

LANCELIN ROAD PASSING LANE

GIS PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT

Prepared for:

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Limitations Statement

The sole purpose of this report and the associated services performed by Kellogg Brown & Root Pty Ltd (KBR) is to provide a GIS based Preliminary Environmental Impact Assessment in accordance with the scope of services set out in the contract between KBR and Main Roads Western Australia (MRWA) ('the Client'). That scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to the site.

KBR derived the data in this report primarily from nominate examination of records in the public domain, interrogation of databases provided by MRWA and sourced by KBR, and interviews with individuals with information about the site. The passage of time, manifestation of latent conditions or impacts of future events may require further exploration at the site and subsequent data analysis, and re-evaluation of the findings, observations and conclusions expressed in this report.

In preparing this report, KBR has relied upon and presumed accurate certain information (or absence thereof) relative to the Lancelin Road passing lane project provided by government officials and authorities, the Client and others identified herein. Except as otherwise stated in the report, KBR has not attempted to verify the accuracy or completeness of any such information.

The findings, observations and conclusions expressed by KBR in this report are not, and should not be considered, an opinion concerning the success or otherwise of any applications submitted to any regulator for assessment and approval. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported or to the findings, observations and conclusions expressed in this report. Further, such data, findings, observations and conclusions are based solely upon MRWA supplied data, desktop survey reports, examination of records in the public domain, interviews with individuals with information about the site and approval processes in existence at the time of the investigation.

This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the provisions of the agreement between KBR and the Client. KBR accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report by any third party.

Revision History

Revision	Date	Comment	Signatures		
			Originated by	Checked by	Authorised by
A	19/09/05	Issued for internal review	CU	JR	JR
B	20/09/05	Issued to Client for Review	CU	JR	JR
C	04/01/2006	Issued to Client	CU	JR	JR
D	12/01/2006	Final Issued to Client	CU 		

CONTENTS

Section	Page
1 INTRODUCTION	1
2 ASSESSMENT OF IMPACTS & MANAGEMENT RECOMMENDATIONS	2
3 RECOMMENDATIONS	7
4 DATASETS	9
5 REFERENCES	10

APPENDICES

A - Environmental Constraints Figures

**B - Environmental Protection and Biodiversity
Conservation Register Search**

C - CALM Rare Fauna Search

D - NNTT Search Results

E - CALM Letter of Consultation

1 Introduction

Kellogg Brown & Root (KBR) was appointed by Main Roads Western Australia (MRWA) to undertake a geographic information system (GIS) based Preliminary Environmental Impact Assessment (PEIA) for a proposed north bound passing lane on Lancelin Road between 23.0 and 24.7 SLK.

The objective of the PEIA is to identify the key environmental constraints associated with the proposed works, and to identify any requirements for the project to be referred under the *Environmental Protection Act 1986* and the *Environmental Protection and Biodiversity Conservation Act 1999*. The PEIA will provide guidance for further environmental impact investigations as required.

The proposed works involve the construction of a north bound passing lane on Lancelin Road from 23.0 to 24.7 SLK. The road works will involve widening the existing alignment with a 3.5 m auxiliary lane, a 1.0 m sealed shoulder and a 1.0 m unsealed shoulder. Works involved will include vegetation clearing, material storage (laydown areas), compaction, bitumenising and line marking.

This PEIA assesses the environmental impacts of the proposed passing lane works. Figure 1 contains an overview of the study area. Figures 1 to 4 attached in Appendix A contain details of the environmental constraints associated with the proposed works.

KBR obtained the information in this report from a desktop assessment based on existing database records, information provided by MRWA and literature available in the public domain.

2 Assessment of Impacts & Management Recommendations

Evaluation of potential impacts and their management

Aspect	Evaluation of Potential Impacts and their Management
Air quality	<p>The purpose of the proposed works is to allow for improved safety for road users and not for increased traffic volumes. Air quality may be affected during construction by the generation of dust and machinery exhaust, however the impacts can be effectively managed and are not considered to be significant.</p> <p>An air quality impact assessment is not required for this project as it is not considered significant and the annual average daily traffic volume maximum is below the limit of 15,000 vehicles per day in rural areas, as specified in the MRWA Environmental Guideline, Air Quality (MRWA, 2004).</p> <p>These impacts may be effectively managed by standard air quality and dust management techniques. Provided these management commitments are followed during construction, impacts on air quality during construction are not considered to be significant.</p>
Dust	<p>Dust may be a potential issue during construction activities. Excessive dust may impact upon adjacent rural landholdings, vegetation and traffic. Construction activities require dust suppression to control short-term dust generation. Likely to be effectively managed by standard construction dust management techniques.</p> <p>Standard MRWA dust minimisation techniques are recommended to be followed during construction.</p>
Vegetation – clearing	<p>Vegetation clearing will be associated with the proposed works and for any laydown areas required for the storage of materials. The length of road works is 1.7 km with a widening of 5.5 m (the construction footprint is shown in Appendix A). This will result in an area of vegetation clearing of 2.5 ha. Part of the area to be cleared, 1320 m², lies within State Forest 65 and a Bush Forever Reserve No. 406.</p> <p>The Department of Conservation and Land Management (CALM) has reviewed the passing lane proposal and has advised that MRWA should apply measures to minimise the amount of clearing necessary within the State forest (refer to CALM Letter dated 21/12/2005 in Appendix E). CALM also requires that all topsoil removed during the clearing process should be stockpiled and direct returned following the completion of works. CALM believes that MRWA should arrange for appropriate offsets for clearing, which may include the revegetation of cleared areas or financial contributions towards the management of the CALM estate. MRWA is currently negotiating the details of this offset mitigation package. Due to encroachment into Bush Forever Reserve 406, consultation with the Western Australian Planning Commission (WAPC) may also be required.</p> <p>The project has been assessed against the 10 principles of clearing, as outlined in the <i>Environmental Protection Act 1986</i>, which is included in Table 1 below. As CALM Reserves and Bush Forever Reserves constitute ESA's, some clearing will occur within ESA's and a MRWA purpose permit will be required to facilitate clearing before clearing commences. However, provided the environmental management practices described below are employed, impacts associated with clearing are not predicted to be significant on a regional scale.</p> <p>Where vegetation clearing occurs, removal of mature trees should be minimised and vegetation clearing limits should be clearly established, flagged and communicated as part of the final project design. Laydown areas should be located in previously cleared areas where practicable. The offset mitigation package should be put in place and areas outside the project area should not be disturbed as part of the proposed works.</p>
Fauna	<p>Interrogation of the Federal Environmental Protection and Biodiversity Conservation (EPBC) database identified two vulnerable species, one endangered species and one migratory species that could potentially exist in the vicinity of the project area (Appendix B). These include Carnaby's black cockatoo, Baudin's black cockatoo, the chuditch and the white-bellied sea eagle. Five species with listed over fly areas for the project area were also identified (Appendix B).</p> <p>A search of the CALM threatened fauna database identified a Schedule 1 species (fauna that is likely to become extinct), Carnaby's black cockatoo, a Priority Four species (taxa in need of monitoring), western brush wallaby and a Priority Five (taxa in need of</p>

