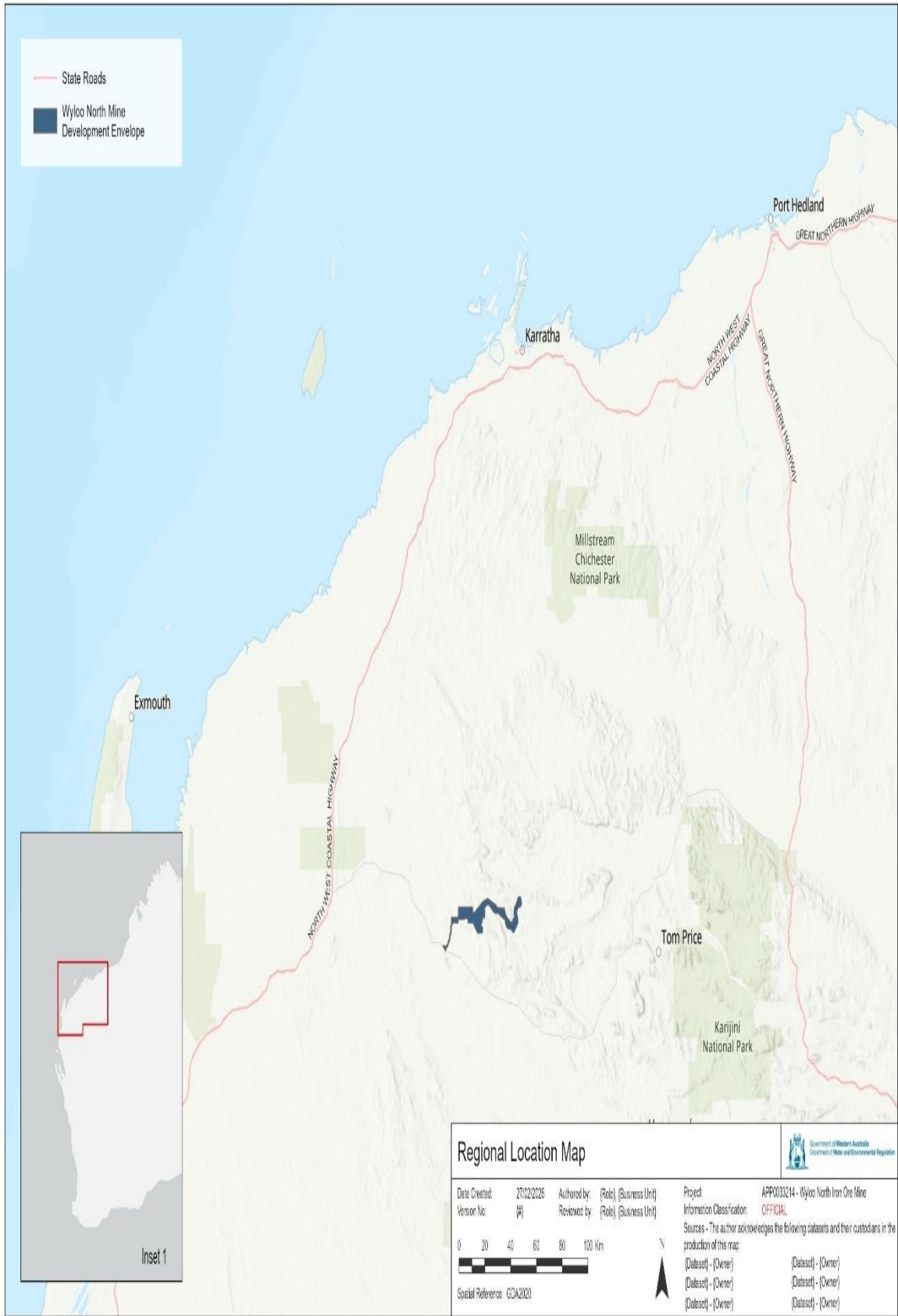
Note: Offsets are not appropriate for all proposals. They should usually only be considered as the final step in the mitigation hierarchy, and only for significant residual impacts for environmental factors. Proponents must provide sufficient evidence about and assess whether (and how) an offset is likely to counter-balance a significant residual impact. Conclusions about this cannot be based on assumptions or conjecture.

