

Kemerton Strategic Industrial Area Strategic Proposal – Environmental Scoping Document

DevelopmentWA

JANUARY 2024

DOCUMENT TRACKING

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ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd

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Template 2.8.1

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Invitation to make a submission

The Environmental Protection Authority (EPA) invites people to make a submission on the draft Environmental Scoping Document (ESD) for this proposal.

DevelopmentWA propose to progress the Kemerton Strategic Industrial Area (KSIA) Strategic Proposal to enable development of strategic industrial land to support industry expansion in Western Australia. On 31 March 2022, the Commonwealth Minister for the Environment entered into an agreement with the Minister for Lands and the Minister for State Development of Western Australia to undertake a strategic assessment of the impacts of actions taken in the KSIA (Strategic Assessment). The strategic assessment will be undertaken in accordance with Part 10 of the *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) and as per the agreed Terms of Reference (ToR) for the assessment.

DevelopmentWA has prepared the draft Environmental Scoping Document (ESD) in accordance with Environmental Protection Authority (EPA) *Procedures Manual (Part IV Divisions 1 and 2)* and is released for public review, along with the draft ToR prepared by the former Commonwealth Department of Agriculture, Water and the Environment, now the Department of Climate Change, Energy, the Environment and Water, in consultation with DevelopmentWA. The draft ESD outlines the work required and key areas of focus for the environmental review, required by s. 40(B) of the *Environmental Protection Act 1986* (EP Act). The draft ToR document, prepared as a requirement of section 146(B) of the EPBC Act, specifies what must be included in the Impact Assessment Report (IAR) and to meet requirements for matters of national environmental significance (MNES under the EPBC Act).

This draft ESD is available for a public review period of 4 weeks from 29th August 2022, closing on 26th September 2022.

WHY WRITE A SUBMISSION?

The EPA seeks information that will inform the EPA's consideration of the likely effect of the proposal, if implemented, on the environment.

The EPA will use the information in the submissions to identify any additional preliminary key environmental factors/issues and the type and extent of any additional work for the environmental review that should be included in the revised ESD.

Submissions will be treated as public documents unless provided and received in confidence, subject to the requirements of the *Freedom of Information Act 1992*.

WHY NOT JOIN A GROUP?

It may be worthwhile joining a group or other groups interested in making a submission on similar issues. Joint submissions may help to reduce the workload for an individual or group. If you form a small group (up to 10 people) please indicate all the names of the participants. If your group is larger, please indicate how many people your submission represents.

DEVELOPING A SUBMISSION

The draft ESD specifies the form, content, indicative timing and procedure of the proponent's environmental review. The draft ESD also outlines the preliminary key environmental factors, any specific work required and key areas of focus for the environmental review. The likely environmental

impacts and the proposed management measures will be addressed in the Environmental Review Document / Impact Assessment Report after the proponent undertakes the studies outlined in the ESD.

You may agree or disagree with, or comment on, the general issues discussed in the draft ESD or on specific elements.

When making comments on the draft ESD:

- Suggest other preliminary key (i.e., most important) environmental factors and/or any additional work you consider would be appropriate.
- Clearly state your point of view and give reasons for your conclusions.
- Reference the source of your information, where applicable.
- Suggest recommendations or alternatives.

WHAT TO INCLUDE IN YOUR SUBMISSION

Include the following in your submission to make it easier for the EPA to consider your submission:

- Your contact details – name and address.
- Date of your submission
- Whether you want your contact details to be confidential.
- Summary of your submission, if your submission is long.
- List points so that issues raised are clear, preferably by environmental factor.
- Refer each point to the page, section and if possible, paragraph of the draft ESD.
- Attach any reference material, if applicable.

Make sure your information is accurate.

The closing date for public submissions is: 26th September 2022.

The EPA prefers submissions to be made electronically via the EPA's Consultation Hub at <https://consultation.epa.wa.gov.au>.

Alternatively, submissions can be:

- posted to: Chair, Environmental Protection Authority, Locked Bag 10, Joondalup DC, WA 6919, or
- delivered to: Environmental Protection Authority, Prime House 8 Davidson Terrace, Joondalup Western Australia 6027.

If you have any questions on how to make a submission, please contact EPA Services at the Department of Water and Environmental Regulation on 6364 7000.

1. Introduction

The Environmental Protection Authority (EPA) has determined that the Kemerton Strategic Industrial Area Strategic Proposal (described in further detail in the Proposal Content Document: Appendix A) 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(B) of the EP Act. DevelopmentWA (the proponent) has prepared this draft ESD according to the procedures in the EPA's Procedures Manual.

The EPA requires the proponent to undertake the environmental review according to the procedure in the EPA's *Administrative Procedures and Procedures Manual*, and the *Instructions and Template: How to prepare an Environmental Review Document*.

1.1 Terminology

As the Strategic Proposal is being assessed under both the State EP Act and Commonwealth EPBC Act there are differing terms which apply to the same documents. For clarity these are outlined in Table 1.

