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# NORTHLINK STUDY TEAM

The following individuals contributed to the preparation of the Perth–Darwin National Highway Public Environmental Review. This report draws on their work and the contributions of these organisations are gratefully acknowledged.

## Principal Authors

Coffey team members who contributed to the preparation of the PER are listed in the following table.

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### Specialist Consultants

Specialist consultants who contributed to supporting documentation to the PER are listed in the following table.

Study	Company	Name	Qualification	Years' Experience
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Study	Company	Name	Qualification	Years' Experience
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## Acknowledgments

We would like to acknowledge the contribution of the following people in the preparation of the PER:

Name	Company
Dominic Boyle	Main Roads Western Australia
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Michelle Rhodes	360 Environmental
Felicity Johns	360 Environmental
Dr Brian Chambers	School of Animal Biology, University of Western Australia
Various staff	Department of Parks and Wildlife

## ENVIRONMENTAL SCOPING DOCUMENT

<b>PROPOSAL:</b>	<b>Perth Darwin National Highway – Swan Valley Section (Assessment No. 1994)</b>
<b>LOCALITY:</b>	<b>City of Swan and Shire of Chittering</b>
<b>PROPONENT:</b>	<b>Commissioner for Main Roads Western Australia</b>
<b>LEVEL OF ASSESSMENT:</b>	<b>Public Environmental Review with a 4 week public review period</b>

This Environmental Scoping Document (ESD) is provided to define the form, content and timing of the Public Environmental Review (PER) document to be prepared in accordance with the Western Australian *Environmental Protection Act 1986* (EP Act).

The EPA notes that the proposal is also a controlled action under *the Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and that the proposed action is being assessed through a public environment report assessment process. As the proposal is unable to be assessed through the bilateral agreement under section 47 of the EPBC Act, the Commonwealth Department of the Environment (DOE) and the OEPA have agreed to undertake a coordinated approach to this assessment. This is discussed further in Section 2.4.

The preliminary key environmental factors to be addressed are identified in Section 2. The generic guidelines for the format of an environmental review document are available on the Environmental Protection Authority's (EPA's) website [www.epa.wa.gov.au](http://www.epa.wa.gov.au).

**The environmental review document must adequately address all elements of this scoping document prior to approval being given to commence the public review.**

**The Environmental Protection Authority expects the proponent to fully consult with interested members of the public and relevant stakeholders, and to take due care in ensuring any other relevant environmental factors which may be of interest to the public and stakeholders are addressed. The PER should document the results of all consultation undertaken.**

## 1. Introduction

The EP Act sets out that where a proposal is considered to be likely to have a significant environmental impact it will be subject to an assessment by the Environmental Protection Authority (EPA) under section 38 of the EP Act. This proposal is being assessed by way of a PER because it raises preliminary key environmental factors. The EPA will, at the conclusion of its assessment, prepare a report on the outcome of its assessment of the proposal and give the assessment report to the Minister for Environment. In accordance with the requirements of the EP Act, the Minister for Environment will then decide whether or not the proposal may be implemented, and, if the proposal may be implemented, the conditions and procedures that implementation of the proposal should be subject.

The procedure for a PER is described in the Western Australian EP Act *Environmental Impact assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012*. The proponent should have regard to the Administrative Procedures when preparing the PER.

As this proposal is subject to a PER, the proponent is required to produce a PER document in accordance with an approved ESD. The purpose of the ESD is to:

- develop proposal-specific guidelines to direct the proponent on the preliminary key environmental factors for the proposal that should be addressed in preparing the PER document; and
- identify the necessary impact predictions for the proposal and the information on the environmental values required to carry out the assessment.

The EPA has determined that it will prepare and issue the ESD outlining the scope and content of the PER in relation to this proposal.

The EPA, in its formulation of the ESD, undertakes consultation with the proponent regarding the details of the proposal, the preliminary key environmental factors and the environmental surveys and investigations required and expected outcomes. In addition the EPA will consult with the relevant government agencies. In many cases the OEPA will act for the EPA.

ESDs prepared by the EPA are not subject to a public review period. The ESD will be available on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au)) upon finalisation and must be included as an appendix in the PER document.

The proponent will then be required to prepare a PER document in accordance with the ESD. When the EPA is satisfied that the PER document:

- focuses only on the preliminary key environmental factors, not on other factors which fall below the significance threshold as outlined in Environmental Assessment Guideline 9 *Application of a significance framework in the environmental impact assessment process*;
- demonstrates that all studies identified in the scoping document have been undertaken, and present the findings of those studies, including how the proposal or its management has been informed by the outcome of any studies;
- demonstrates that the proposal can meet the EPA's objectives through the mitigation hierarchy; and

- is concise,
- the proponent will be required to release the document for a public review period of 4 weeks.

An important aspect of the environmental impact assessment process is the review by the public. The EPA requires public input into the possible environmental impacts of this proposal and its implementation. The EPA expects the proponent to fully consult with interested members of the public and relevant stakeholders, and to take due care in ensuring any other relevant environmental factors which may be of interest to the public and stakeholders are succinctly addressed. The PER should document the matters raised in consultation ideally in a table.

The EPA considers that adequate consultation can be demonstrated when the stakeholders:

- are included in the consultation process and are able to make their concerns known;
- are kept informed about the potential and actual environmental impacts; and
- receive responses to the concerns raised, including identifying how the proposal has been modified and/or identifying management measures that will be implemented to address the concerns raised.

To facilitate adequate public input, the PER document should be made available as widely as possible and at a reasonable cost.

## **2. Specific Guidelines for the Preparation of the Environmental Review**

### **2.1 The proposal**

Main Roads Western Australia, the proponent, proposes to construct and operate a freeway standard dual carriageway and grade separated interchanges between the Reid Highway/Tonkin Highway junction and Great Northern Highway at Muchea (Figure 1). The proposal forms a section of the Perth to Darwin National Highway, known as the Swan Valley Section, and also allows for a reservation in the median to protect for any future rail projects. The proposal comprises of a 963 hectare (ha) study area (Figure 1) in the form of an approximate 100 metre (m) wide by 40 kilometre (km) long corridor, within which a development envelope will be identified.

The PER document will need to define the proposal consistent with Environmental Assessment Guideline 1 *Defining the Key Characteristics of a Proposal* (May 2012) (EAG 1). EAG 1 describes how to define the key proposal characteristics for the purposes of assessing the proposal and subsequent incorporation in the Ministerial approval statement. It is expected that the key proposal characteristics will be informed by the outcome of the work required for the environmental factors that are relevant to the proposal specified below (section 2.2).

Should the proponent propose to change the proposal, as described above and shown in Figure 1, during the assessment process the EPA may consider these changes without a revised proposal being referred to the EPA, if it considers that the change is unlikely to significantly increase any impact that the proposal may have on the environment, under Section 43A of the EP Act.

### **2.2 Preliminary Key Environmental factors, scope of works and policy documents relevant to this proposal**

The PER should give a detailed assessment of each of the preliminary key environmental factors identified for this proposal. At this preliminary stage, the OEPA believes the preliminary key environmental factors, objectives and work required is detailed in Table 1. Table 1 also identifies a list of relevant policy documents for this proposal, which set out how the expects the preliminary key environmental factors to be considered. The EPA expects that the treatment of preliminary key environmental factors will be consistent with the approaches set out in these policy documents.

Attachment 1 of this document contains guidelines and supporting information issued by the Commonwealth DoE. The proponent should ensure that the PER document meets the requirements as set out in Attachment 1 for the purposes of the assessment by the Commonwealth Government under the EPBC Act. This is further discussed in Section 2.4 below.