Aspect	Evaluation of Potential Impacts and their Management
	<p>monitoring - conservation dependant), quenda, that may occur within a 10 km radius of the project area (Appendix C).</p> <p>As a small area of vegetation clearing is proposed (2.5 ha), fauna habitat disturbance is not expected to be significant. Consultation with CALM confirmed this finding, and no issues with fauna were identified with the project (Appendix E).</p> <p>It is recommended as part of final design that minimal vegetation clearing is specified to minimise impacts on fauna. Areas outside of the works footprint must not be disturbed during construction. Additionally, MRWA should consider revegetation on completion of works to offset potential loss of fauna habitat.</p>
Vegetation – TECs/DRF	<p>No Declared Rare Flora (DRF), Priority Flora or threatened ecological communities (TEC) were identified within the project area in spatial datasets provided by CALM. One DRF, conservation code 1, was identified in the vicinity of the works, as shown in Figure 3, Appendix A. However, as the species is outside of the project area, proposed works will not impact on this site.</p> <p>No management commitments are required.</p>
Vegetation – weeds	<p>The Declared Plant <i>patterson's curse</i>, as listed under the <i>Agriculture and Related Resources Protection Act 1976</i>, is known to occur in the vicinity of the project (<i>pers.comm.</i> Errol Krueper, District Manager, Department of Agriculture). A snapshot botanical survey (GHD 2005) identified onion weed (<i>Asphodelus fistulosus</i>), Geraldton carnation weed (<i>Euphorbia terracina</i>) and Victorian tea tree (<i>Leptospermum laevigatum</i>) within the study area. GHD have recommended that care is taken to minimise the spread of these weeds, and that the patch of Victorian tea tree should be removed and disposed of at a Shire landfill prior to the commencement of clearing.</p> <p>It is recommended that weed hygiene management practices aimed at avoiding the introduction and spread of weed species are employed during construction activities.</p>
Vegetation – dieback	<p>The GHD botanical survey did not identify vegetation dieback caused by the plant pathogen <i>Phytophthora cinnamomi</i> in the study area. However, the project location does have the remnant vegetation associations that can be susceptible to the pathogen. Consequently, the presence of dieback in the study area should be considered as a part of construction works.</p> <p>It is recommended that dieback hygiene management practices are followed during construction. This will include a requirement from CALM (Appendix E) that all machines and vehicles are clean and free of soil before the commencement of works within or adjacent to State Forest 65. These practices should be incorporated with weed management practices. Areas outside of the project boundary must not be disturbed to minimise potential contact and spread of the fungus.</p>
Commonwealth Environmental Approvals	<p>A search of the EPBC register identified flora and fauna species that may occur in the project area that constitute Matters of National Environmental Significance. These included two vulnerable species (baudin's black cockatoo and the chuditch), one endangered species (carnaby's black cockatoo) and one migratory species (white-bellied sea eagle) (Appendix B). Note that EPBC search findings are a general guide only, and they include migratory sea-bird species unlikely to occur in the project area. Consultation with CALM did not identify any issues with fauna.</p> <p>To minimise potential habitat loss, removal of mature trees should be minimised and vegetation clearing limits should be clearly established as part of the final project design. Areas outside the project area should not be disturbed as part of the proposed works. Additionally, MRWA should consider revegetation on completion of works to offset tree losses.</p>
European heritage	<p>No European heritage sites were identified within the vicinity of proposed works. Both the Heritage Council of Western Australian and the Australian Heritage Place Inventory were referred to.</p> <p>No management commitments are required.</p>
Aboriginal heritage	<p>No Aboriginal heritage sites were identified in the project area.</p> <p>No management commitments are recommended.</p>

Aspect	Evaluation of Potential Impacts and their Management
Native Title	<p>A search of the National Native Title Tribunal (NNTT) records identified a Native Title application that covers the project area, in the name of Yued (WC97/71). This claim has been accepted for registration, which means that the applicant group has the right to negotiate over land uses for the area until determination is established (<i>pers.comm</i> Rosalie Ansell, NNTT).</p> <p>Although the proposed works occur within a gazetted road reserve and therefore it is likely that Native Title is extinguished (Native Title is extinguished over public works including dedicated roads on Crown Land if constructed before 01/01/1994), advice from Main Roads' Indigenous Heritage Officer should be sought regarding this issue.</p>
Surface waters/drainage	<p>As the proposed works entail the construction of a passing lane on an existing roadway, significant changes to surface water or drainage flows are not expected within the study area.</p> <p>As a precaution, revegetation of construction areas should be considered to minimise the potential for erosion. Areas outside the construction zone must not be disturbed as part of the proposed works.</p>
Wetlands	<p>No wetlands listed with CALM were identified within the vicinity of proposed works. No management commitments are required.</p>
Groundwater	<p>The project is located in a Public Drinking Water Sources Area (PDWSA), as shown in Figure 2 of Appendix A. This is the Gngangara Underground Water Pollution Control Area, listed under the Metropolitan Water Supply Sewage and Drainage Act 1909. As no dewatering or drainage modifications are associated with the proposed works, no change to groundwater levels or quality is predicted. Standard construction practices including hazardous substances management, dust management, noise and vibration management, weed management, and drainage management should effectively control any potential impacts on this PDWSA.</p> <p>Hazardous substances management, drainage management practices are recommended to be followed by the construction contractor. Standard construction measures for refuelling, machinery servicing etc should also be followed to avoid the introduction of hazardous chemicals into the project area.</p>
Noise and vibration	<p>Noise and vibration levels may increase during construction, which may adversely impact adjacent land users and adjoining vegetation. These impacts may be effectively managed by standard noise and vibration management techniques. Provided that these management techniques are employed, increases in noise and vibration during construction are not considered significant.</p>
Visual amenity	<p>As proposed works entail a passing lane only, significant changes to visual amenity are not expected.</p> <p>Where vegetation clearing occurs, landscaping should take place following construction to restore visual amenity.</p>
Public safety and risk	<p>The proposed works should improve overall public safety and risk by creating improved overtaking opportunities for motorists. A risk to the public could be posed during construction. Provided traffic management and signage to Main Roads standards is employed, none of the proposed works should present significant hazards to public safety.</p> <p>Traffic management and signage to Main Roads standards is recommended.</p>
Reserves / Conservation areas	<p>The area of proposed works is immediately adjacent to a CALM reserve, the Gngangara-Moore River State Forest 65 (figure 3 in Appendix A) and a Bush Forever Reserve No. 406.</p> <p>Impacts associated with clearing are not predicted to be significant on a regional scale as they can be effectively managed by environmental management practices which include: The minimisation of the removal of mature trees; the clear flagging and communication of vegetation clearing limits as part of the final project design; the location of laydown areas in previously cleared areas where practicable; and the non-disturbance of areas outside the construction area.</p> <p>In addition, CALM has reviewed the passing lane proposal and has advised that MRWA should: Apply measures to minimise the amount of clearing necessary within the State forest (Appendix E); stockpile and return on completion of works all topsoil removed</p>