Table 1: Terms and acronyms used in the KSIA Strategic Proposal

Term	Acronym/Abbreviation	Description
Strategic Proposal / Strategic Assessment		Referred to as a Strategic Proposal under the State EP Act and Strategic Assessment under the Commonwealth EPBC Act. This landscape-scale assessment will occur concurrently (not under an accredited assessment or bilateral agreement); and a streamlined approach will allow preparation of documents and processes to meet the requirements under both state and commonwealth approvals.
Strategic Assessment Agreement	The Agreement	The formal agreement between the Commonwealth Minister for the Environment, the Western Australian Minister for State Development, and the Western Australian Minister for Lands to enter into a Strategic Assessment of the impacts of actions taken in the Kemerton Strategic Industrial Area on matters protected by Part 3 of the EPBC Act.
Environmental Scoping Document	ESD	The ESD is prepared in accordance with s.40(B) of the EP Act and specifies the form, content, indicative timing and procedure for the proponent's environmental assessment.
Terms of Reference	ToR	The ToR are a requirement under the EPBC Act for undertaking a strategic assessment and are prepared in accordance with the Strategic Assessment Agreement. The ToR outline the requirements for how the strategic assessment partner is to address the impacts of their proposed development activities under the EPBC Act.
Impact Assessment Report / Environmental Review Document	IAR / ERD	An environmental assessment report prepared in accordance with the ToR and ESD provided under the Agreement. While following the form and content of the EPA's Environmental Review Document guidelines, to maintain consistency this document is referred to as the Impact Assessment Report for the KSIA Strategic Assessment. The IAR describes and assesses the impacts of implementing the Strategic Assessment Plan.

Term	Acronym/ Abbreviation	Description
Sustainable Development Plan	The Plan	<p>The Plan details opportunities for the sustainable development of the KSIA over the life of the approval timeframe. Prepared in accordance with the endorsement criteria set out in Attachment 2 to the Strategic Assessment Agreement, the scope of the Plan is:</p> <ul style="list-style-type: none"> • To identify areas for future development within the KSIA. • To identify classes of actions proposed to be undertaken within the KSIA, including the provision of a description of how these actions are related to development activities regulated and/or managed under State legislative requirements. • To define objectives and commitments for the conservation of protected matters based on the ‘avoid, mitigate and offset’ hierarchy of principles. • To define objectives and commitments for regulatory and administrative efficiencies, including governments and third-party developers. • To provide an implementation framework that describes how the Plan will be efficiently and effectively implemented (including how commitments for the conservation of protected matters set out in the Plan will be achieved). • To provide an assurance framework that describes how the named approval holder will demonstrate and adaptively manage the effectiveness of proposed regulatory, administrative and protected matter objectives.
Response to Submissions / Supplementary Report	RtS	Referred to as the Response to Submissions under the EP Act, and Supplementary Report under the EPBC Act. The RtS provides a summary of all public comments received in response to the draft IAR and Plan and how these have been addressed following the public review period.

1.2 Indicative timing of the environmental review

Table 2 sets out the indicative timeline of the strategic assessment agreed between the EPA and the Proponent.

Table 2: Indicative timeline of the Strategic Assessment

Key assessment milestones	Completion date
EPA approves final Environmental Scoping Document	February 2024
Proponent submits first draft Impact Assessment Report (IAR) and Sustainable Development Plan (the Plan)	June 2024
EPA provides comment on first draft IAR and Plan (6 weeks from receipt of ERD)	August 2024
Proponent submits revised draft IAR and Plan	November 2024
EPA authorises release of IAR and Plan for public review (2 weeks from EPA approval of ERD)	December 2024
Proponent releases IAR and Plan for public review for 12 weeks	January 2025
Close of public review period	April 2025
EPA provides Summary of Submissions (3 weeks from close of public review period)	May 2025

Key assessment milestones	Completion date
Proponent provides Response to Submissions (RtS)	August 2025
EPA reviews the RtS (4 weeks from receipt of Response to Submissions)	September 2025
EPA prepares assessment report and completes assessment (6 weeks from EPA accepting Response to Submissions)	November 2025
EPA finalises assessment report (including two weeks consultation on draft conditions; if the EPA deems that the Proposal will be implemented) and gives report to Minister (6 weeks from completion of assessment)	January 2026

1.3 Commonwealth Government approvals

On 31 March 2022, the Commonwealth Minister for the Environment entered into an agreement with the Minister for Lands and the Minister for State Development of Western Australia to undertake a strategic assessment of the impacts of actions taken in the KSIA (Strategic Assessment). The strategic assessment will be undertaken in accordance with Part 10 of the EPBC Act and as per the agreed Terms of Reference (ToR) for the assessment.

The Strategic Proposal process under the EP Act and Strategic Assessment under the EPBC Act will occur concurrently (not under an accredited assessment or bilateral agreement); and a streamlined approach will allow preparation of documents and processes to meet the requirements under both state and commonwealth approvals.