**Table 1 – Preliminary Key Environmental factors and scope of works relevant to the proposal**

Flora and vegetation	
<b>EPA objective</b>	To maintain representation, diversity, viability and ecological function at the species, population and community level.
<b>Potential impacts</b>	<p>Potential impacts include:</p> <ul style="list-style-type: none"> <li>• loss of flora and vegetation through clearing for road construction</li> <li>• loss of fauna habitat (vegetation loss) short and long term</li> <li>• impacts to wetlands and their buffers.</li> <li>• impacts to riparian vegetation and ground water dependant ecosystems.</li> <li>• spread of weeds and <i>Phytophthora</i> dieback.</li> <li>• fragmentation</li> </ul>
<b>Work and output required</b>	<ul style="list-style-type: none"> <li>• Undertake a Level 2 survey where the proposal intersects or abuts significant flora, vegetation and/or Environmentally Sensitive Areas. All surveys and reporting must be undertaken in accordance with EPA's Guidance Statements 10 and 51. Wetland identification and assessment should utilise the Department of Parks and Wildlife's <i>Geomorphic Wetlands Swan Coastal Plain Dataset</i> (last updated January 2014). Vegetation communities are to be determined through multivariate analysis. The degree to which these requirements have been followed should be provided.</li> <li>• Identify and assess the values and significance of flora and vegetation within the development envelope and immediate adjacent area and describe these values in a local, regional and State context.</li> <li>• Describe and assess the extent of any potential direct and indirect impacts as a result of both construction and operational elements of the proposal on flora and vegetation or ecological communities including those protected under the <i>Wildlife Conservation Act 1950</i> and <i>Environmental Protection and Biodiversity Conservation Act 1999</i>, riparian vegetation and wetlands and their buffers.</li> <li>• Based on the outcomes of the above and taking into consideration the principles of avoidance and minimisation, identify an environmentally acceptable development envelope.</li> <li>• Provide a summary of residual impacts of the proposal.</li> <li>• Identify management and mitigation<sup>1</sup> measures, including rehabilitation, for the proposal that demonstrate that the EPA's objectives can be met.</li> </ul>
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"> <li>• EPA (2004) Guidance Statement No. 51 <i>Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia</i>.</li> <li>• EPA (2006) Guidance Statement No. 10 <i>Level of Assessment for proposals affecting natural areas within the System 6 region and Swan Coastal Plain</i></li> </ul>

<sup>1</sup> To mitigate means a sequence of proposed actions designed to help manage adverse environmental impacts, and which includes (in order of preference):

1. avoidance – avoiding the adverse environmental impact altogether;
2. minimisation – limiting the degree or magnitude of the adverse impact;
3. rectification – repairing, rehabilitating or restoring the impacted site as soon as possible; and
4. reduction – gradually eliminating the adverse impact over time by preservation and maintenance operations during the life of the action;
5. offsets (after above mitigation considerations have been exhausted).

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	<p><i>portion of the System 1 Region.</i></p> <ul style="list-style-type: none"> <li>Department of Parks and Wildlife <i>Geomorphic Wetlands Swan Coastal Plain Dataset</i> (last updated January 2014)</li> </ul>
<b>Terrestrial Fauna</b>	
<b>EPA objective</b>	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
<b>Potential impacts</b>	<p>Potential impacts on fauna include:</p> <ul style="list-style-type: none"> <li>loss habitat for fauna;</li> <li>disturbance to waterbirds (including migratory species) from impacts to wetlands;</li> <li>fauna mortality as a result of construction activities;</li> <li>loss of fauna habitat through clearing and dewatering; and</li> <li>fragmentation.</li> </ul>
<b>State Work and output required</b>	<ul style="list-style-type: none"> <li>The EPA understands that a Level 1 fauna study has been undertaken. Based on the outcomes of the Level 1 survey design, in consultation with the OEPA, and undertake a targeted Level 2 survey where the proposal intersects or abuts significant fauna or their habitat. Impacts to fauna movement between Maralla Road Nature Reserve, Calacabardee and Whiteman Park should also be assessed. All surveys and reporting must be undertaken in accordance with EPA's Guidance Statement 56 and 20, and Section 3 of the Technical Guide (EPA 2010) – <i>Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</i>. The degree to which these requirements have been followed should be provided.</li> <li>Identify and assess the values and significance of fauna, fauna habitat and habitat connectivity within the development envelope and immediate adjacent area and describe these values in a local, regional and State context.</li> <li>Describe and assess the potential impacts as a result of both construction and operational elements of the proposal (including fragmentation) on fauna and significant fauna including those protected under the <i>Wildlife Conservation Act 1950</i> and <i>Environmental Protection and Biodiversity Conservation Act 1999</i>.</li> <li>Estimate the number of protected and endangered species that are likely to be lost, in the context of the existing population, as a result of direct and indirect impacts to vegetation and habitat.</li> <li>Based on the outcomes of the above and taking into consideration the principles of avoidance and minimisation, identify an environmentally acceptable development envelope.</li> <li>Provide a summary of residual impacts of the proposal.</li> <li>Identify management and mitigation measures for the proposal, such as fauna underpasses and artificial wetlands, which demonstrate that the EPA's objectives can be met.</li> </ul>
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"> <li>EPA (2009) Guidance Statement No. 20 <i>Sampling of short-range endemic invertebrate fauna for environmental impact assessment in Western Australia</i>.</li> <li>EPA Guidance Statement No. 56 (2004) <i>Terrestrial fauna surveys for environmental impact assessment in Western Australia</i>.</li> <li>EPA/DEC (2010) Technical Guide – <i>Terrestrial Vertebrate Fauna Surveys for</i></li> </ul>

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	<i>Environmental Impact Assessment.</i>
<b>Hydrological Processes and Inland Waters Environmental Quality</b>	
<b>EPA objective</b>	<p>To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected.</p> <p>To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.</p>
<b>Potential impacts</b>	<p>Potential impacts to ground and surface water quantity and quality, including in wetlands, waterways and Public Drinking Water Source Areas, may occur as a result of:</p> <ul style="list-style-type: none"> <li>• crossing and impounding of waterways;</li> <li>• dewatering during construction;</li> <li>• filling and clearing within Conservation and Resource Enhancement Wetlands and Environmental Protection Policy Lakes; and</li> <li>• water pollution through road run-off and disturbance of potential acid sulphate soils; and changes to hydrological processes such as compaction.</li> </ul>
<b>Work and output required</b>	<ul style="list-style-type: none"> <li>• Identify and assess the values and significance of hydrological and soil characteristics within the development envelope and immediate adjacent area and describe these values in a local, regional and State context. Wetland identification and assessment should utilise the Department of Parks and Wildlife's <i>Geomorphic Wetlands Swan Coastal Plain Dataset</i> (last updated January 2014).</li> <li>• Describe and assess the potential impacts (direct and indirect) as a result of both construction and operational elements of the proposal on water quantity and quality in relation to ground and surface water, waterways, wetlands and Public Drinking Water Source Areas.</li> <li>• Predict the extent, severity and duration of potential impacts, including changes to local and regional groundwater flows and levels, drawdown, local water quality and impacts to other groundwater users as a result of construction or operation.</li> <li>• Based on the outcomes of the above and taking into consideration the principles of avoidance and minimisation, identify an environmentally acceptable development envelope.</li> <li>• Provide a summary of residual impacts of the proposal.</li> <li>• Identify management and mitigation measures for the proposal that demonstrate that the EPA's objectives can be met.</li> </ul>
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"> <li>• EPA Position Statement No.4 <i>Environmental Protection of Wetlands</i> November 2004</li> <li>• Environmental Protection Policy <i>Gnangara Mound Crown Land</i> 1992</li> <li>• Environmental Protection (<i>Swan Coastal Plain Lakes</i>) Policy 1992</li> <li>• EPA Position Statement No. 7 <i>Principles of environmental protection</i> August 2004</li> <li>• Department of Parks and Wildlife <i>Geomorphic Wetlands Swan Coastal Plain Dataset</i> (last updated January 2014)</li> </ul>

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Amenity (noise and vibration)	
<b>EPA objective</b>	To ensure that impacts from noise and vibration are reduced as low as reasonably practicable.
<b>Potential impacts</b>	<p>Potential impacts from noise and vibration may occur as a result of:</p> <ul style="list-style-type: none"> <li>• Construction.</li> <li>• Increased traffic noise and vibration as a result of operation on nearby noise sensitive land uses.</li> </ul>
<b>Work and output required</b>	<ul style="list-style-type: none"> <li>• Undertake noise monitoring along the proposed alignment to determine ambient noise levels at receivers likely to be affected by the proposal.</li> <li>• Prepare a computer noise model to determine the magnitude of potential noise emissions and vibration effects across the project area.</li> <li>• From the outputs of the noise model, assess (in coordination with the Department of Parks and Wildlife and the City of Swan) noise impacts on sensitive land uses, recreational values and fauna.</li> <li>• Provide a summary of residual impacts of the proposal.</li> <li>• Based on the outcomes of the above and taking into consideration the principles of avoidance and minimisation, identify management and mitigation measures for the proposal that demonstrate that the EPA's objectives can be met.</li> </ul>
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"> <li>• State Planning Policy 5.4 Rail, <i>Transport Noise and Freight – Considerations in Land Use Planning</i></li> </ul>
Integrating Factors – Rehabilitation and Closure	
<b>EPA Objective</b>	To ensure that premises are closed, decommissioned and rehabilitated in an ecologically sustainable manner, consistent with agreed outcomes and land uses, and without unacceptable liability to the State.
<b>Potential impacts</b>	Potential impacts include reduction in the quality and quantity of habitats, reductions in ecosystem functions, impacts to adjacent natural vegetation and in the economic value of sites.
<b>Work and output required</b>	<ul style="list-style-type: none"> <li>• Provide details of rehabilitation to be undertaken to demonstrate that the EPA's objectives can be met.</li> </ul>
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"> <li>• EPA Guidance Statement No. 6 <i>Rehabilitation of terrestrial ecosystems</i>.</li> </ul>
Integrating Factors – Offsets	
<b>EPA Objective</b>	To counterbalance any significant residual environmental impacts or uncertainty through the application of offsets.
<b>Potential impacts</b>	Potential significant residual impacts on Flora and Vegetation, Terrestrial Fauna, Hydrological Processes and Inland Waters Environmental Quality.
<b>Work and output required</b>	<ul style="list-style-type: none"> <li>• Provide a summary of significant residual impacts for the proposal for each preliminary key environmental factor listed above, including a breakdown of residual impacts within and outside of the Perth Peel Strategic Assessment Boundary.</li> <li>• Provide details of any environmental offsets proposed to be secured through the Perth Peel Strategic Assessment Boundary.</li> <li>• Provide an overall offsets strategy for the proposal, and distinguish between</li> </ul>