Aspect	Evaluation of Potential Impacts and their Management
	during the clearing process; arrange for appropriate offsets for clearing, which may include the revegetation of cleared areas or financial contributions towards the management of the CALM estate (MRWA is currently negotiating the details of this offset mitigation package). Due to encroachment into Bush Forever Reserve 406, consultation with the Western Australian Planning Commission (WAPC) may also be required.
Contamination	<p>The land uses adjacent to the project area would not suggest a previous history of being contaminated or being adjacent to any contaminated sites. Additionally, as major excavation is not planned, the proposed works are unlikely to impact on any contaminated sites that may exist in the area. Verification of contaminated sites within the project area may be obtained from the Department of Environment (DoE) contaminated sites database under the Freedom of Information Act for a per lot fee. Lisa Smith (9222 7179) at the DoE is the contact officer for this search if required.</p> <p>Standard construction measures for refuelling, machinery servicing etc should be followed to avoid the introduction of hazardous chemicals into the project area.</p>
Acid Sulfate Soils (ASS)	<p>According to WA Planning Bulletin No. 64 and the Perth Groundwater Atlas (DoE) there is a low to no risk of Actual Acid Sulfate Soils (AASS) and Potentially Acid Sulfate Soils (PASS) occurring at depths of greater than 3 m within the project area.</p> <p>Therefore further soil investigations are not required and no management recommendations apply.</p>
Statutory Land Use Planning	<p>The project area is covered by the Town Planning Scheme No 8. However, consultation with the Shire of Gingin Planning Department indicates that an amendment to the scheme will not be required for the proposed passing lane.</p> <p>No management commitments are recommended.</p>

Clearing of Native Vegetation

Under the amended *Environmental Protection Act 1986 (EP Act)*, clearing of native vegetation must be under the authority of a clearing permit, unless subject to an exemption. An exemption applies for clearing activities that are required for road widening and realignment projects, where the clearing has been completed before 8 January 2006. The exemption does not apply in Environmentally Sensitive Areas (ESA). The exemption covers all clearing activities that are required to deliver the road project such as:

- clearing for the construction footprint;
- clearing to search for road base materials;
- extracting road base materials;
- constructing temporary vehicular tracks;
- construction work camps;
- clearing for stockpile areas; and
- establishing new sightlines.

In assessing whether the project is likely to have a significant impact on the environment, the project was assessed against the Department of Environment (DoE) 10 principles of clearing, as derived from the *Environmental Protection Act 1986*, shown in Table 1 below.

Table 1: Assessment of project against the DoE 10 principles of clearing.

<i>Clearing Principle</i>	<i>Yes/No</i>
Does the area to be cleared comprise a high level of biological diversity?	Yes
Does the area to be cleared comprise the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia?	No
Does the area to be cleared include, or is necessary for the continued existence of, rare flora?	No
Does the area to be cleared comprise the whole or a part of, or is necessary for the maintenance of, a threatened ecological community?	No
Is the area to be cleared significant as a remnant of native vegetation in an area that has been extensively cleared?	No
Is the area to be cleared within, or in association with, an environment associated with a watercourse or wetland?	No
Is the clearing of the vegetation likely to cause appreciable land degradation?	No
Is the clearing of the vegetation likely to have an impact on the environmental values of any adjacent or nearby conservation area?	Will impact on adjacent State Forest 65 and Bush Forever Reserve, though impacts not considered to be significant on a regional scale
Is the clearing of the vegetation likely to cause deterioration in the quality of surface or underground water?	No
Is the clearing of the vegetation likely to cause, or exacerbate, the incidence or intensity of flooding?	No

Vegetation clearing will be associated with the proposed works, with cleared areas estimated at 2.5 ha. Proposed works will be minimised to include only clearing absolutely necessary for the construction of the passing lane. No DRF, Priority Flora or TEC were identified within the project area. However, 1320 m² of clearing will be required within the adjacent Bush Forever Reserve (No. 406) and CALM State Forest, which will be done under a MRWA purpose permit. Consultation with CALM has not identified significant vegetation clearing impacts.

Minimum vegetation clearing protocols are recommended where practicable. Where vegetation clearing occurs, removal of mature trees should be minimised and vegetation clearing limits should be clearly established as part of the final project design. Areas outside the project area must not be disturbed as part of the proposed works. Additionally, as advised by CALM, MRWA should consider revegetation on completion of works to offset tree losses.

3 Recommendations

The following section describes the environmental management commitments that are recommended to address potential environmental impacts that were identified in Section 2 above. Where no impact has been identified, no recommendation is made.

Vegetation Clearing

Vegetation clearing will be associated with the proposed works, with cleared areas estimated at 2.5 ha. Proposed works will be minimised to include only clearing absolutely necessary for the construction of the passing lane. No DRF, Priority Flora or TEC were identified within the project area. However, 1320 m² of clearing will be required within the adjacent Bush Forever Reserve (No. 406) and CALM State Forest, which will be done under a MRWA purpose permit. Consultation with CALM has not identified significant vegetation clearing impacts (Appendix E).

Minimum vegetation clearing protocols are recommended where practicable. Where vegetation clearing occurs, removal of mature trees should be minimised and vegetation clearing limits should be clearly established as part of the final project design. Areas outside the project area must not be disturbed as part of the proposed works. Additionally, as advised by CALM, MRWA should consider revegetation on completion of works to offset tree losses.

Referral to the Environmental Protection Authority

The primary impact of the proposed works will be the small area of clearing of vegetation that is required in the adjacent State Forest and Bush Forever reserve. Consultation with CALM did not identify significant vegetation clearing impacts as associated with the proposal. As a result, it is unlikely that the project will require referral to the Environmental Protection Authority on these grounds.

Three species on the CALM threatened and priority fauna database were identified in the project area (Appendix C). However, as minimal vegetation clearing is proposed, consultation with CALM did not identify fauna habitat disturbance as a significant issue. Additionally, standard environmental management techniques for clearing, noise, dust, weeds and hazardous waste management are recommended to minimise environmental impacts.

Referral to Department of the Environment and Heritage

The Environmental Protection and Biodiversity Conservation (EPBC) register identified several 'species or species habitat likely to occur in the area'. However, as the area of vegetation to be cleared is small and no regionally significant vegetation is present, the potential impacts of the proposal are likely to be minor and effectively controlled by standard construction environmental management practices. Consequently, referral to the DEH is not required.

Fauna

A search of the CALM threatened fauna database identified three species that may occur in the project area. Several 'species or species habitat likely to occur in the area' were also identified in the Environmental EPBC register (refer to Section 2 and Appendix B and C).

As minimal vegetation clearing is proposed, fauna habitat disturbance is not expected to be significant. However, it is recommended that where possible works are located in areas of previously disturbed vegetation, that vegetation clearing be minimised where practicable and that MRWA should consider revegetation on completion of works to offset potential loss of fauna habitat as advised by CALM.