This draft ESD has been prepared to include the work to be carried out and reported on in the Impact Assessment Report (IAR) to meet the requirements of the EP Act. The ToR document, which was prepared as a requirement of section 146(B) of the EPBC Act, specifies what must be included in the IAR and to meet requirements for Matters of National Environmental Significance (MNES under the EPBC Act). The IAR will be developed as a streamlined report that meets the requirements of both the State EP Act and Commonwealth EPBC Act.

Key streamlining components of the assessment process are summarised below and presented in Figure 1.

1. Environmental Scoping Document / Terms of Reference
 - a. The draft ToR and Environmental Scoping Document (ESD) will be released for public consultation concurrently (i.e., released on the same day for 4 weeks).
 - b. Draft ESD / ToR are publicly advertised.
 - c. ESD / ToR finalised considering comments.
2. Impact Assessment Report (IAR)
 - a. A single IAR document is prepared that meets requirements for both Commonwealth and State assessment documents. MNES impact assessment will have dedicated chapter/s.
3. The Sustainable Development Plan (the Plan)
 - a. Covers management of the KSIA, with conservation commitments for MNES.
 - b. The draft Plan will be released for consultation, at the same time as IAR.
 - c. Single public exhibition period for the IAR and draft Plan.
 - d. Consultation on Plan and IAR will be undertaken at the same time by the State on behalf of the State and Commonwealth.

- e. All documents published on the State’s website and the State provides comments on the Plan to DCCEEW for review.
4. Response to Submissions / Supplementary Report (IAR / Plan)
 - a. Single document that addresses submissions and further information relating to the evaluation of impacts and meets requirements for both Response to Submissions document under State EP Act process and Supplementary Report under Part 10 EPBC Act process.
5. EPA Bulletin – EPA prepares Report and Recommendations to the Minister.
 - a. This is prepared parallel to DCCEEW’s report / briefing to its Minister.
6. Approval by WA Minister for Environment occurs (if the Proposal is deemed environmentally acceptable).
7. Appeals period / Appeals considered.
8. Endorsement by Federal Minister following finalisation of WA Appeals process (if the Proposal is deemed environmentally acceptable).
9. Approval of Classes of Actions.

The benefits of the proposed streamlining approach include:

- Reduces duplication – only one IAR and one public comment period required.
- Simplifying processes makes it easier for the public to engage with the process.
- Commonwealth can rely on the State assessment report (for the sections covering Commonwealth and joint State and Commonwealth matters) to inform the outcomes of the Plan.
- Commonwealth can align with the State’s conditions of approval, where appropriate.