### 3. Decision-making authorities

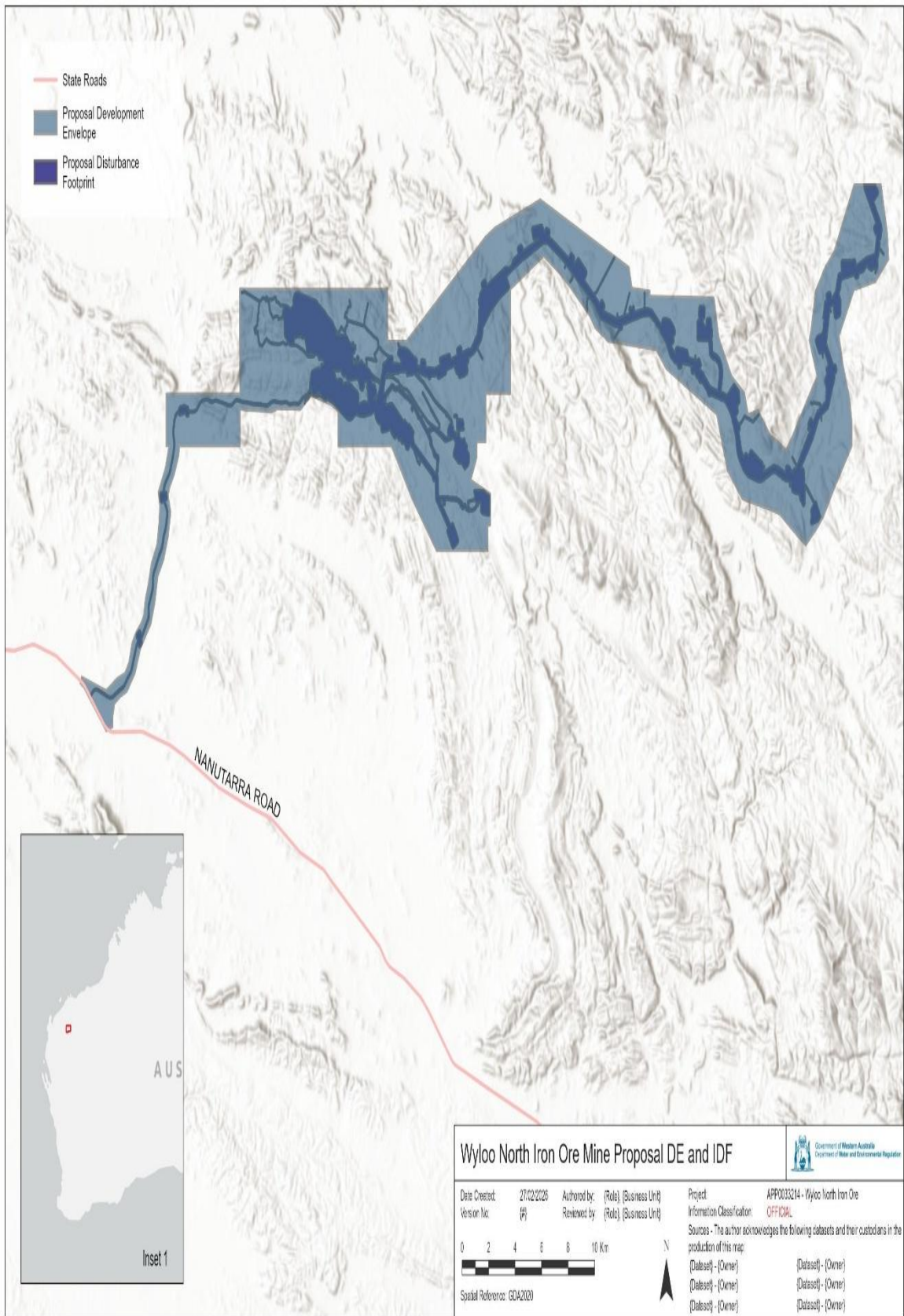
The Proponent has identified the State decision-making authorities for the proposal; listed in Table 3-2 of the Referral Supporting Document. Additional decision-making authorities may be identified during the course of the assessment. The proponent is required to update and complete the information in Table 5, which is to be provided in the ERD on a per impact basis. Information about how DMAs processes can meet expected outcomes and EPA objectives is preliminary or may be unknown at this ESD stage.