Vegetation management - weeds and dieback

There is a potential for construction activities to spread weeds and dieback through vegetation disturbance, excavation, and the movement of personnel and machinery. Numerous weeds, including the Declared Plant Patterson's curse, and environmental weeds such as onion weed, Geraldton carnation weed and Victorian tea tree are known to occur in the project area. It is recommended that weed hygiene management practices aimed at avoiding the introduction and spread of weed species are employed during construction activities. This will include the removal and disposal of the patch of Victorian tea tree on site at a Shire landfill prior to commencement of clearing.

A botanical survey conducted in the study area did not identify evidence of dieback, though the vegetation within State Forest 65 is of significant environmental importance and dieback susceptible vegetation is prevalent in the area. It is recommended that dieback hygiene management practices are followed during construction. This will include the CALM requirement that all machines and vehicles are clean and free of soil before the commencement of works within or adjacent to State Forest 65.

Groundwater management

This project is located in the Gnamptara Public Drinking Water Supply Area (PDWSA) (Appendix A). As no dewatering or drainage modifications are associated with the proposed works, significant change to groundwater levels or quality is not predicted. However, standard construction practices including hazardous substances management, dust management, noise and vibration management, weed management, and drainage management are recommended to control any potential impacts on this PDWSA. Construction measures for refuelling, machinery servicing etc should also be followed to avoid the introduction of hazardous chemicals into the project area.

Native title

A Native Title application in the name of Yeud exists over the project area (refer to Appendix D). This claim has been accepted for registration, which means that the applicant group has the right to negotiate over land uses for the area until determination is established in court. Although the proposed works occur within a gazetted road reserve and therefore it is likely that Native Title is extinguished (Native Title is extinguished over public works including dedicated roads on Crown Land if constructed before 01/01/1994), advice from Main Roads' Indigenous Heritage Officer should be sought regarding this issue.

Dust and air quality management

Dust and air emissions may be generated in the course of construction activities which may have an impact on adjacent vegetation, and road users. Standard dust and air emission management measures should be followed during construction to minimise potential air quality impacts. These may include watering of construction areas and

unsealed access roads, confining works to non-peak periods and to periods of low wind speed and regular machinery inspection and servicing.

Noise and vibration management

Increases in noise and vibration that may affect adjacent vegetation and road users during construction can be effectively managed by standard noise and vibration management procedures. The guidelines should be followed by the construction contractor.

Contaminated sites

The land uses adjacent to the project area would not suggest a previous history of being contaminated or being adjacent to any contaminated sites. Additionally, as major excavation is not planned, the proposed works are unlikely to impact on any contaminated sites that may exist in the area. Verification of contaminated sites within the project area may be obtained from the DoE contaminated sites database under the Freedom of Information Act for a per lot fee (refer to Section 2).

Standard construction measures for refuelling, machinery servicing etc should be followed to avoid the introduction of hazardous chemicals into the project area.

Public safety management

A risk to the public could be posed during construction. Therefore, traffic management and signage practices to Main Roads standards are recommended during construction.

EAA process

As per the Main Road's Environmental Assessment and Approvals (EAA) process, the Project Manager should forward a copy of his/her referral recommendation and a copy of this GIS based preliminary environmental impact assessment report to the Manager Environment MRWA for review and endorsement.

4 Datasets

As part of the GIS Preliminary Environmental Impact Assessment process developed between MRWA and KBR, spatial datasets provided by MRWA have been used where possible for the identification of environmental constraints associated with the proposal. This process has been used to improve the efficiency and timeliness of the PEIA process. MRWA obtained spatial datasets from the relevant custodians, and KBR has been entrusted with maintaining their currency.

Spatial datasets referred to in this report include Declared Rare and Priority Flora (DRF), threatened ecological communities (TEC) and Conservation Reserves (Conservation and Land Management), Aboriginal Heritage Sites (Department of Indigenous Affairs), European Heritage (Department of the Environment and Heritage and Heritage Council of Western Australia), Bush Forever Reserves (Western Australian Planning Commission), Environmentally Sensitive Areas (MRWA), Public

Drinking Water Supply Areas and wetlands (Department of Environment) and cadastral information (Department of land Information).

Datasets used for this assessment were provided by MRWA in April 2005 and this assessment assumes that all data is accurate at this date. Where no spatial datasets were available, KBR has used conventional means for obtaining information, including liaison with regulatory authorities, internet searches and database searches.

5 References

Department of Environment. 2005. *Groundwater Atlas*. At http://portal.environment.wa.gov.au/portal/page?_pageid=55.772260&_dad=portal&_schema=PORTAL. Accessed on 16/09/2005.

Department of Environment and Heritage. 2005. *Australian Heritage Places Inventory*. At <http://www.heritage.gov.au/ahpi/>. Accessed on 16/09/2005.

Department of Environment and Heritage. 2005. *EPBC search*. <http://www.deh.gov.au/epbc/>. Accessed on 16/09/2005.

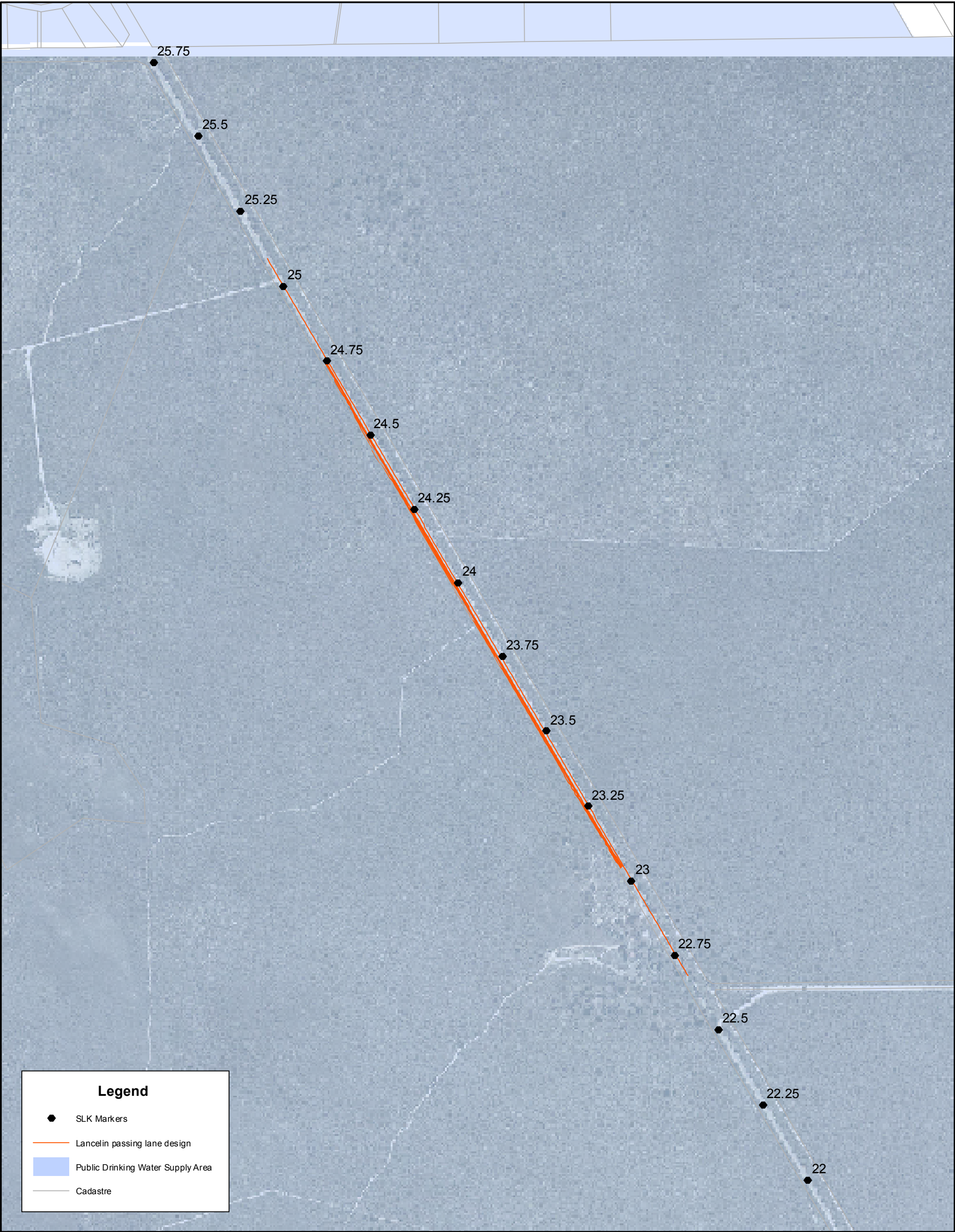
GHD. 2005. *Wanneroo Road - Passing Lanes 23.0 to 24.7 SLK Snapshot Vegetation Survey*