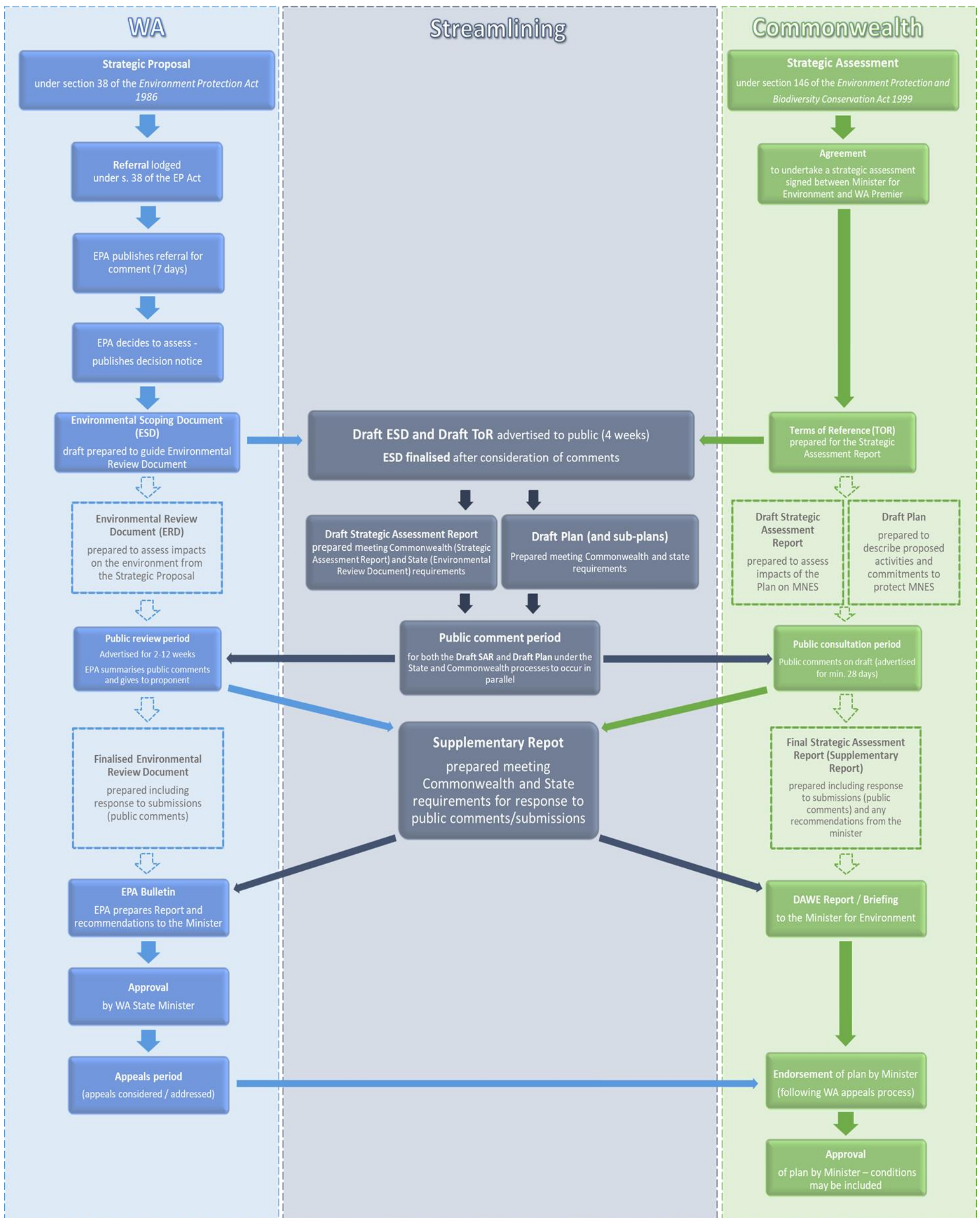


Figure 1: Streamlined assessment approach for the KSIA Strategic Proposal/Assessment

1.3.1 MNES for the Strategic Proposal / Strategic Assessment

The relevant MNES identified to date for the Strategic Proposal / Strategic Assessment are presented in Table 3. Any additional MNES identified during development of the IAR will also be included.

Table 3: MNES subject to assessment for the Strategic Proposal / Strategic Assessment

MNES	EPBC Act status	BC Act / DBCA status	Known occurrence in the KSIA
<u>Threatened fauna</u>			
Carnaby's Black Cockatoo	Endangered	Endangered	Industry Core and Buffer
Forest Red-tailed Black Cockatoo	Vulnerable	Vulnerable	Industry Core and Buffer
Baudin's Black Cockatoo	Vulnerable	Endangered	Industry Core and Buffer
Western Ringtail Possum	Critically Endangered	Critically Endangered	Buffer
Black-stripe Minnow	Endangered	Endangered	Not yet surveyed.
Chuditch	Vulnerable	Vulnerable	Vagrant
Australasian Bittern	Endangered; Migratory	Endangered	Vagrant
Carter's Freshwater Mussel	Vulnerable	Vulnerable	Not yet surveyed.
<u>Migratory species</u>			
Australian Painted snipe	Vulnerable; Migratory	Migratory	Vagrant
Fork-tailed Swift	Migratory	Migratory	Vagrant
Grey Plover	Migratory	Migratory	Irregular visitor
Pacific Golden Plover	Migratory	Migratory	Irregular visitor
Greater Sand Plover	Migratory	Migratory	Irregular visitor
Little Curlew	Migratory	Migratory	Vagrant
Black-tailed Godwit	Migratory	Migratory	Vagrant
Ruff	Migratory	Migratory	Vagrant
Broad-billed Sandpiper	Migratory	Migratory	Vagrant
Sharp-tailed Sandpiper	Migratory	Migratory	Irregular visitor
Curlew Sandpiper	Migratory	Migratory	Irregular visitor
Long-toed Stint	Migratory	Migratory	Irregular visitor
Red-necked Stint	Migratory	Migratory	Irregular visitor
Pectoral Sandpiper	Migratory	Migratory	Irregular visitor
Common Sandpiper	Migratory	Migratory	Regular visitor
Common Greenshank	Migratory	Migratory	Regular visitor
Wood Sandpiper	Migratory	Migratory	Irregular visitor
Marsh Sandpiper	Migratory	Migratory	Irregular visitor
Oriental Pratincole	Migratory	Migratory	Vagrant

MNES	EPBC Act status	BC Act / DBCA status	Known occurrence in the KSIA
Common Gull-billed Tern	Migratory	Migratory	Vagrant
Caspian Tern	Migratory	Migratory	Vagrant
Glossy Ibis	Migratory	Migratory	Vagrant
Eastern Osprey	Migratory	Migratory	Vagrant
<u>Threatened flora</u>			
<i>Drakaea elastica</i>	Endangered	Critical	Industry Core and Buffer
<i>Drakaea micrantha</i>	Vulnerable	Endangered	Industry Core and Buffer
<i>Caladenia procera</i>	Critically Endangered	Critical	Buffer
<i>Austrostipa bronwenae</i>	Endangered	Endangered	Buffer
<i>Diuris drummondii</i>	Vulnerable	Vulnerable	Buffer
<i>Diuris micrantha</i>	Threatened	Vulnerable	Buffer
<u>Threatened Ecological Communities</u>			
Banksia Woodlands of the Swan Coastal Plain	Endangered	Priority 3	Industry Core and Buffer
Tuart woodlands and forests of the Swan Coastal Plain	Critically Endangered	-	Buffer

2. Form and content (required work)

The EPA requires that the form 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 requires that the content of the ERD (in this case, the IAR) is in accordance with the *Instructions and Template: How to prepare an Environmental Review Document*. The EPA also requires that the IAR includes the proposal specific additional content outlined in Section 2.