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	significant residual impacts both within and outside of the Perth Peel Strategic Assessment Boundary.
<b>Relevant policy/guidance documents</b>	<ul style="list-style-type: none"><li>• EPA Guidance Statement No. 19 Environmental Offsets September 2008</li><li>• Environmental Protection Bulletin No.1 <i>Environmental Offsets – Biodiversity</i></li><li>• EPA Position Statement No. 9 <i>Environmental offsets</i> January 2006</li></ul>

These preliminary key environmental factors must be addressed within the environmental review document for the public to consider the impacts of the proposal and proposed management, and make comment to the EPA. All technical reports, modelling and referenced documents (not currently in the public domain) used in the preparation of the PER document should be included as appendices to the document. Documents used in the preparation of the PER must not contain disclaimers that preclude their public availability.

The EPA anticipates addressing these factors in its report to the Minister for the Environment.

### **2.3 Other Environmental Issues**

The EPA expects the proponent to take due care in ensuring all other relevant environmental impacts which may be of interest to the public are addressed and that management is covered in the environmental review.

The EPA has identified other environmental factors which it considers to be relevant to the proposal. These environmental factors should be discussed in the PER include an outline of how these factors will be managed. These include but are not limited to the following:

- Heritage – including but not limited to the Gnangara Forestry Settlement; and
- Amenity – including but not limited to the Dick Perry Reserve and Whiteman Park.

This list is provided to assist with the preparation of the PER document, but during the course of the preparation of the document other factors may be found also to be relevant, and they should be included in the detailed discussion.

### **2.4 Matters of National Environmental Significance (MNES)**

This proposal is a controlled action under the EPBC Act and that the proposed action is being assessed through a public environment report assessment procedure. As the proposal is unable to be assessed through the bilateral agreement under section 47 of the EPBC Act, the Commonwealth Department of the Environment (DOE) and the OEPA have agreed to undertake a coordinated approach to this assessment.

This coordinated approach means that the proponent will be required to prepare one environmental review document (for one public review period) to satisfy the requirements of both the State's Public Environmental Review and the Commonwealth's draft Public Environmental Report and therefore minimise duplication.

The PER document should contain a separate section identifying MNES, discussing how these matters have been addressed within the document and discussing any offsets proposed to address MNES. Once submissions have been received on the PER and the proponent has prepared an adequate Response to Submissions report, each assessment process under the EP Act and EPBC Act will continue.

Attachment 1 of this document contains Guidelines for the Content of a Draft Public Environment Report (EPBC Reference 2013/7042) issued by the Commonwealth DoE. The proponent should ensure that the PER document meets the requirements as set out in Attachment 1 for the purposes of the assessment by the Commonwealth Government under the EPBC Act.

### **2.5 Agreed Assessment Milestones**

EPA Environmental Assessment Guideline No. 6 *Timelines for EIA of Proposals* addresses the responsibilities proponents and EPA for achieving timely and effective assessment of proposals.

This timeline (Table 2) is agreed between the EPA and the proponent. Proponents are expected to meet the agreed proposal assessment timeline, and in doing so, provide adequate, quality information to inform the assessment. Proponents will need to allocate sufficient time to undertake the necessary studies to the appropriate standard and incorporate the outcomes of the studies into the PER.

Where an agreed timeline is not being met by the proponent, or if adequate information is not submitted by the proponent, the timeline for subsequent steps will be re-established. Where the OEPA is unable to meet a date in the agreed timelines the proponent will be advised and the timeline adjusted.

The EPA will report to the Minister for Environment on whether the agreed proposal assessment timeline has been met. Where the timeline has not been met, the reasons for this will be identified.

**Table 2: Agreed Milestones for the proposal for the coordinated assessment**

Key Stage of Proposal	Agreed Milestone
EPA approval of ESD Document	1 April 2014
Proponent submits first adequate draft of PER Document	30 January 2015
OEPA provides comment on first draft PER Document	6 weeks*
Proponent submits adequate revised draft PER Document	27 March 2015
EPA authorises release of PER Document	2 weeks
Proponent releases approved PER Document	10 April 2015
Public Review of PER Document	4 weeks
Response to Public Submissions	26 June 2015
OEPA reviews Response to Public Submissions**	4 weeks
OEPA assesses proposal for consideration by EPA	7 weeks
Preparation and finalisation of EPA Report (including 2 weeks consultation on draft conditions with proponent and key Government agencies)	5 weeks from receipt of final information

\*\*If a revised response to submissions is required OEPA reviews revisions in 3 weeks

Note - if the document is received over the Christmas period the timeline may be required to be adjusted to reflect availability of Government Agency's to provide advice during this period.

## 2.6 Decision Making Authorities

At this preliminary stage, the EPA had identified the following Decision Making Authorities (DMAs) (see Table 3). These Decision Making Authorities are constrained from making any decision that could have the effect of causing or allowing the proposal to be implemented. Throughout the assessment process further DMAs may be identified.

**Table 3: Nominated Decision Making Authorities**

Decision Making Authority	Relevant Legislation
Minister for Water	<i>Rights in Water and Irrigation Act 1914</i>
Minister for Planning	<i>Town Planning and Development Act 2005</i>
Minister for Lands	<i>Land Administration Act 1997</i>
Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i>
Minister for Environment	<i>Wildlife Conservation Act 1950</i>

DMAs are not prevented from parallel processing, up to the point of their decision, so that their views can inform the ministerial consultation process.

### **3. Preparation of the Environmental Review Document**

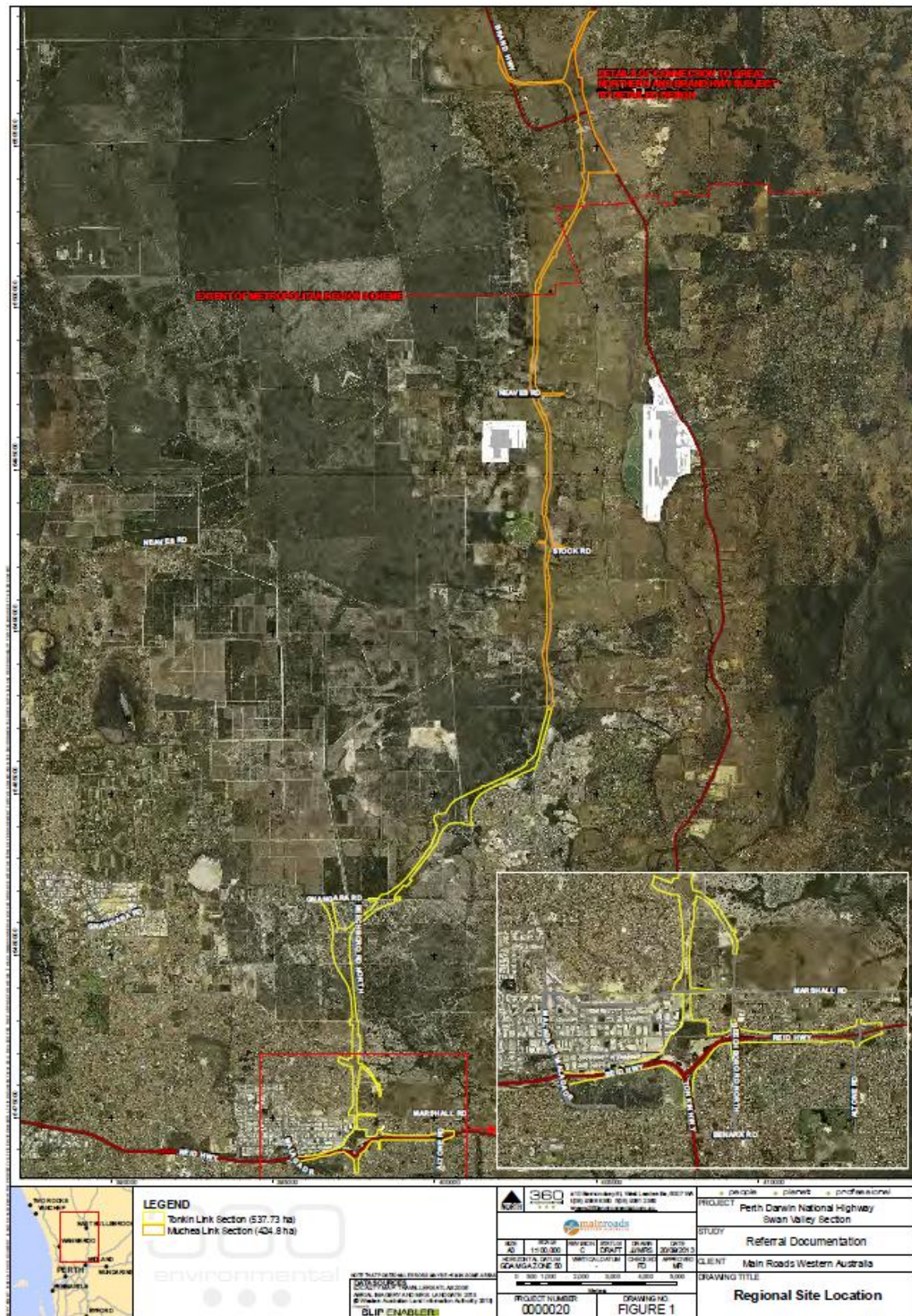
The recommended format for the Environmental Review document is available on the Environmental Protection Authority's (EPA's) website [www.epa.wa.gov.au](http://www.epa.wa.gov.au).