Heritage Council of Western Australia. 2005. *Places database Search*. At <http://register.heritage.wa.gov.au/>. Accessed on 16/09/2005.

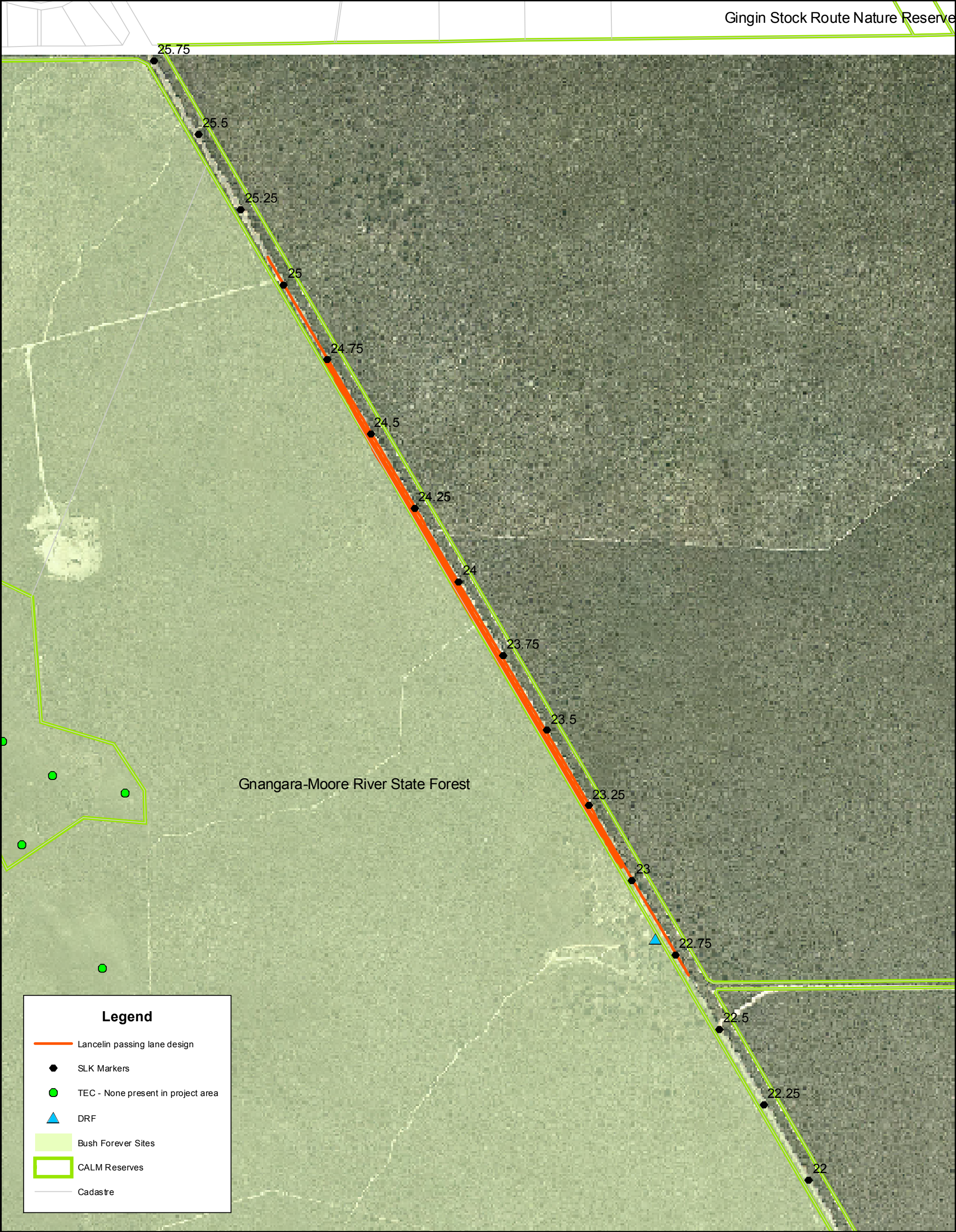
Western Australian Planning Commission. 2003. *Acid Sulfate Soils*. Planning Bulletin No 64.