The IAR will consider both State environmental factors and Commonwealth protected matters listed under the EPBC Act. The impact assessment sections of the IAR will be divided into the relevant environmental factors, with a separate section addressing MNES.

2.1 Preliminary key environmental factors

The preliminary key environmental factors for the IAR, as identified in the EPA Chair's Determination (required by s39[b] of the EP Act), are:

- Flora and vegetation
- Terrestrial fauna
- Subterranean fauna
- Terrestrial environmental quality
- Inland waters
- Air quality
- Greenhouse gas emissions
- Social surroundings.

It is noted there may be changes to these factors as the assessment progresses.

2.2 Specific additional work required for assessment of proposal

The KSIA has been set aside for heavy industry since the mid 1980's and has been subject to extensive baseline studies and consideration as part of strategic and local planning including the GBRS, Industry 2030 (EPA Bulletin 902, August 1998; EPA Bulletin 1108, September 2003) and the KSIA Structure Plan (2017).

The IAR will consider baseline studies completed to date and incorporate results of contemporary studies, including those to support the KSIA Structure Plan and engagement with key regulators and Decision-Making Authorities (DWER, DCCEEW and DBCA) as part of ongoing KSIA working group meetings. Outcomes-based commitments will be defined in the IAR and discuss steps to deliver commitments, whilst providing for flexibility in implementation over the course of the 50-year Strategic Proposal.

Table 4 outlines the proposal specific additional work required as it relates to the assessment of preliminary environmental factors.

Table 4: Proposal specific additional required work

Preliminary Environmental Factor	
Flora and vegetation	
Required work	<ol style="list-style-type: none"> 1. Identify and characterise the flora and vegetation of the Strategic Proposal Area, in accordance with the EPA <i>Technical Guidance – Flora and Vegetation Surveys for Environmental Impact assessment</i> (EPA 2016a). Demonstrate how surveys are relevant and consistent with current EPA policy and guidance. If multiple surveys have been undertaken to support the assessment, provide a consolidated report including the integrated results of the surveys. Ensure database searches and taxonomic identifications are up to date, including utilisation of DBCA database information. 2. Detail the survey effort applied in relation to the Strategic Proposal Area that have been undertaken to inform the local and regional context, including targeted surveys for conservation significant flora. 3. Provide maps depicting vegetation condition, known weed occurrences (WONs and Declared Plants/weeds), and locations of recorded significant flora, listed ecological communities and significant vegetation types in relation to the Proposal area, in accordance with <i>Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment</i> (EPA 2016a). 4. Describe the values and significance of flora and vegetation within the Strategic Proposal Area, in a local and regional context. 5. Identify the potential direct and indirect impacts of the Proposal on Flora and Vegetation values. 6. Describe and justify proposed avoidance and mitigation measures aimed at reducing potential impacts of the Strategic Proposal, ensuring residual direct and indirect impacts to identified key Flora and Vegetation values are not greater than predicted. 7. Assess the potential direct, indirect and cumulative impacts on Flora and Vegetation values, considering local and regional context, known existing threats, and predicted climate change. 8. Define outcomes-based environmental commitments for Flora and Vegetation, in consideration of the EPA objective for this factor. Describe how outcomes-based commitments will be achieved over the life of the Strategic Proposal, including measures to be implemented to achieve them. 9. Apply the Residual Impact Significance Model and WA Offset Template from the WA Environmental Offsets Guidelines (2014, or any subsequent revisions). Where significant residual impacts are predicted, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines, and EPBC Act Offset Policy 2012 where appropriate. 10. Demonstrate and document how the EPA’s objective for Flora and Vegetation will be met and the predicted environmental outcomes. 11. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Flora and Vegetation factor, including identification of the responsible party(s) for this ongoing role.
Terrestrial Fauna	
Required work	<ol style="list-style-type: none"> 12. Identify and characterise the terrestrial fauna and fauna habitats (including short-range endemic (SRE) invertebrate fauna) of the Strategic Proposal Area, in accordance with the EPA <i>Technical Guidance</i>. Demonstrate how surveys are relevant and consistent with current EPA policy and guidance. If multiple surveys have been undertaken to support the assessment, provide a consolidated report including the integrated results of the surveys. Ensure database searches and taxonomic identifications are up to date, including utilisation of DBCA database information. 13. Detail the survey effort applied in relation to the Strategic Proposal Area that have been undertaken to inform the local and regional context, including targeted surveys for conservation significant fauna. 14. Provide maps depicting fauna habitat types, and the recorded locations of conservation or other significant species and SRE invertebrate species in relation to the Strategic Proposal Area and habitat types.