When the EPA is satisfied with the standard of the environmental review document (see EAG 6 Section 4.3) it will provide a written sign-off, giving approval to advertise the document for public review. The review document may not be advertised for release before written approval is received.

The proponent is responsible for advertising the release and availability of the PER in accordance with the guidelines which will be issued to the proponent by the OEPA. The EPA must be consulted on the timing and details for advertising the document.



Figure 1- Location of the Proposal



**Attachment 1 – Guidelines for the Content of a Draft Public Environment Report (EPBC 2013/7042).**



**Australian Government**

**Department of the Environment**

# **GUIDELINES FOR THE CONTENT OF A DRAFT PUBLIC ENVIRONMENT REPORT**

*Environment Protection and Biodiversity Conservation Act 1999*

**EPBC Reference: 2013/7042**

**New alignment of the Perth-Darwin National Highway  
(Swan Valley Section), Western Australia**

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PER Guidelines

EPBC 2013/7042 New alignment of the Perth-Darwin National Highway (Swan Valley Section),  
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# ENVIRONMENTAL PROTECTION AUTHORITY

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## **GUIDELINES FOR A DRAFT PUBLIC ENVIRONMENT REPORT**

### **New alignment of the Perth-Darwin National Highway (Swan Valley Section), Western Australia**

#### **PREAMBLE**

Main Roads Western Australia proposes the development of a new alignment for the Perth-Darwin National Highway between Tonkin Highway and Reid Highway junction in the south, and the Brand Highway and Great Northern Highway at Muchea in the north, approximately 13 kilometres (km) north east of Perth CBD, Western Australia.

At a Commonwealth level, the proposal was referred to the Department of the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 31 October 2013. On 27 November 2013, a delegate of the Commonwealth Minister for the Environment determined that the proposed action is a controlled action and as such requires assessment and a decision on approval under the EPBC Act before it can proceed. On the 21 January 2014, a delegate of the Minister determined the proposed action would be assessed by Public Environment Report (PER).

The proposed action has the potential to have a significant impact on the following matters, which are protected under Part 3 of the EPBC Act:

- Listed threatened species and communities (sections 18 & 18A).
- Migratory Species (sections 20 & 20A).
- Commonwealth land (sections 26 & 27A).

In accordance with the Western Australian *Environmental Protection Act 1986* (EP Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a Public Environmental Review (WA)/draft Public Environment Report (Cwlth) (PER/draft PER) is to be prepared describing the proposal by Main Roads Western Australia to develop a new alignment for the Perth-Darwin National Highway between Tonkin Highway and Reid Highway junction in the south, and the Brand Highway and Great Northern Highway at Muchea in the north, approximately 13 km north east of Perth CBD, Western Australia, and its likely effects on the environment.

Information about the action and its relevant impacts, as outlined below, is to be provided in the PER/draft PER. This information should be sufficient to allow a delegate of the Commonwealth Minister for the Environment to make an informed decision on whether or not to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision.

## GENERAL ADVICE ON GUIDELINES

### 1 GENERAL CONTENT

The PER should be a stand-alone document that primarily focuses on the following matters of national environmental significance:

- Listed threatened species and communities (sections 18 & 18A).
- Migratory Species (sections 20 & 20A).
- Commonwealth land (sections 26 & 27A).

It should contain sufficient information to avoid the need to search out previous or supplementary reports.

The PER should enable interested stakeholders and the Minister to understand the environmental consequences of the proposed development on matters of national environmental significance (NES). Information provided in the PER should be objective, clear, and succinct and where appropriate, be supported by maps, plans, diagrams or other descriptive detail. The body of the PER is to be written in a clear and concise style that is easily understood by the general reader. Technical jargon should be avoided wherever possible. Cross-referencing should be used to avoid unnecessary duplication of text.

Detailed technical information, studies or investigations necessary to support the main text should be included as appendices to the PER. It is recommended that any supporting documentation and studies, reports or literature, from which information has been extracted and which are not normally available to the public, be made available at appropriate locations during the period of public display of the PER. The proponent should also make the PER and supporting information available on the Internet.

If it is necessary to make use of material that is considered to be of a confidential nature, the Proponent should consult with Department of the Environment (the Department) on the preferred presentation of that material, before submitting the draft PER to the Minister for approval for publication.

The level of analysis and detail in the PER should reflect the nature and extent of the expected and potential impacts on the environment. Any and all unknown variables or assumptions made in the assessment must be clearly stated and discussed. The extent to which the limitations, if any, of available information may influence the conclusions of the environmental assessment should be discussed.

The Proponent should ensure that the PER assesses compliance of the action with the principles of Ecologically Sustainable Development<sup>2</sup> as set out in the EPBC Act, and the objects of the Act (refer to Attachment 1). A copy of Schedule 4 of the EPBC Regulations *Matters to be addressed by draft Public Environment Report and PER* is also enclosed at [Attachment 2](#).

### 2 FORMAT AND STYLE

The PER should comprise three elements, namely:

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<sup>2</sup> A copy of the objects and principles of the EPBC Act can be viewed at [Attachment 1](#).

# ENVIRONMENTAL PROTECTION AUTHORITY

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- An executive summary;
- The main text of the document; and
- Appendices containing detailed, supporting technical information and other information that can be made publicly available.

The guidelines have been set out in a manner that may be adopted as the format for the PER. This format need not be followed where the required information can be more effectively presented in an alternative way. However, each of the elements must be addressed to meet the requirements of the EPBC Act and Regulations.

The PER should be written so that any conclusions reached can be independently assessed. To this end all sources must be appropriately referenced using the Harvard standard. The reference list should include the address of any Internet “web” pages used as data sources.

The main text of the PER should include a list of abbreviations, a glossary of terms and appendices containing:

- A copy of these guidelines;
- A list of persons and agencies consulted during the PER;
- Contact details for the Proponent; and
- The names, qualifications and work done by all persons involved in preparing the PER.

High-resolution maps, diagrams and other illustrative material should be included in the PER where appropriate. The PER should be produced on A4 size paper capable of being photocopied, with maps and diagrams on A4 or A3 size and in colour where possible.

The PER information and associated data must be provided in both hardcopy and electronic form to the Department. The proponent should consider the format and style of the document so that it is appropriate for publication on the Internet. The capacity of the website to store data and display the material may have some bearing on how the document is presented.

## **SPECIFIC CONTENT**

### **1 GENERAL INFORMATION**

This should provide the background and context of the action including:

- (a) The title of the action;
- (b) The full name and postal address of the designated Proponent;
- (c) A clear outline of the objective(s) of the action;
- (d) The location of the action;
- (e) The background to the development of the proposal;



## ENVIRONMENTAL PROTECTION AUTHORITY

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- (f) How the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action;
- (g) The current status of the proposed action;
- (h) Legislative background for the proposal, including:
  - The matters of NES protected under Part 3 of the EPBC Act and any other requirements and approvals needed under the EPBC Act; and
  - Other relevant legislation, both Commonwealth and State;
- (i) The consequences of not proceeding with the action.