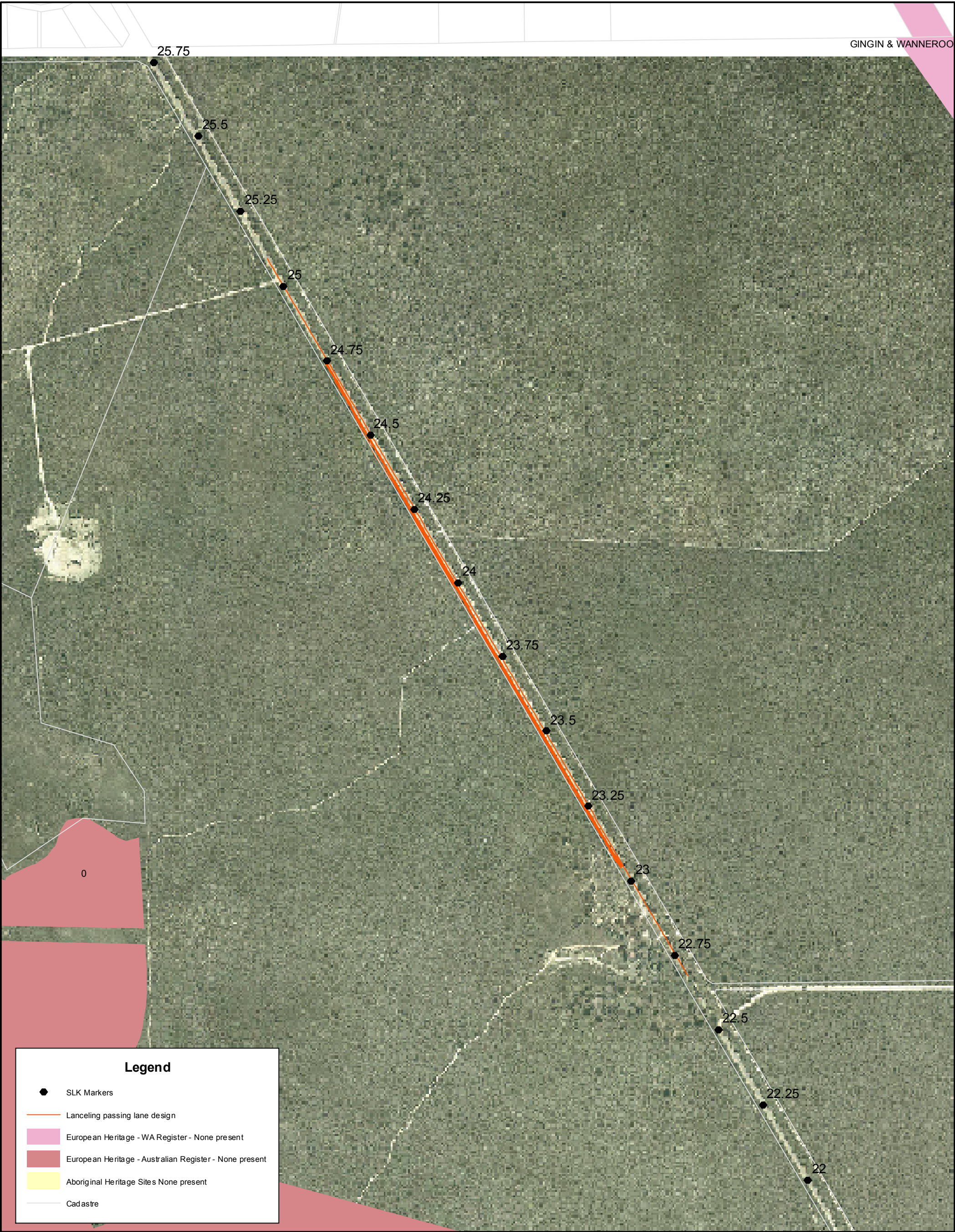
Appendix A

ENVIRONMENTAL CONSTRAINTS FIGURES



<div>Prepared for Main Roads Western Australia</div>	<div><div><div><div></div><div>N</div></div><div><div>0</div><div>125</div><div>250</div><div>500 Meters</div></div><div>1:10,000 @A3</div></div></div>			<div>Kellogg, Brown & Root Pty Ltd</div> <div><div>KBR</div><div>Kellogg, Brown & Root Pty Ltd ABN 91 007 660 317</div></div>	<div>TITLE</div> <div>Surface and Groundwater Resources</div>
	<div>SOURCE: All data supplied by MRWA</div>			<div>Drawn by GIS Specialist</div>	
	<div>GIS FILE G:\Projects\MRWA\2_PEI A\014_Lancelin_Road\GIS\IMXD</div>	<div>PROJECTION GDA 94 Zone 50</div>	<div>FINAL APPROVAL DATE CU 04/10/2005</div>		
		<div>FIGURE No. 2</div>	<div>PROJECT No. PEN372_014</div>		





Prepared for Main Roads Western Australia	<div><div><div>N</div><div></div></div><div><div>0</div><div>125</div><div>250</div><div>500 Meters</div></div><div><div>1:10,000</div><div>@A3</div></div></div>			<div>Kellogg, Brown & Root Pty Ltd</div> <div><div>KBR</div></div> <div>Kellogg, Brown & Root Pty Ltd ABN 91 007 660 317</div>	TITLE
	SOURCE: All data supplied by MRWA			Aboriginal and European Heritage Sites	
	GIS FILE G:\Projects\MRWA\2_PEI A\014_Lancelin_Road\GIS\MXD	PROJECTION GDA 94 Zone 50	FINAL APPROVAL DATE CU 04/10/2005		FIGURE No. 4
			Drawn by GIS Specialist	PROJECT No. PEN372_014	

Appendix B

**ENVIRONMENTAL
PROTECTION AND
BIODIVERSITY
CONSERVATION REGISTER
SEARCH**



Australian Government
Department of the Environment and Heritage

Protected Matters Search Tool

You are here: [DEH Home](#) > [EPBC Act](#) > [Search](#)

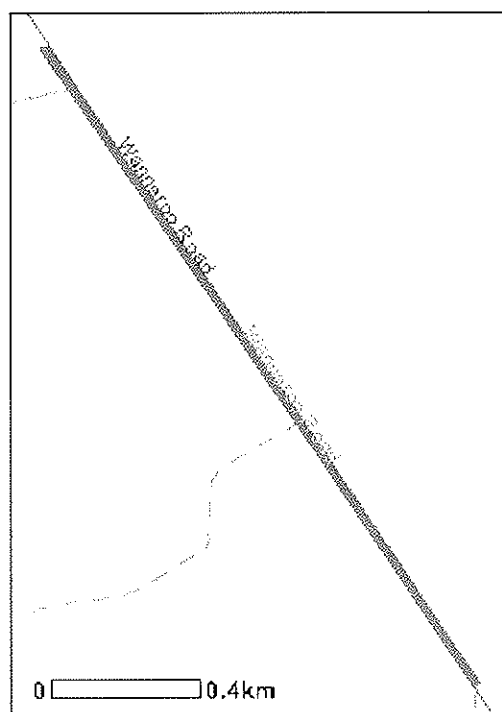
4 October 2005 17:49

EPBC Act Protected Matters Report

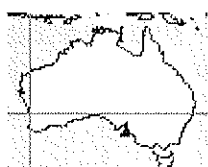
This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.deh.gov.au/epbc/assessmentsapprovals/index.html>



Search Type: Line
Buffer: 0 km
Coordinates: -31.37139,115.62080, -31.35415,115.60909, -31.3541,115.60909



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.deh.gov.au/epbc/assessmentsapprovals/guidelines/index.html>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	None
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
Threatened Species:	4
Migratory Species:	1

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.deh.gov.au/heritage/index.html>.