Preliminary Environmental Factor	
	15. Describe the values and significance of fauna and fauna habitat, including SRE species, in a local and regional context. Identify habitat conditions and important or restricted habitats (e.g., breeding habitat, foraging/feeding/dispersal habitat).
	16. Identify the potential direct and indirect impacts of the Proposal on Terrestrial Fauna values, including SRE species.
	17. Describe and justify proposed avoidance and mitigation measures aimed at reducing potential impacts of the Strategic Proposal, ensuring residual direct and indirect impacts to identified key Terrestrial Fauna values are not greater than predicted.
	18. Assess the potential direct, indirect and cumulative impacts of the Proposal on Terrestrial Fauna values, considering local and regional context, known existing threats and predicted climate change.
	19. Define outcomes-based environmental commitments for Terrestrial Fauna, in consideration of the EPA objective for this factor. Describe how outcomes-based commitments will be achieved over the life of the Strategic Proposal, including measures to be implemented to achieve them.
	20. Apply the Residual Impact Significance Model and WA Offset Template from the WA Environmental Offsets Guidelines (2014, or any subsequent revisions). Where significant residual impacts are predicted, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines.
	21. Demonstrate and document how the EPA’s objective for Terrestrial Fauna will be met and the predicted environmental outcomes.
	22. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Terrestrial Fauna factor, including identification of the responsible party(s) for this ongoing role
Subterranean Fauna	
Required work	23. Identify and characterise the subterranean fauna and their habitats of the Strategic Proposal Area in accordance with the requirements of EPA Technical Guidance.
	24. Identify where any future targeted surveys would be required to be implemented as part of Derived Proposals.
	25. Provide maps showing the extent of subterranean fauna habitat in relation to the Strategic Proposal Area and species distributions.
	26. Describe the values and significance of subterranean fauna in a local and regional context. Include relevant geological and hydrological information to determine habitat suitability, extent and connectivity, including inside and outside of potential impact areas.
	27. Identify the potential direct and indirect impacts of the Proposal on Subterranean fauna.
	28. Describe and justify proposed avoidance and mitigation measures aimed at reducing potential impacts of the Strategic Proposal to ensure residual direct and indirect impacts to subterranean fauna are not greater than predicted.
	29. Assess the direct, indirect and cumulative impacts of the Proposal on subterranean fauna, considering local and regional context.
	30. Define outcomes-based environmental commitments for Subterranean Fauna, in consideration of the EPA objective for this factor. Describe how outcomes-based commitments will be achieved over the life of the Strategic Proposal, including measures to be implemented to achieve them.
	31. Apply the Residual Impact Significance Model and WA Offset Template from the WA Environmental Offsets Guidelines (2014, or any subsequent revisions). Where significant residual impacts are predicted, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guidelines.
	32. Demonstrate and document how the EPA’s objective for Subterranean Fauna will be met and the predicted environmental outcomes.

Preliminary Environmental Factor	
	33. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Subterranean Fauna factor, including identification of the responsible party(s) for this ongoing role.
Terrestrial Environmental Quality	
Required work	34. Compile and present information on soil mapping units, known or suspected contaminated sites and potential acid sulfate soils within the Strategic Proposal Area.
	35. Identify potential direct and indirect impacts of the Proposal to soil quality. Include an analysis of the likely nature, magnitude and duration of potential impacts.
	36. Discuss proposed avoidance and mitigation measures aimed at reducing potential impacts of the Strategic Proposal, with particular reference to acid sulfate soils and potential future industrial waste streams.
	37. Demonstrate and document how the EPA’s objective for Terrestrial Environmental Quality will be met and the predicted environmental outcomes.
	38. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Terrestrial Environmental Quality factor, including identification of the responsible party(s) for this ongoing role.
Inland Waters	
Required work	39. Characterise the hydrological and hydrogeological regimes within the Strategic Proposal Area including, but not limited to, catchment boundaries, surface water flows, flood patterns, aquifers, groundwater levels and water quality.
	40. Identify and describe the environmental values they support, including wetlands. Describe these values in their local and regional contexts.
	41. Provide a hydrogeological model for the Proposal Area with consideration of surface water interactions and potential future climate scenarios.
	42. Provide a conceptual water supply and management strategy and rationale. The strategy will include a site water balance model over the life of the Proposal (including consideration of potential future climate scenarios), assessment of water management options including water reuse and stormwater discharge.
	43. Identify and describe potential direct and indirect impacts to surface water and groundwater associated with the Proposal. This will include but not be limited to the nature, extent and duration of potential changes to groundwater levels, surface water flows and water quality.
	44. Describe and justify proposed avoidance and mitigation measures aimed at reducing potential impacts of the Strategic Proposal. Proposed mitigation measures will consider adaptation to reasonable climate change scenarios and what effect this would have on the outcome of the proposal.
	45. Assess the potential impacts on significant water dependent ecosystems as a result of altered hydrological or hydrogeological regimes and water quality, in the context of future climate change scenarios.
	46. Define outcomes-based environmental commitments for Inland waters, in consideration of the EPA objective for this factor. Describe how outcomes-based commitments will be achieved over the life of the Strategic Proposal, including measures to be implemented to achieve them.
	47. Demonstrate and document how the EPA’s objective for Inland Waters will be met and the predicted environmental outcomes.
	48. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Inland Waters factor, including identification of the responsible party(s) for this ongoing role.
Air Quality	
Required work	49. Identify the potential sources and types of air emissions during the life of the Strategic Proposal.