### **2 DESCRIPTION OF THE ACTION**

This should include, but is not limited to, comprehensive detail and informative map(s) of:

- (a) All components of the action, including actions to be undertaken during the preparation, construction and operation phases;
- (b) The precise location and area in hectares of the site and of any works to be undertaken, structures to be built or other infrastructure and components associated with the action;
- (c) The proposed timing and duration of the works to be undertaken;
- (d) How the works are to be undertaken and design parameters for those aspects of structures or components of the action that may have relevant impacts;
- (e) Proposed public works such as entry and exit sites, roads, drainage lines etc., including locations and map(s);
- (f) Location, size, operation and maintenance plans proposed for sediment and erosion control; groundwater, surface water and stormwater management systems to be employed;
- (g) The zoning and management plans for any open space, conservation and rehabilitation areas, including map(s);
- (h) Full details of the standards being adopted in relation to conservation of ecosystems, stormwater discharge, energy, resource and transport efficiency and water conservation;
- (i) Consistency of the proposed action with relevant environmental guidance and policy; and
- (j) Identification and quantification of hazards and risks, including cumulative hazards and risks. For example, but not necessarily limited to, potential threats from heavy or prolonged rainfall, flood, chemical spills, or failure of treatment systems.

### **3 FEASIBLE ALTERNATIVES**

Any feasible alternatives to the proposed action should be described to the extent reasonably practicable, including:

- (a) If relevant, the alternative of taking no action;

## ENVIRONMENTAL PROTECTION AUTHORITY

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- (b) Constraints and opportunities for alternative development footprints and uses;
- (c) A comparative description of the impacts of each alternative on the NES matter protected by Part 3 of the EPBC Act; and
- (d) Sufficient detail and supporting information to make clear why any alternative is preferred to another.

The short, medium and long-term advantages and disadvantages of each alternative should be discussed.

### 4 DESCRIPTION OF THE ENVIRONMENT

A description of the environment of the proposed site and the surrounding areas that may be affected by the action must be provided, including but not limited to, information on:

- (a) A description (with maps) of vegetation on and surrounding the site, including the area, species composition, distribution, and relative abundance of species present – supported by adequate data;
- (b) A description (with maps) of the area, distribution and abundance of invasive species within and surrounding the project area – supported by adequate data;
- (c) A description (with maps) of the geology, soil type/s and geomorphology of the site – supported by adequate data;
- (d) EPBC Act listed ecological communities<sup>3</sup>, and their habitat, likely to be present in the vicinity of the proposed action must be identified and described<sup>4</sup>, including:
  - A description of the national, regional and local distribution, abundance and condition of the listed community;
  - Survey/s of the presence, area, distribution and condition of listed ecological communities and their habitat that may be present on and adjacent to the site of the proposed action, including data map(s). The descriptions available for the EPBC Act listed ecological communities<sup>5</sup> should be referenced in identifying any ecological communities present. The survey/s and data collected must:

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<sup>3</sup> As identified in the EPBC Act Environment Reporting Tool (ERT) prepared on 19 November 2013 (relevant extract at **Attachment 3**).

<sup>4</sup> Further information detailing the information that will be required to address Matters of National Environmental Significance is at **Attachment 4**.

<sup>5</sup> Including relevant EPBC Act Commonwealth listing advice, conservation advice and policy statements available at: <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

## ENVIRONMENTAL PROTECTION AUTHORITY

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- Representative sample of vegetation (i) on the site of the proposed action and (ii) within the areas of any EPBC Act ecological communities identified;
  - Cover all vegetation strata, that is the canopy, mid-storey and under-storey;
  - Allow frequency of occurrence/relative abundance of the flora species present, to be determined;
- (e) EPBC Act listed threatened and listed migratory species<sup>61</sup>, and their habitat, likely to be present on or in the vicinity of the proposed action must be identified and described<sup>4</sup>, including:
- A description of the population size, distribution, abundance and dynamics of each species on and in the vicinity of the site (of the proposed action);
  - The international, national, regional and local status for each species;
  - Targeted surveys to detect the presence, distribution and abundance of these species and their habitat (including maps), on and in the vicinity of the site of the proposed action. Surveys must also identify how the site is utilised by each species for breeding, foraging or other key life-cycle stages<sup>5</sup>;
- (f) A detailed environment assessment of the area both within and in the vicinity of the proposed road alignment that traverses Commonwealth land (with maps), including:
- The components and features of the environment;
  - Components and features of the environment likely to be impacted (i.e. landscapes and soils, water resources, plants, animals, heritage, people and communities, pollutants, chemicals, and toxic substances).
  - Environmentally sensitive or vulnerable areas;
  - Rare, endemic, unusual, important or otherwise valuable environments, or components of the environment;
  - History, current use and condition of the environment that is likely to be impacted.
- (g) All surveys conducted for the purposes of (a) – (e) must be conducted by suitably qualified individuals and use appropriate methods (consistent with any relevant, available guidelines). A detailed description of the methodology(s) used, data of the survey results and map(s) must be provided.
- (h) A description of the existing traffic, existing roads and access conditions in the locality.

### 5 RELEVANT IMPACTS

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## ENVIRONMENTAL PROTECTION AUTHORITY

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The PER must include a description of all the potential relevant impacts (e.g. direct, indirect and cumulative impacts) of the proposed action, including consequential impacts as defined by Section 527E of the EPBC Act, on the relevant matters of NES protected under Part 3 of the EPBC Act. These impacts must be quantified where possible.

For each listed threatened species and ecological community and listed migratory species likely to be impacted by the action<sup>1</sup>, the assessment of impacts must include (but is not limited to)<sup>4</sup>:

- (a) A detailed description and assessment of the nature and extent of potential impacts on listed threatened species, ecological communities or listed migratory species, for example:
  - Direct mortality or clearing of a species, ecological community or habitat that will result from the action;
  - Fragmentation of a population, community, or habitat, including reduced movement/migration corridors (for fauna) or activity, or habitat connectivity;
  - Direct or indirect disruption to breeding, foraging or other key life-cycle stages;
  - Indirect impacts that result in reduced condition or habitat quality;
  - Increased activity and disturbance, including (but not limited to) road use, noise, lighting, barriers, fire risk, rubbish dumping, the introduction and spread of exotic species or disease, and other forms of pollution;
  - Alterations to surface and groundwater hydrology and runoff, on and adjacent to the development;
  - Introduction of point and diffuse sources of nutrients, sediments, and contaminants on and from the site of the proposed action;
  - Potential impacts related to the disturbance from earthworks and construction, determined in accordance with relevant and available guidelines;
  - Potential impacts to water quality (from stormwater runoff, wastewater, sewage etc.) to waterways and areas of vegetation on or surrounding the site;
- (b) A detailed assessment of the nature and extent of the likely short, medium and long-term impacts of the proposed action on matters of NES – including impacts before, during and after construction and operation;
- (c) An analysis of the significance of the impacts on matters of NES on a local, regional and national scale;
- (d) An analysis of the significance of the impacts on matters of NES in the context of current condition of the matter of NES, and where information is available, the pre-development condition;
- (e) A statement of whether any impacts are likely to be unknown, unpredictable or irreversible;
- (f) Any technical data and other information used or needed to make a detailed assessment of the impacts of the proposal on matters of NES;
- (g) Expected positive and negative social and economic impacts of the proposal.

## 6 PROPOSED SAFEGUARDS, MITIGATION MEASURES AND OFFSETS

The PER must provide information on mitigation measures, with a particular focus on matters protected under Part 3 of the EPBC Act. Specific measures intended to avoid or minimise relevant impacts must be provided and substantiated, based on best available practices, and must include the following elements<sup>4</sup>:

- (a) A consolidated list of mitigation measures that will be undertaken by the proponent;
- (b) For each mitigation measure, detail of:
  - i. Which impact it addresses for which matter of NES;
  - ii. Assessment of the expected or predicted effectiveness of the measure – provide supporting evidence where available;
  - iii. Detail of parties responsible for implementation and where relevant, for ongoing funding and maintenance;
  - iv. Any statutory or policy basis for the mitigation measures; and
  - v. The anticipated cost.
- (c) A detailed Environmental Management Plan (EMP) that sets out the framework for short- and long-term mitigation, monitoring, and ongoing management of the relevant impacts of the action, including any provisions for independent environmental auditing. The EMP needs to address the construction, operation and monitoring phases separately. For each potential impact, the EMP must state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing for implementation. The EMP needs to provide sufficient detail to be auditable and to be used as an operational document.