Please note that the current dataset on Commonwealth land is not complete. Further information on Commonwealth land would need to be obtained from relevant sources including Commonwealth agencies, local agencies, and land tenure maps.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species,

whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.deh.gov.au/epbc/permits/index.html>.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Places on the RNE:	None
Listed Marine Species:	5
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Other Commonwealth Reserves:	None
Regional Forest Agreements:	None

Details

Matters of National Environmental Significance

Threatened Species [Dataset Information]	Status	Type of Presence
Birds		
<i>Calyptorhynchus baudinii</i> Baudin's Black-Cockatoo, Long-billed Black-Cockatoo	Vulnerable	Species or species habitat likely to occur within area
<i>Calyptorhynchus latirostris</i> Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo	Endangered	Species or species habitat likely to occur within area
Mammals		
<i>Dasyurus geoffroii</i> Chuditch, Western Quoll	Vulnerable	Species or species habitat likely to occur within area
Plants		
<i>Lepidosperma rostratum</i> Beaked Lepidosperma	Endangered	Species or species habitat likely to occur within area
Migratory Species [Dataset Information]	Status	Type of Presence
Migratory Terrestrial Species		
Birds		
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Dataset Information]	Status	Type of Presence
Birds		
<i>Apus pacificus</i> Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
<i>Ardea alba</i> Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<i>Merops ornatus</i> Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area

Caveat

The information presented in this report has been provided by a range of data sources as [acknowledged](#) at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the *Environment Protection and Biodiversity Conservation Act 1999*. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under "type of presence". For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the migratory and marine provisions of the Act have been

mapped.

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites;
- seals which have only been mapped for breeding sites near the Australian continent.

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgments

This database has been compiled from a range of data sources. Environment Australia acknowledges the following custodians who have contributed valuable data and advice:

- New South Wales National Parks and Wildlife Service
- Department of Sustainability and Environment, Victoria
- Department of Primary Industries, Water and Environment, Tasmania
- Department of Environment and Heritage, South Australia Planning SA
- Parks and Wildlife Commission of the Northern Territory
- Environmental Protection Agency, Queensland
- Birds Australia
- Australian Bird and Bat Banding Scheme
- Australian National Wildlife Collection
- Natural history museums of Australia
- Queensland Herbarium
- National Herbarium of NSW
- Royal Botanic Gardens and National Herbarium of Victoria
- Tasmanian Herbarium
- State Herbarium of South Australia
- Northern Territory Herbarium
- Western Australian Herbarium
- Australian National Herbarium, Atherton and Canberra
- University of New England
- Other groups and individuals

ANUCLIM Version 1.8, Centre for Resource and Environmental Studies, Australian National University was used extensively for the production of draft maps of species distribution. Environment Australia is extremely grateful to the many organisations and individuals who provided

expert advice and information on numerous draft distributions.

Last updated:

Department of the Environment and Heritage
GPO Box 787 Canberra ACT 2601 Australia
Telephone: +61 (0)2 6274 1111

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Appendix C

**THREATENED AND PRIORITY
FAUNA SEARCH - CALM**

31.2577 °S 115.509 °E / 31.4697 °S 115.72 °E Wanneroo Rd proposed passing lane (plus 10km buffer)

* *Date* *Certainty* *Seen* *Location Name* *Method*

Schedule 1 - Fauna that is rare or is likely to become extinct

Calyptorhynchus latirostris **Carnaby's Black-Cockatoo** 1 records

This species moves around seasonally in flocks to feeding areas in proteaceous scrubs and heaths and eucalypt woodlands as well as pine plantations. Breeding occurs in winter/spring, mainly in the eastern forests and wheatbelt where they can find mature hollow-bearing trees to nest in.

2003 1 Two Rocks Day sighting

Priority Four: Taxa in need of monitoring

Macropus irma **Western Brush Wallaby** 1 records

This species occurs in areas of forest and woodland supporting a dense shrub layer.

1998 2 1 Yeal/Welbinga Dead

Priority Five: Taxa in need of monitoring (conservation dependent)

Isoodon obesulus fusciventer **Quenda** 1 records

This species prefers areas with dense understorey vegetation, particularly around swamps and along watercourses, that provides ample protection from predators.

1997 1 1 CARABAN Dead

* Information relating to any records provided for listed species:-

Date: date of recorded observation

Certainty (of correct species identification): 1=Very certain; 2=Moderately certain; and 3=Not sure.

Seen: Number of individuals observed.

Location Name: Name of reserve or nearest locality where observation was made

Method: Method or type of observation



Appendix D

NATIONAL NATIVE TITLE TRIBUNAL SEARCH RESULTS



NATIONAL NATIVE TITLE TRIBUNAL

Application Information and Extract from the Register of Native Title Claims

Application Information

Application numbers: Federal Court number: WAD6192/98
NNTT number: WC97/71

Application name: Martha Borinelli, Arnold Franks and Others -v- the State of Western Australia and Others
(Yued)

Registration history: Registered from 22/08/1997.

Register Extract (pursuant to s.186 of the *Native Title Act 1993*)

Application lodged with: National Native Title Tribunal

Date application lodged: 22/08/1997

Date claim entered on Register: 22/08/1997

Applicants: Arnold Franks, Charmaine Walley, Diane Mippy, Edna Ryder, Jenny Mogridge, Joseph Ryder, Mal Ryder, Martha Borinelli, William Warrell

Address for service: Christine Cooper
South West Aboriginal Land & Sea Council
PO Box 4112
VICTORIA PARK WA 6979
Phone: 08 9486 2400
Fax: 08 9486 2499

Area covered by the claim:

The external boundaries of the claim are set out in the map attached as Attachment C to the application and a technical description of the external boundary attached as Attachment B to the application.

Internal boundaries

1. The applicants exclude from the claim any areas covered by valid acts on or before 23 December 1996 comprising such of the following as are included as extinguishing acts within the Native Title Act 1993, as amended, or the Titles Validation Act 1994, as amended, at the time of the Registrar's consideration:

- (a) Category A past acts, as defined in NTA section 229;
- (b) Category A intermediate period acts as defined in NTA section 232B.

2. The applicants exclude from the claim any areas in relation to which a previous exclusive possession act, as defined in section 23B of the NTA, was done in relation to an area, and, either the act was an act attributable to the Commonwealth, or the act was attributable to the State of Western Australia, and a law of that State has made provision as mentioned in section 23E in relation to the act as at the time of the Registrar's consideration.

3. The applicants exclude from the claim any areas in relation to which native title rights and interests have otherwise been extinguished, including areas subject to:

- (a) an act authorised by legislation which demonstrates the exercise of permanent adverse dominion in relation to native title; or
- (b) actual use made by the holder of a tenure other than native title which is permanently inconsistent with the continued existence of native title.