Preliminary Environmental Factor	
	50. Develop a contemporary air pollution/air shed model incorporating current and potential future industrial land uses and associated emissions. The model will consider current and potential future climatic conditions across the Strategic Proposal Area.
	51. Based on modelling, predict the residual air quality impacts on sensitive receivers over the life of the Strategic Proposal. Include current background levels, as well as relevant air quality standards/guidelines when evaluating and comparing against the maximum predicted emissions and ground level concentrations.
	52. Propose an overall management program for air quality, to mitigate impacts to sensitive receptors. This will outline proposed management and monitoring, including installation of a meteorological monitoring network, to ensure impacts to nearby existing residential areas and future residences on adjoining land will be managed to acceptable levels.
	53. Demonstrate and document how the EPA’s objective for Air Quality will be met and the predicted environmental outcomes.
	54. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Air Quality factor, including identification of the responsible party(s) for this ongoing role.
Greenhouse Gas Emissions	
Required work	55. Characterise and estimate the potential sources of Scope 1 (direct) greenhouse gas emissions associated with clearing of the Strategic Proposal Area.
	56. Detail how future Derived Proposals will assess greenhouse gas emissions (Scope 1, Scope 2 and Scope 3), including where emissions will warrant management via a Greenhouse Gas Management Plan.
	57. Detail how future Derived Proposals will apply the mitigation hierarchy to avoid and minimise greenhouse gas emissions.
	58. Demonstrate and document how the EPA’s objective for Greenhouse Gases will be met and the predicted environmental outcomes.
	59. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Greenhouse Gas Emissions factor, including identification of the responsible party(s) for this ongoing role.
Social Surroundings	
<u>Heritage</u>	
Required work	60. In consultation with the Traditional Owners, identify and characterise the Aboriginal heritage and cultural values in the proposal area in accordance with EPA guidance. Undertake surveys (including anthropological and archaeological) in the Strategic Proposal area and surrounding areas that are likely to be directly or indirectly impacted by the Strategic Proposal.
	61. Identify and assess potential direct and indirect impacts to Aboriginal heritage and cultural values associated with the Proposal.
	62. Provide maps showing the locations of sites of European significance within the Strategic Proposal Area and surrounding region and identify potential direct and indirect impacts to these values.
	63. Describe any proposed avoidance and mitigation measures to avoid or minimise the potential direct and indirect impacts on Aboriginal heritage values that are to be implemented in consultation with Traditional Owners. Include actions that will be undertaken to manage the potential for disturbance to unknown sites of Aboriginal heritage significance during construction.
	64. Demonstrate how the mitigation hierarchy of avoid, minimise and mitigate has been applied during the planning and design stages of the Proposal to minimise potential impacts on Aboriginal and European heritage.
<u>Noise</u>	

Preliminary Environmental Factor	
Required work	65. Identify potential sensitive receptors, including residential properties, hospitals, hotels, caravan parks, schools, places of worship, aged care facilities, childcare facilities, shopping centres and playgrounds (and excluding commercial and industrial premises) within the Strategic Proposal Area and surrounds.
	66. Identify potential sources of noise including existing industrial premises and operations located within the Strategic Proposal Area.
	67. Present baseline noise levels and determine appropriate threshold noise levels at the nearest identified potential sensitive receptors/Buffer Area boundary consistent with the Environmental Protection (Noise) Regulations 1997.
	68. Model predicted noise levels at identified potential sensitive receptors/Buffer Area boundary based on existing sources of noise, potential new sources of noise and the calculated Influencing Factor.
	69. Determine the process to ensure noise is minimised from Derived Proposal activities.
	70. Propose an appropriate noise monitoring strategy (including monitoring sites and frequency) to ensure identified noise thresholds are not exceeded at potentially sensitive receptors/Buffer Area boundary.
	71. Define outcomes-based environmental commitments for Social Surroundings, in consideration of the EPA objective for this factor. Describe how outcomes-based commitments will be achieved over the life of the Strategic Proposal, including measures to be implemented to achieve them.
	72. Demonstrate and document how the EPA's objective for Social Surroundings will be met and the predicted environmental outcomes.
73. Detail the governance arrangements for future derived proposals in relation to the assessed outcomes of the Social Surroundings factor, including identification of the responsible party(s) for this ongoing role	

In addition to specific consideration of each environmental factor, the IAR will also provide a holistic assessment of environmental impacts, including an environmental values assessment, and drawing together the overall impact of the proposal on the environment and identifying any interactions between individual factors.

2.3 Cumulative impact assessment – scoping of activities, boundaries, and environmental values for relevant environmental factors

Cumulative impact assessment will be undertaken to assess the potential maximum impacts of the Strategic Proposal and other projects at a local and regional scale. The other projects that will be considered include the Kemerton General Industrial Area and any other project within the Strategic Proposal Area that is identified as current or reasonably foreseeable.