The EMP may be comprised of a number of documents but must include an overarching plan. The EMP should include a comprehensive water quality risk management and monitoring plan and other relevant policy and guidance available. The EMP may also include Erosion and Sedimentation Management Plan, Stormwater and Wastewater Management Plan, Wildlife Impact Management Plan, Vegetation and Rehabilitation Management Plan, Emergency Response Plan, or a Monitoring Program.

The EMP should also describe contingencies for events such as heavy or prolonged rainfall, failure of treatment systems, climate change etc. and planning to mitigate the consequences of events that may occur together to manage the cumulative risk to matters of NES.

The EMP should make reference to scientific literature and other relevant guidance or best-practice standards documented and available. A reference list should be included in the EMP.

- (d) The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.
- (e) In the event that impacts cannot be avoided or mitigated, describe in the PER any offset/s to compensate for residual impacts, for relevant matter/s of NES, including:

Details of the impact site –

## ENVIRONMENTAL PROTECTION AUTHORITY

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- Presence and conservation status of protected matter/s likely to be impacted;
- Specific attributes of the protected matter being impacted at a site, for example, the type of threatened species or ecological community, the quality of habitat, population attributes such as recruitment or mortality, landscape attributes such as habitat connectivity, or heritage values.
- Scale and nature of the impacts of the proposed action – including direct and indirect impacts; and
- Duration of the impact (not of the action).

Details of the offset site –

- Extent to which the proposed offset actions correlate to, and adequately compensate for, the impacts on the attributes for the protected matter;
- Conservation gain to be achieved by the offset i.e. positive management strategies that improve the site or averting the future loss, degradation or damage of the protected matter;
- Current land tenure of the proposed offset and the method of securing and managing the offset for the life of the impact;
- Time it will take to achieve the proposed conservation gain;
- Level of certainty that the proposed offset will be successful; and
- Suitability of the location of the proposed offset site.

In determining the appropriateness of offset activities proposed, it is important to consult the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy (October 2012) and other relevant Commonwealth approved recovery plans, threat abatement plans, conservation advice, ecological character descriptions, management plans and/or listing documents. Where Commonwealth approved guidance documents are not available or are insufficient detail, additional information sources such as state and territory management plans or peer-reviewed scientific literature can be reviewed to inform priority offset activities.

### **7 OTHER APPROVALS AND CONDITIONS**

Information must be provided on any approval, conditions, permit or certificate requirements that apply, or that the proponent reasonably believes are likely to apply, to the proposed action including:

- (a) Details of any planning scheme (local, State or Commonwealth), plan or policy under any planning system that is relevant to the proposed action, including:

## ENVIRONMENTAL PROTECTION AUTHORITY

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- What environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy; and
  - How the scheme provides for the prevention, minimisation and management of any relevant impacts.
- (b) A description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions or requirements that apply to the action;
- (c) A statement identifying any additional approvals that are required; and
- (d) A description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

### **8 CONSULTATION**

Information on the consultation processes related to the action, including:

- (a) Any consultation that has already taken place and the documented responses or results of that consultation;
- (b) Any consultation proposed before or during the proposed action, about the relevant impacts of the action, including:
  - i. The methodology and proposed consultation process;
  - ii. The identification of affected parties, including any communities;
  - iii. A description of the adequacy of the consultation process;
- (c) Any documented response to, or result of, the consultation; and
- (d) A description of the views expressed by the consulted parties.

It should be noted that the EPBC Act provides for a mandatory public consultation process following the submission of the draft PER to the Department.

### **9 INFORMATION SOURCES PROVIDED IN THE PER**

Information utilised in the preparation of the PER must be suitably referenced, including:

- (a) The source of the information;
- (b) How recent the information is;
- (c) How the reliability of the information was tested; and
- (a) What uncertainties (if any) are in the information.

### **10 ENVIRONMENTAL RECORD OF PERSON(S) PROPOSING TO TAKE THE ACTION**

The PER must document any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- (a) The person proposing to take the action; and
- (b) For an action for which a person has applied for a permit, the person making the application.

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

### **11 CONCLUSION**

An overall conclusion as to the environmental acceptability of the proposal should be provided, including discussion on consistency with principles of Ecologically Sustainable Development<sup>2</sup> and the objects and requirements of the EPBC Act. Reasons supporting the undertaking the proposal in the manner proposed should also be outlined.

Measures proposed or required by way of offset for any unavoidable impacts on NES matters, and the relative degree of compensation, should be highlighted.



## **ATTACHMENT 1**

### **THE OBJECTS AND PRINCIPLES OF THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999**

#### **SECTIONS 3 AND 3A**

#### **3 Objects of the Act**

- (a) To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- (b) To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- (c) To promote the conservation of biodiversity;
- (d) To promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- (e) To assist in the co-operative implementation of Australia's international environmental responsibilities;
- (f) To recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- (g) To promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.

#### **3A Principles of Ecologically Sustainable Development**

The following principles are principles of ecologically sustainable development.

- (a) Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.
- (b) If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- (c) The principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.
- (d) The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.
- (e) Improved valuation, pricing and incentive mechanisms should be promoted.

## **ATTACHMENT 2**

### **MATTERS THAT MUST BE ADDRESSED IN A PUBLIC ENVIRONMENT REPORT**

#### **(SCHEDULE 4 OF THE EPBC ACT REGULATIONS 2000)**

#### **1 General information**

- 1.01 The background of the action including:
- (a) The title of the action;
  - (b) The full name and postal address of the designated proponent;
  - (c) A clear outline of the objective of the action;
  - (d) The location of the action;
  - (e) The background to the development of the action;
  - (f) How the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action;
  - (g) The current status of the action;
  - (h) The consequences of not proceeding with the action.

#### **2 Description**

- 2.01 A description of the action, including:
- (a) All the components of the action;
  - (b) The precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;
  - (c) How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts;
  - (d) Relevant impacts of the action;
  - (e) Proposed safeguards and mitigation measures to deal with relevant impacts of the action;
  - (f) Any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action;
  - (g) To the extent reasonably practicable, any feasible alternatives to the action, including:
    - (i) If relevant, the alternative of taking no action;
    - (ii) A comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action;
    - (iii) Sufficient detail to make clear why any alternative is preferred to another;
  - (h) Any consultation about the action, including:

- (i) Any consultation that has already taken place;
- (ii) Proposed consultation about relevant impacts of the action;
- (iii) If there has been consultation about the proposed action — any documented response to, or result of, the consultation;
- (i) Identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.

### **3 Relevant impacts**

3.01 Information given under paragraph 2.01 (d) must include:

- (a) A description of the relevant impacts of the action;
- (b) A detailed assessment of the nature and extent of the likely short term and long-term relevant impacts;
- (c) A statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
- (d) Analysis of the significance of the relevant impacts;
- (e) Any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

### **4 Proposed safeguards and mitigation measures**

4.01 Information given under paragraph 2.01 (e) must include:

- (a) A description and an assessment of the expected or predicted effectiveness of the mitigation measures;
- (b) Any statutory or policy basis for the mitigation measures;
- (c) The cost of the mitigation measures;
- (d) An outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
- (e) The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program;
- (f) A consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.

## **5 Other approvals and conditions**

5.01 Information given under paragraph 2.01 (f) must include:

- (a) Details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:
  - (i) What environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy;
  - (ii) How the scheme provides for the prevention, minimisation and management of any relevant impacts;
- (b) A description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the Act), including any conditions that apply to the action;
- (c) A statement identifying any additional approval that is required;
- (d) A description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

## **6 Environmental record of person proposing to take the action**

6.01 Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- (a) The person proposing to take the action; and
- (b) For an action for which a person has applied for a permit, the person making the application.

6.02 If the person proposing to take the action is a corporation — details of the corporation's environmental policy and planning framework.

## **7 Information sources**

7.01 For information given in a draft public environment report or environmental impact statement, the draft must state:

- (a) The source of the information; and
- (b) How recent the information is; and
- (c) How the reliability of the information was tested; and
- (d) What uncertainties (if any) are in the information.