AND, to avoid any uncertainty, the applicants exclude from the claim:

- (c) an unqualified grant of an estate in fee simple; or
- (d) a lease which is currently in force, in respect of an area not exceeding 5,000 square metres, upon which a dwelling house, residence, building or work is constructed, and which comprises:
 - i) a Lease of a Worker's Dwelling under the Worker's Homes Act 1911-1928; or
 - ii) a 999 year Lease under the Land Act 1898; or
 - iii) a Lease of a Town Lot or Suburban Lot pursuant to section 117 of the Land Act 1933 (WA); or
 - iv) a Special Lease under section 117 of the Land Act 1933 (WA); or
- (e) a Conditional Purchase Lease currently in force in the Agricultural Areas of the South West Division under clauses 46 and 47 of the Land Regulations 1887 which includes a condition that the lessee reside on the area of the lease and upon which a residence has been constructed; or
- (f) a Conditional Purchase Lease of cultivable land currently in force under Part V, Division (1) of the Land Act 1933 (WA) in respect of which habitual residence by the lessee is a statutory condition in accordance with the Division and upon which a residence has been constructed; or
- (g) a Perpetual Lease currently in force under the War Service Land Settlement Scheme Act 1954; or
- (h) a permanent public work; or
- (i) an existing public road or street used by the public.

4. Paragraphs (1), (2) and (3) above are subject to such of the provisions of sections 47, 47A and 47B of the NTA as apply to any part of the area contained within this application, particulars of which will be provided prior to the hearing but which include such areas as may be listed in Schedule L.

Persons claiming to hold native title:

The claimants comprise those Aboriginal people who are:

1. the biological descendants of the unions between: -

- * Sarah Bundaran of Wyenning + white settler John Ryder
- * Mary Ellen/Helen Tainan + Patrick Yappo
- * William 'Bill' Warrel + Delores 'Olley' Nettle
- * John Pickett + Joanna Indich

2. those persons adopted by the individuals named in 1. above and those persons adopted by the biological descendants of the unions between the individuals named in 1. above.

3. those persons that are the biological descendants of the adopted persons included in 2. above.

4. Arnold Franks.

Adoption occurs in the following manner: if a man dies and his brother or cousin marries the widow, any of the widow's children are adopted as the children of the new husband.

Registered native title rights and interests:

The following Native Title Rights & Interests were entered on the Register on 21/07/1999:

The Qualifications

The applicants claim in relation to the claim area, including land and waters, the native title rights and interests set out below ("The Rights and Interests") subject to the following qualifications:

- (i) To the extent that any minerals, petroleum or gas within the area of the claim are wholly owned by the Crown in the right of the Commonwealth or the State of Western Australia, they are not claimed by the applicants.
- (ii) To the extent that the native title rights and interests claimed may relate to waters in an offshore place, those rights and interests are not to the exclusion of other rights and interests validly created by a law of the Commonwealth or the State of Western Australia or accorded under international law in relation to the whole or any part of the offshore place.
- (iii) The applicants do not make claim to native title rights and interests which confer possession, occupation use and enjoyment to the exclusion of all others in respect of any areas in relation to which a previous non-exclusive possession act, as defined in section 23F of the NTA, was done in relation to an area, and, either the act was an act attributable to the Commonwealth, or the act was attributable to the State of Western Australia, and a law of that State has made provision as mentioned in section 23I in relation to the act.
- (iv) Paragraph (iii) above is subject to such of the provisions of sections 47, 47A and 47B of the NTA as apply to any part of the area contained within this application, particulars of which will be provided prior to the hearing but which include such areas as may be listed in Schedule L.
- (v) The native title rights and interests claimed are subject to any valid rights created under the common law or a law of the State or Commonwealth.

The Rights and Interests

Subject to the above qualifications, the rights and interests claimed in relation to the claim area, including land and waters are:

- (a) rights and interests to exclusively possess, occupy, use and enjoy the area;
- (b) the right to make decisions about the use and enjoyment of the area;
- (c) the right of access to the area;
- (d) the right to control the access of others to the area;
- (e) the right to use and enjoy resources of the area;
- (f) the right to control the use and enjoyment of others of resources of the area;
- (g) the right to maintain and protect places of importance under traditional laws, customs and practices in the area;
- (h) Not registered;
- (i) the right to rear and teach children in their country;
- (j) Not registered;
- (k) Not registered;
- (l) Not registered;
- (m) the right to manage, conserve and look after the land, waters and resources, including locating and cleaning water sources and drinking water on the land.

Register attachments:

1. Map of Claim Area (Annexure A), Attachment C of the Application, 1 page - A4, Attached 07/07/1999.
2. Technical Description of External Boundary, Attachment B of the Application, 3 pages - A4, Attached 07/07/1999.

Note: The Register may, in accordance with s.188 of the Native Title Act 1993, contain confidential information that will not appear on the Extract.

Appendix E

**LETTER FROM CALM RE
CONSULTATION ON
LANCELIN ROAD PROPOSAL**



Department of Conservation
and Land Management

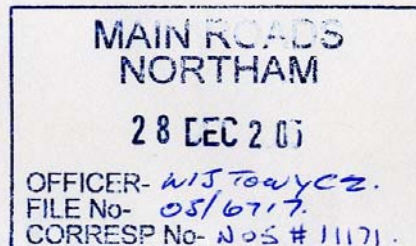


Conserving the
nature of WA

Your Ref:
Our Ref: SCD2004F181V02
Enquires: Jacqui Maguire

Phone: (08) 9405 0743
Fax: (08) 9405 0777
Email: jacquim@calm.wa.gov.au

Regional Manager
Main Roads Western Australia
Wheatbelt North Region
PO Box 333
Northam WA 6401



Att: Bob Wijtowycz

RE: PROPOSED PASSING LANE 23.0 TO 24.7 SLK WANNEROO ROAD

In response to a request from your Department, the Department of Conservation and Land Management (CALM) does not object to the proposed encroachment of an area of State Forest 65 subject to the following conditions:

Vegetation Clearing

CALM is aware that an area of approximately 1320m² within State forest 65 is required to be cleared of native vegetation as a result of the construction of the passing lane. The Department supports any measures taken by Main Roads to minimise the amount of clearing necessary within the State forest. CALM also requests that all topsoil removed during the clearing should be stockpiled and returned following completion of works. This will enable the existing seed set within the soil to aid in re-establishing the native vegetation.

Dieback

The vegetation within State Forest 65 is of significant environmental importance. Waterlogged soils provide ideal conditions for contamination by *Phytophthora cinnamomi* (Dieback). Correct *Phytophthora* hygiene procedures must be adhered to, including:

- **All machines and vehicles to be clean on entry.** Please advise your contractor of this condition prior to their arrival on site, to ensure that all machines/vehicles are free of soil before commencing work within or adjacent to the State Forest.

Offset Arrangements

The Department believes an appropriate offset should be arranged to mitigate the loss of conservation value within the State forest. Appropriate offsets may include revegetation of cleared areas or financial contributions towards management operations within CALM estate. This offset can be negotiated, prior to commencement of roading works, between your Department's Regional Manager and the Swan Coastal District Manager, Paul Brown (Ph: 9405 0700).

Rubbish

Any equipment or rubbish generated from the works should be removed offsite following completion of the operation.

Please contact Jacqui Maguire (08) 9405 0743, should you have any queries regarding this advice.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Paul Brown'.

Paul Brown
DISTRICT MANAGER
Swan Coastal District

21 December 2005