Table 5 lists the values to be included in the cumulative assessment and defines the local and regional scales for assessment.

Table 5: Cumulative impact assessment definition

Factor	Values	Scale
Flora and Vegetation	<ul style="list-style-type: none"> Vegetation mapping units State listed TECs and PECs Significant flora (as far as practicable) Wetlands and associated vegetation 	Local and Regional
Terrestrial Fauna	<ul style="list-style-type: none"> Locally and regionally significant terrestrial fauna habitat Ecological linkages 	Local and Regional
Subterranean Fauna	<ul style="list-style-type: none"> Geological unit (where identified as habitat for significant species) 	Local and Regional
Inland Waters	<ul style="list-style-type: none"> Hydrology and water quality and associated sensitive receptors 	Local and Regional Catchments
Air Quality and Social Surroundings	<ul style="list-style-type: none"> Air quality Noise 	Sensitive receptors within the Greater Bunbury region within the likely extent of direct or indirect impacts of the Strategic Proposal.

3. Decision-making authorities

The EPA has identified the following decision-making authorities (DMAs) for the Proposal (Table 6). Additional DMAs may be identified during the assessment.

Table 6: Decision-making authorities

Decision Making Authority	Legislation or Agreement regulating the Activity	Approval Required	Can the Statutory Decision Making Process Regulate Impacts on the Environment? (Yes/No and Summary of Reasons)
WA Minister for Environment Administered by DBCA	<i>Biodiversity Conservation Act 2016</i>	Impacts to threatened flora and fauna species are managed through DBCA:	Yes. Provides authorisations to take threatened flora species Provides authorisations to take or disturb threatened flora species
Minister for Water Administered by DWER	<i>Rights in Water and Irrigation Act 1914</i>	Section 5c licence to take water Section 26D licence to construct or alter a well Permit to Obstruct or Interfere with Bed/Banks	Yes. Assessment of impacts associated with specific activities of future proposals (as relevant).
Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i>	S. 16 authorisation to enter, excavate, examine or remove anything on an Aboriginal site S. 18 consent where the impact on an Aboriginal site is unavoidable	Yes. Provides authorisation to enter, excavate, examine or remove anything on an Aboriginal site. Provides an assessment on impacts to Aboriginal sites if an impact is unavoidable.
Executive Director Resource and Environmental Compliance, Department of Mines, Industry Regulation and Safety	<i>Mining Act 1972</i>		
Chief Dangerous Goods Officer, Department of Mines, Industry Regulation and Safety	<i>Dangerous Goods and Safety Act 2004</i>	Dangerous goods storage and transport licences	Yes. Assessment of the storage and handling of dangerous goods.
State Mining Engineer, DMIRS	<i>Mines Safety and Inspection Act 1994</i>	Approves Project Management Plans and imposes general duty of care provisions to maintain safe and healthy workplaces at	No

Decision Making Authority	Legislation or Agreement regulating the Activity	Approval Required	Can the Statutory Decision Making Process Regulate Impacts on the Environment? (Yes/No and Summary of Reasons)
	Mines Safety and Inspection Regulations 1995	mining operations and protect people at work from hazards.	A Project Management Plan is concerned with occupational health and safety.
Chief Executive Officer, DWER	<i>EP Act 1986 Part V</i>	Works Approval and Licence Operating Licence	Yes. Assessment of construction and operation of future proposals.
Minister for Planning Administered by DPLH	<i>Planning and Development Act 2005</i>	Planning / Development Approval	No. A development approval considers the impacts from small portions of the Strategic Proposal to an extent but does not regulate all emissions.
Minister for Lands Administered by DPLH	<i>Land Administration Act 1997</i> <i>Public Works Act 1902</i>	Licence to use Crown Land	No
CEO, Shire of Harvey	<i>Building Act 2011</i> <i>Planning and Development Act 2005</i> <i>Health Act 2011</i> <i>Extractive Industries Local Law 2017 (Clause 2.3)</i>	Development Applications Building and Health approvals Extractive industries licences	No
CEO, Department of Health	<i>Public Health Act 2016</i> <i>Health (Miscellaneous Provisions) Act 1911</i> Government Sewerage Policy (2019)	Approval of wastewater treatment infrastructure (if necessary)	No The Public Health Act is an Act 'to protect, promote and improve the health and wellbeing of the public of Western Australia and to reduce the incidence of preventable illness, and for related purposes'. This does, in some respects, align with the Social Surrounding environmental factor, however it does not consider other environmental impacts associated with the Proposal.

4. References

EPA 2014, *WA Environmental Offsets Guidelines*, Environmental Protection Authority, 2014.

EPA 2016, *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact assessment*, Environmental Protection Authority, 2016.

EPA 2021, *Environmental Protection Authority Procedures Manual (Part IV Divisions 1 and 2)*, Environmental Protection Authority, 2021.

Appendix A Proposal Content Document