## ATTACHMENT 3

### EPBC Act Environment Reporting Tool (ERT)

Extract of Report created: 19 November 2013 18:38

Listed Threatened Ecological Communities		[ Resource Information ]
Name	Status	Type of Presence
<a href="#">Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain</a>	Endangered	Community known to occur within area
<a href="#">Assemblages of plants and invertebrate animals of tumulus (organic mound) springs of the Swan Coastal Plain</a>	Endangered	Community known to occur within area
<a href="#">Claypans of the Swan Coastal Plain</a>	Critically Endangered	Community likely to occur within area
<a href="#">Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain</a>	Endangered	Community known to occur within area
Listed Threatened Species		[ Resource Information ]
Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Calyptorhynchus banksii naso</a> Forest Red-tailed Black-Cockatoo [67034]	Vulnerable	Species or species habitat may occur within area
<a href="#">Calyptorhynchus baudinii</a> Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Calyptorhynchus latirostris</a> Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Breeding likely to occur within area
<a href="#">Leipoa ocellata</a> Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
<b>Insects</b>		
<a href="#">Leioproctus douglasiellus</a> a short-tongued bee [66756]	Critically Endangered	Extinct within area
<b>Mammals</b>		
<a href="#">Dasyurus geoffroii</a> Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pseudocheirus occidentalis</a> Western Ringtail Possum [25911]	Vulnerable	Species or species habitat likely to occur within area

Plants		
<a href="#">Andersonia gracilis</a> Slender Andersonia [14470]	Endangered	Species or species habitat likely to occur within area
<a href="#">Anigozanthos viridis subsp. terraspectans</a> Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Caladenia huegelii</a> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat known to occur within area
<a href="#">Centrolepis caespitosa</a> [6393]	Endangered	Species or species habitat likely to occur within area
<a href="#">Chamelaucium sp. Gingin (N.G.Marchant 6)</a> Gingin Wax [64649]	Endangered	Species or species habitat likely to occur within area
<a href="#">Conospermum densiflorum subsp. unicephalum</a> One-headed Smokebush [64871]	Endangered	Species or species habitat may occur within area
<a href="#">Darwinia foetida</a> Mucnea Bell [83190]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Diuris micrantha</a> Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat may occur within area
<a href="#">Diuris purdiei</a> Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area
<a href="#">Drakaea elastica</a> Glossy-leafed Hammer-orchid, Praying Virgin [16753]	Endangered	Species or species habitat likely to occur within area
<a href="#">Drakaea micrantha</a> Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat may occur within area
<a href="#">Eleocharis keigheryi</a> Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Epiblema grandiflorum var. cyaneum</a> Baby Blue Orchid, Blue Babe-in-the-cradle Orchid, Blue Babe-in-a-cradle [67182]	Endangered	Species or species habitat known to occur within area
<a href="#">Eucalyptus balanites</a> Cadda Road Mallee, Cadda Mallee [24264]	Endangered	Species or species habitat may occur within area
<a href="#">Eucalyptus leprophloia</a> Scaly Butt Mallee, Scaly-butt Mallee [56712]	Endangered	Species or species habitat may occur within area
<a href="#">Grevillea althoferorum</a> [64906]	Endangered	Species or species habitat likely to occur within area
<a href="#">Grevillea curviloba subsp. curviloba</a> Curved-leaf Grevillea [64908]	Endangered	Species or species habitat known to occur within area
<a href="#">Grevillea curviloba subsp. incurva</a> Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat known to occur within area

<a href="#">Hydatella dioica</a> One-sexed Hydatella [4898]	Endangered	Species or species habitat likely to occur within area
<a href="#">Lepidosperma rostratum</a> Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
<a href="#">Thelymitra manginii</a> K.Dixon & Batty ms. [67443]	Endangered	Species or species habitat likely to occur within area
<a href="#">Thelymitra stellata</a> Star Sun-orchid [7060]	Endangered	Species or species habitat known to occur within area
<a href="#">Verticordia plumosa</a> var. <a href="#">pleiobotrya</a> Narrow-petalled Featherflower, Mundijong Featherflower [55803]	Endangered	Species or species habitat likely to occur within area
<b>Name</b>	<b>Status</b>	<b>Type of Presence</b>
<b>Reptiles</b>		
<a href="#">Pseudemydura umbrina</a> Western Swamp Tortoise [1760]	Critically Endangered	Translocated population known to occur within area
<b>Listed Migratory Species</b>		<b>[ Resource Information ]</b>
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
<b>Name</b>	<b>Threatened</b>	<b>Type of Presence</b>
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
<a href="#">Leipoa ocellata</a> Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Breeding known to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Species or species habitat likely to occur within area
<a href="#">Rostratula benghalensis</a> (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

## Commonwealth Land

[ Resource Information ]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

### Name

Commonwealth Land -

Defence - MUCHEA ARMAMENT RANGE

Defence - PEARCE - AP15 WATER TREATMENT PLANT

Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK

Defence - PEARCE - AP3 RADAR STATION BULLSBROOK

Defence - PEARCE - AP6 OBSTRUCTION BEACON NO.3

Defence - PEARCE - AP8 BORE SITES

Defence - PEARCE - RAAF BASE

Defence - RAAF CAVERSHAM

## Commonwealth Heritage Places

[ Resource Information ]

### Name

### State

### Status

### Natural

[Muchea / Pearce Air Weapons Range](#)

WA

Indicative Place



## **ATTACHMENT 4**

### **ADDITIONAL INFORMATION TO ASSIST IN THE DEVELOPMENT OF THE DRAFT PER**

In accordance with the Western Australian *Environmental Protection Act 1986* (EP Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a Public Environmental Review (WA)/draft Public Environment Report (Cwlth) (PER/draft PER) is to be prepared describing the proposal by Main Roads Western Australia to develop a new alignment for the Perth-Darwin National Highway between Tonkin Highway and Reid Highway junction in the south, and the Brand Highway and Great Northern Highway at Muchea in the North, approximately 13 kilometres (km) north east of Perth CBD, Western Australia, and its likely effects on the environment.

To assist the Commonwealth Department of the Environment in assessing the relevant impacts of the proposed Perth-Darwin National Highway (Swan Valley Section), WA (EPBC 2013/7042), we request Main Roads (the proponent) address the following information in the PER/draft PER. This information should be sufficient to allow the Commonwealth Minister for the Environment to make an informed decision on whether or not to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision. Information relevant to matters of national environmental significance could be addressed either:

1. Within the main content of the PER/draft PER with a summary of where the information relevant to matters of national environmental significance can be found in the document; or
2. As a separate chapter in the PER/draft PER entitled 'Matters of national environmental significance'.

### **Environmental Scoping Document (ESD)**

#### **Executive Summary**

Main Roads Western Australia (the proponent) proposes the development of a new alignment for the Perth-Darwin National Highway between Tonkin Highway and Reid Highway junction in the south, and the Brand Highway and Great Northern Highway at Muchea in the North, approximately 13 kilometres (km) north east of Perth CBD, Western Australia.

At a Commonwealth level, the proposal was referred to the Department of the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 31 October 2013. On 27 November 2013, a delegate of the Australian Government Minister for the Environment determined that the proposed action is a controlled action and as such requires assessment and a decision on approval under the EPBC Act before it can proceed. On the 21 January 2014, a delegate of the Minister determined the proposed action will be assessed by a Public Environment Report (PER).

The proposed action has the potential to have a significant impact on the following matters, which are protected under Part 3 of the EPBC Act:

- Listed threatened species and communities (sections 18 & 18A).
- Migratory Species (sections 20 & 20A).
- Commonwealth land (sections 26 & 27A).

In accordance with the Western Australian *Environmental Protection Act 1986* (EP Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a Public Environmental Review (WA)/draft Public Environment Report (Cwlth) (PER/draft PER) is to be prepared describing the proposal and its likely effects on the environment.

## Threatened Fauna Species

### Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*)

- Provide a detailed Black-Cockatoo habitat assessment of the proposal site, to determine the vegetation type and extent of Carnaby's Black-Cockatoo foraging, roosting and breeding habitat present within the area, and to identify any evidence of breeding trees actively being used by the species.
- Identify and assess the values and significance of the habitat for the EPBC listed Carnaby's Black-Cockatoo within the proposal area and immediate adjacent area and describe these values in a local, regional and national context.
- Provide an assessment of the extent of clearing of Carnaby's Black-Cockatoo habitat that will occur within the proposal site as a result of the action.
- Demonstrate how the proposed action is consistent with the following policy/guidance documents:
  - Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.1: Significant Impact Guidelines – Matters of National Environmental Significance*; and
  - *Environment Protection and Biodiversity Conservation Act 1999* Survey Guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.
  - Department of Conservation and Land Management National Recovery Plan for the Carnaby's Cockatoo (*Calyptorhynchus latirostris*).