**Table 5: Other statutory decision-making processes which can mitigate potential impacts on the environment**

Environmental impact	How is the impact regulated by other decision-making process(es)?	Limit(s) of the decision-making process(es) to regulate the impact eg time limits, excluded operations	Likely environmental outcome of decision-making process(es), and consistency with EPA objective	Conditions, enforcement, and review process required by decision-making process(es)	Stakeholder engagement in decision-making process(es)
<b>Key environmental factor 1</b>					
<i>Proponent to populate and provide in the environmental review document.</i>					
<b>Key environmental factor 2</b>					



**Figure 1 – Regional location of proposal**



**Figure 2: Development envelope of proposal**

## Appendix 1 – Policy and Guidance

### Flora and Vegetation

#### **EPA policy and guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act 1986 (2014)*
- *Environmental and water assessments relating to mining and mining-related activities in the Fortescue Marsh management area, s16(e) of the Environmental Act 1986 (2013)*
- *Environmental factor guideline – Flora and vegetation (2016)*
- *Instructions for preparing Impact Reconciliation Procedures and Impact Reconciliation Reports (2024)*
- *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA) (2024)*
- *Instructions on how to prepare an environmental review document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*
- *Technical guidance: Flora and vegetation surveys for environmental impact assessment (2016)*

#### **Other policy and guidance**

- *Australian Weeds Strategy 2017–2027. Invasive Plants and Animals Committee. Commonwealth of Australia (2017)*
- *DBCA’s Impact and Invasiveness Rating for the Pilbara Region (2023)*
- *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, Department of Sustainability, Environment, Water, Population and Communities (2012)*
- *Pilbara Conservation Strategy, Government of Western Australia (2018)*
- *WA Environmental Offsets Guidelines, Government of Western Australia (2014)*
- *WA Environmental Offsets Policy, Government of Western Australia (2011)*
- *WA Environmental Offsets Template (2014)*

### Terrestrial Fauna

#### **EPA policy and guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act, 1986 (2014)*
- *Environmental factor guideline – Terrestrial fauna (2016)*
- *Instructions for preparing Impact Reconciliation Procedures and Impact Reconciliation Reports (2024)*
- *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA) (2024)*
- *Instructions on how to prepare an environmental review document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*

- *Technical guidance: Sampling of short range endemic invertebrate fauna* (2016)
- *Technical guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment* (2020)

#### **Other policy and guidance**

- *A review of ghost bat ecology, threats and survey requirements, Department of Agriculture, Water and Environment* (2021)
- *A review of Pilbara leaf-nosed bat ecology, threats and survey requirements* (2021)
- *Approved Conservation Advice - Falco hypoleucos (Grey Falcon), Department of Climate Change, Energy, the Environment and Water* (2020)
- *Approved Conservation Advice – Liasis olivaceus barroni (Pilbara Olive Python), Department of Climate Change, Energy, the Environment and Water* (2008)
- *Approved Conservation Advice – Macroderma gigas (Ghost Bat), Department of Climate Change, Energy, the Environment and Water* (2016)
- *Approved Conservation Advice – Rhinonicteris aurantia (Pilbara form) (Pilbara Leaf-nosed Bat), Department of Climate Change, Energy, the Environment and Water*
- *Approved Conservation Advice for Liasis olivaceus barroni (Olive Python – Pilbara subspecies), s266B of the Environment Protection and Biodiversity Conservation Act 1999* (2008)
- *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, Department of Sustainability, Environment, Water, Population and Communities* (2012)
- *Guidelines for determining the likely presence and habitat usage of night parrot (Pezoporus occidentalis) in Western Australia, Department of Biodiversity, Conservation and Attractions* (2024)
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (2024)
- *National Light Pollution Guidelines for Wildlife* (2023)
- *National Recovery Plan for the Northern Quoll, Department of Environment and Conservation* (2010)
- *Pilbara Conservation Strategy, Government of Western Australia* (2018)
- *Threat Abatement Plan for Predation by Feral Cats, Department of Climate Change, Energy, the Environment and Water* (2024).
- *Threat Abatement Plan for Predation by the European Red Fox, Department of Climate Change, Energy, the Environment and Water* (2008)
- *Threat Abatement Plan for the Biological Effects, including Lethal Toxic Ingestion, Caused by Cane Toads, Department of Climate Change, Energy, the Environment and Water* (2011)
- *Threat Abatement Plan to Reduce the Impacts on Northern Australia's Biodiversity by the Five Listed Grasses, Department of Climate Change, Energy, the Environment and Water* (2012)
- *WA Environmental Offsets Guidelines, Government of Western Australia* (2014)
- *WA Environmental Offsets Policy, Government of Western Australia* (2011)
- *WA Environmental Offsets Template* (2014)

## **Subterranean Fauna**

### **EPA policy and guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act, 1986 (2014)*
- *Environmental factor guideline – Subterranean fauna (2016)*
- *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA) (2021)*
- *Instructions on how to prepare an environmental review document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*
- *Technical guidance: Subterranean fauna survey for environmental impact assessment (2021)*

### **Other policy and guidance**

- *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy, Department of Sustainability, Environment, Water, Population and Communities (2012)*
- *Pilbara Conservation Strategy, Government of Western Australia (2018)*
- *WA Environmental Offsets Guidelines, Government of Western Australia (2014)*
- *WA Environmental Offsets Policy, Government of Western Australia (2011)*
- *WA Environmental Offsets Template (2014)*

## **Inland Waters**

### **EPA Policy and Guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act, 1986 (2014)*
- *Environmental Factor Guideline – Inland Waters (2018)*
- *Instructions on how to prepare an Environmental Review Document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*

### **Other policy and guidance**

- *ANZECC & ARMCANZ (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra.*
- *Guideline for preparing Mining Development and Closure Proposals, Department of Mines, Petroleum and Exploration (2025)*
- *Guidelines for groundwater quality protection in Australia: National Water Quality Management Strategy, Commonwealth of Australia (2013)*
- *Pilbara Conservation Strategy, Government of Western Australia (2018)*

## **Social Surroundings**

### **EPA policy and guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act, 1986 (2014)*
- *Environmental Factor Guideline – Social Surroundings (2023)*
- *Instructions on how to prepare an environmental review document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*

### **Other policy and guidance**

- *Environmental Protection (Noise) Regulations 1997*
- *First Nations Engagement: the Principles of Free, Prior, and Informed Consent (FPIC) – Better Practice Engagement with First Nations Communities and People, Department of Climate Change, Energy, the Environment and Water, (2025)*
- *Guideline for managing the impacts from dust and associated contaminants from land development sites, contaminated sites remediation and other related activities. Department of Water and Environmental Regulation (2011)*
- *Mine sites, exploration camps and construction villages - Scoping Tool: Public Health Considerations, Department of Health (2011)*
- *The Interim Engaging with First Nations People and Communities on Assessments and Approvals under Environment Protection and Biodiversity Conservation Act 1999 (interim guidance) (2023)*

## **Terrestrial Environmental Quality**

### **EPA policy and guidance**

- *Cumulative environmental impacts of development in the Pilbara region, s16(e) of the Environmental Protection Act, 1986 (2014)*
- *Environmental Factor Guideline - Terrestrial Environmental Quality (2016)*
- *Instructions on how to prepare an environmental review document (2025)*
- *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (2024)*
- *Statement of Environmental Principles, Factors and Objectives (2023)*

### **Other policy and guidance**

- *Guideline for preparing Mining Development and Closure Proposals, Department of Mines, Petroleum and Exploration (2025)*
- *Guideline for preparing Mining Development and Closure Proposals (2025)*
- *Pilbara Conservation Strategy, Government of Western Australia (2018)*
- *Preventing acid and metalliferous drainage, Australian Government Department of Industry, Tourism and Resources (2016)*

## **Cumulative Impact Assessment**

### **EPA policy and guidance**

- *Guideline for Cumulative Impact Assessment, EPA, Western Australia (2026)*