### Western Swamp Tortoise (*Pseudemydura umbrina*)

- Identify and assess the values and significance of the habitat for the EPBC listed Western Swamp Tortoise in the proposal area and immediate adjacent area and describe these values in a local, regional and national context.
- Provide a detailed assessment of the potential direct and indirect impact the proposed action may have on the conservation areas – Ellen Brook nature reserve and Twin Swamps wildlife sanctuary that both provide habitat for the critically endangered Western Swamp Tortoise.
- Demonstrate how the proposed action is consistent with the following policy/guidance documents:
  - Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.1: Significant Impact Guidelines – Matters of National Environmental Significance*;
  - Department of Conservation and Land Management National Recovery Plan for the Western Swamp Tortoise (*Pseudemydura umbrina*) 3rd Edition 2003 – 2007; and

- *Environment Protection and Biodiversity Conservation Act 1999* Survey Guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.

### Threatened Flora Species

Grand Spider-orchid (*Caladenia huegelii*) – Endangered, Curved-leaf Grevillea (*Grevillea curviloba* subsp. *curviloba*) – Endangered, Narrow curved-leaf Grevillea (*Grevillea curviloba* subsp. *incurva*) – Endangered, Muchea Bell (*Darwinia foetida*) – Critically Endangered, Grass Wattle (*Acacia anomala*) – Vulnerable

- Provide a detailed assessment of the proposed road alignment to determine the presence/absence, and if applicable, the extent to which any of the above flora species or their habitat are present within the proposal area.
- Identify and assess the values and significance of any EPBC listed flora species and their habitat within the proposal area and immediate adjacent area and describe these values in a local, regional and national context.
- Provide an assessment of the extent to which any EPBC listed species or their habitat will be directly or indirectly impacted as a result of the proposed action.
- Demonstrate how the proposed action is consistent with the following policy/guidance documents:
  - Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.1: Significant Impact Guidelines – Matters of National Environmental Significance*;
  - Department of Conservation and Land Management (2000). Curved-leaf Grevillea (*Grevillea curviloba* subsp. *curviloba*) Interim Recovery Plan 2000-2003. Perth, Western Australia;
  - Department of Environment and Conservation (2009). Grand Spider Orchid (*Caladenia huegelii*) Recovery Plan. Commonwealth Department of the Environment, Water, Heritage and the Arts, Canberra;
  - Department of Conservation and Land Management (2000). Narrow Curved-leaf Grevillea (*Grevillea curviloba* subsp. *incurva*) Interim Recovery Plan 2000-2003. Perth, Western Australia;
  - *Environment Protection and Biodiversity Conservation Act 1999* Conservation Advice for *Acacia anomala* (Grass Wattle); and
  - *Environment Protection and Biodiversity Conservation Act 1999* Conservation Advice for *Darwinia* sp. Muchea (B.J.Keighery 2458) (Muchea Bell).

### Ecological Communities

Assemblages of plants and invertebrate animals of tumulus (organic mound) springs of the Swan Coastal Plain – Endangered, Clay Pans of the Swan Coastal Plain – Critically Endangered, *Corymbia calophylla* – *Xanthorrhoea preissii* woodland and shrublands of the Swan Coastal Plain – Endangered, Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain – Endangered.

- Provide a detailed assessment of the proposed road alignment to determine the presence/absence, and if applicable, the extent to which any of the above EPBC ecological communities are present within the proposal area.
- Identify and assess the values and significance of the EPBC listed ecological communities located within the proposal area and immediate adjacent area and describe these values in a local, regional and national context.
- Provide an assessment of the extent to which any of the above listed ecological communities will be cleared, or indirectly impacted as a result of the proposed action.
- Demonstrate how the proposed action is consistent with the following policy/guidance documents:
  - Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.1: Significant Impact Guidelines – Matters of National Environmental Significance*.
  - Department of Conservation and Land Management (2006). Community of Tumulus (organic mound) springs of the Swan Coastal Plain Interim Recovery Plan No. 198. Perth, Western Australia.
  - Department of Conservation and Land Management (2006). *Corymbia calophylla* – *Xanthorrhoea preissii* woodlands and shrublands (Swan Coastal Plain Community type 3c – Gibson *et al.* 1994) Interim Recovery Plan 2000 - 2003. Perth, Western Australia.
  - Department of Conservation and Land Management (2006). Shrubland and woodlands on Muchea Limestone. Interim Recovery Plan 2000 - 2003. Perth, Western Australia.
  - *Environment Protection and Biodiversity Conservation Act 1999* Conservation Advice for Clay Pans of the Swan Coastal Plain.

#### **Migratory Species**

- A detailed assessment of the proposed road alignment to determine the presence/absence, and if applicable, the extent to which any migratory species or their habitat are present within the proposal area.
- An assessment of the extent to which any EPBC listed migratory species or their habitat will be directly or indirectly impacted as a result of the proposed action.
  - Demonstrate how the proposed action is consistent with the Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.1: Significant Impact Guidelines – Matters of National Environmental Significance*; and

- *Environment Protection and Biodiversity Conservation Act 1999* Survey Guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.

#### **Commonwealth Land**

- A detailed environmental assessment of the area both within and in the vicinity of the proposed road alignment that traverses Commonwealth land, including maps and images of the site. When undertaking the environmental assessment please consider the following:
  - What are the components or features of the environment?
  - What components of the environment are likely to be impacted? (I.e. landscapes and soils, water resources, plants, animals, heritage, people and communities, pollutants, chemicals, and toxic substances).
  - Is the environment sensitive or vulnerable to impacts?
  - Is the environment, or are components of it, rare, endemic, unusual, important or otherwise valuable?
  - What is the history, current use and condition of the environment which is likely to be impacted by the action?
- An assessment of the extent to which the environment within and in the vicinity of the proposed road alignment will be directly or indirectly impacted as a result of the proposed action. When assessing the extent of the impact please consider the following:
  - What are the components of the action?
  - What are the predicted adverse impacts associated with the action, including indirect consequences?
  - How severe are the potential impacts? (I.e. scale, intensity, timing, duration and frequency)
  - What is the extent of uncertainty about the potential impacts?
- A copy of any correspondence from the Commonwealth Department of Defence to Main Roads Western Australia regarding the planning, construction and operation of the proposed road alignment on Commonwealth land as described in EPBC referral documentation.
- Demonstrate how the proposed action is consistent with the Department of Environment and Heritage (2006) *EPBC Act Policy Statement 1.2: Significant Impact Guidelines – Matters of National Environmental Significance*.

#### **Avoidance and Mitigation Strategies**

- Based on the outcomes of the environmental assessment of the EPBC listed flora & fauna species, migratory species, ecological communities & Commonwealth lands, please provide further details on the avoidance measures that Main roads propose to implement prior to, during and post construction to manage the potential direct and indirect significant impact of the proposed action on EPBC listed matters (as described above).
- After all reasonable avoidance measures have been put in place, please provide further details on the mitigation of any remaining significant impact that Main Roads propose to implement prior to, during and post construction to manage the potential direct and indirect significant impacts on EPBC listed matters.
- Demonstrate how the proposed action is consistent with the following EPBC policy/guidance documents:
  - Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008). *Threat abatement plan for competition and land degradation by rabbits*, DEWHA, Canberra.
  - Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008). *Threat abatement plan for predation by the European red fox*, DEWHA, Canberra.
  - Department of Environment and Heritage (2001). *Threat abatement plan for dieback caused by the root-rot fungus phytophthora cinnamomi*, DEWHA, Canberra.

#### **Offset Strategy**

- In the event that impacts cannot be avoided or mitigated, describe in the PER any offset/s to compensate for residual significant impacts, for relevant matter/s of NES, including:

##### **Details of the impact site –**

- Presence and conservation status of protected matter/s likely to be impacted;
- Specific attributes of the protected matter being impacted at a site, for example, the type of threatened species or ecological community, the quality of habitat, population attributes such as recruitment or mortality, landscape attributes such as habitat connectivity, or heritage values.
- Scale and nature of the impacts of the proposed action – including direct and indirect impacts; and
- Duration of the impact (not of the action).

##### **Details of the offset site –**

- Extent to which the proposed offset actions correlate to, and adequately compensate for, the impacts on the attributes for the protected matter;

- Conservation gain to be achieved by the offset i.e. positive management strategies that improve the site or averting the future loss, degradation or damage of the protected matter;
  - Current land tenure of the proposed offset and the method of securing and managing the offset for the life of the impact;
  - Time it will take to achieve the proposed conservation gain;
  - Level of certainty that the proposed offset will be successful; and
  - Suitability of the location of the proposed offset site.
- In determining the appropriateness of offset activities proposed, it is important to consult the relevant Commonwealth approved recovery plans, threat abatement plans, conservation advice, ecological character descriptions, management plans and/or listing documents. Where Commonwealth approved guidance documents are not available or are insufficient detail, additional information sources such as state and territory management plans or peer-reviewed scientific literature can be reviewed to inform priority offset activities.
  - Demonstrate how the proposed action is consistent with the following EPBC policy/guidance documents:
    - *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy (October 2012).