



Statement No.

**MINISTER FOR THE ENVIRONMENT**

**000637**

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED  
(PURSUANT TO THE PROVISIONS OF THE  
ENVIRONMENTAL PROTECTION ACT 1986)**

**SOUTH WEST METROPOLITAN RAILWAY,  
PERTH TO MANDURAH**

**Proposal:** The construction and operation of a passenger railway service between Perth and Mandurah, as documented in schedule 1 of this statement.

**Proponent:** Chief Executive Officer, Public Transport Authority

**Proponent Address:** Westrail Centre, West Parade, East Perth WA 6004.

**Assessment Number:** 1395

**Report of the Environmental Protection Authority:** Bulletin 1102

The proposal referred to above may be implemented by the proponent subject to the following conditions and procedures:

**1 Implementation and Changes**

1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement.

1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

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- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines on advice of the Environmental Protection Authority, is not substantial, the proponent may implement those changes upon receipt of written advice.

## **2 Proponent Commitments**

- 2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of fulfilment of the conditions in this statement.

## **3 Proponent Nomination and Contact Details**

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.
- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environmental Protection of any change of contact name and address within 60 days of such change.

## **4 Commencement and Time Limit of Approval**

- 4-1 The proponent shall substantially commence the proposal within five years of the date of this statement or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

- 1 the environmental factors of the proposal have not changed significantly;

- 2 new, significant, environmental issues have not arisen; and
- 3 all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

## **5 Compliance Audit and Performance Review**

5-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environmental Protection which address:

- 1 the status of implementation of the proposal described in schedule 1 of this statement;
- 2 evidence of compliance with the conditions and commitments; and
- 3 the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environmental Protection is empowered to audit the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

5-2 The proponent shall submit a performance review report every five years after the start of the operations phase, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, which addresses:

- 1 the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;
- 2 the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
- 3 significant improvements gained in environmental management, including the use of external peer reviews;
- 4 stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
- 5 the proposed environmental targets over the next five years, including improvements in technology and management processes.

- 5-3 The proponent shall submit a report prepared by an auditor approved by the Department of Environmental Protection under the "Compliance Auditor Accreditation Scheme" to the Chief Executive Officer of the Department of Environmental Protection on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating that the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.

### Procedures

- 1 Where a condition states "to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environmental Protection for the preparation of written advice to the proponent.
- 2 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environmental Protection.

### Notes

- 1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environmental Protection over the fulfilment of the requirements of the conditions.
- 2 Within this statement, to "have in place" means to "prepare, implement and maintain for the duration of the proposal".
- 3 The South Street carpark is deemed to be outside the proposal, and if the area is required in the future, the proponent will notify the Environmental Protection Authority.

*Judy Edwards*

Dr Judy Edwards MLA  
MINISTER FOR THE ENVIRONMENT

14 NOV 2003

## Schedule 1

### The Proposal (Assessment No. 1395)

The proposal is to construct and operate the South West Metropolitan Railway from Perth to Mandurah within the “footprint” depicted in Figures 1 and 2. The main characteristics of the proposal are summarised in Table 1 below.

**Table 1: Key Proposal Characteristics**

Element	Description
Proposal description	Construction and operation of rail infrastructure from Perth to Mandurah within the footprint depicted in Figures 1 and 2. The proposal includes construction of the railway line, stations, vehicular and pedestrian areas and access ways associated with the railway, drainage facilities, road/rail intersections, bridges, tunnels, facilities to accommodate power and other services, signals, lighting, noise barriers, fauna and service vehicle underpasses, fencing, landscaping, signage, and associated earthworks.
Length of railway	Approximately 72 kilometres
Typical cross-section and corridor to be cleared for railway line	Embankments and cuttings generally with a slope of 1 in 2 on both sides of railway, 6 metres for fencing and access track on one side, 12 metres for two tracks on ballast, 2 metres for fencing on other side to access track.  The typical width of the corridor to be cleared ranges from 25 to 40 metres, of which all but 20 metres is to be landscaped.
Stations	In the short term, approximately 11 as follows: William Street The Esplanade Canning Bridge Leach Highway South Street Thomsons Lake Thomas Road Leda Rockingham Waikiki Mandurah
Future Stations	In the longer term approximately 7 as follows: Success Mandogalup Anketell South Parmelia Stakehill Karnup Lakelands

River crossings	<p>Narrows Bridge – bridge between existing Freeway bridges.</p> <p>Mt Henry Bridge - widening and strengthening of existing bridge to accommodate railway.</p> <p>Bridgeworks require additional piers and footings in the river bodies.</p>
Tunnels	<p>From Narrows Interchange to Perth Station yard</p> <p>Anketell Tunnel (existing)</p> <p>Fremantle Road Tunnel, Mandurah</p>
Grade separations/intersections	<p><i>Road bridges over rail:</i> –</p> <p>Road Bridges over the Kwinana Freeway from Mill Point Road, South Perth to Anketell Road, inclusive (existing)</p> <p>Thomas Road, Bertram</p> <p>Challenger Avenue, Parmelia</p> <p>Wellard Road, Wellard</p> <p>Elanora Drive, Rockingham</p> <p>Safety Bay Road, Waikiki (existing)</p> <p>Stakehill Road, Baldivis</p> <p>Gordon Road, Greenfields</p> <p><i>Rail bridges over road:</i> –</p> <p>Mandurah Road, Hillman (also rail bridge over rail)</p> <p>Mandurah Road, Baldivis</p> <p>Paganoni Road, Karnup</p> <p><i>Rail bridge over rail:</i> -</p> <p>Glen Iris, Jandakot (existing)</p> <p>Provision for up to two occupational crossings at Lakelands.</p>
Underpasses for service vehicles	<p>Northern end of Leda Nature Reserve, and at Paganoni Bushland approximately 350 metres north of Metropolitan Region Scheme boundary.</p>
General standard of design and construction	<p>Design speed 140 kilometres per hour for track infrastructure.</p>
Rail cars	<p>Electric Multiple Units, 25kV a.c. supply, coupled as three-car sets, running at a maximum service speed of 130 kilometres per hour.</p> <p>The existing two-car sets may be used from time to time between Thomsons Lake and Perth.</p>
Construction material source	<p>Local cut and fill, all materials (ballast and rails etc) sourced by construction contractor from approved sources and suppliers.</p>
Areas of land that are to be cleared or are otherwise required for this proposal for which mitigation measures will be implemented to achieve no net loss of regional biodiversity and wetland values and functions.	<ul style="list-style-type: none"> <li>• Portions of Pickle Swamp and the buffer of Pickle Swamp in the Leda Nature Reserve and Gilmore Avenue Road reserve</li> <li>• Areas of threatened ecological community 19b in the Garden Island Highway reserve north of Lake Cooloongup</li> <li>• Land outside the existing gazetted Railways reserve and the previous cleared alignment of Safety Bay Road that is required for the Waikiki Station Site, including portions of threatened ecological community 19b and floristic community type 24</li> <li>• Portions of land within the 50 metre buffer of Paganoni Swamp and Black Swan Lake (Fremantle Road sumpland)</li> <li>• Land containing floristic community type 24 in the Peel Region Scheme area north of Gordon Road, Mandurah</li> </ul>

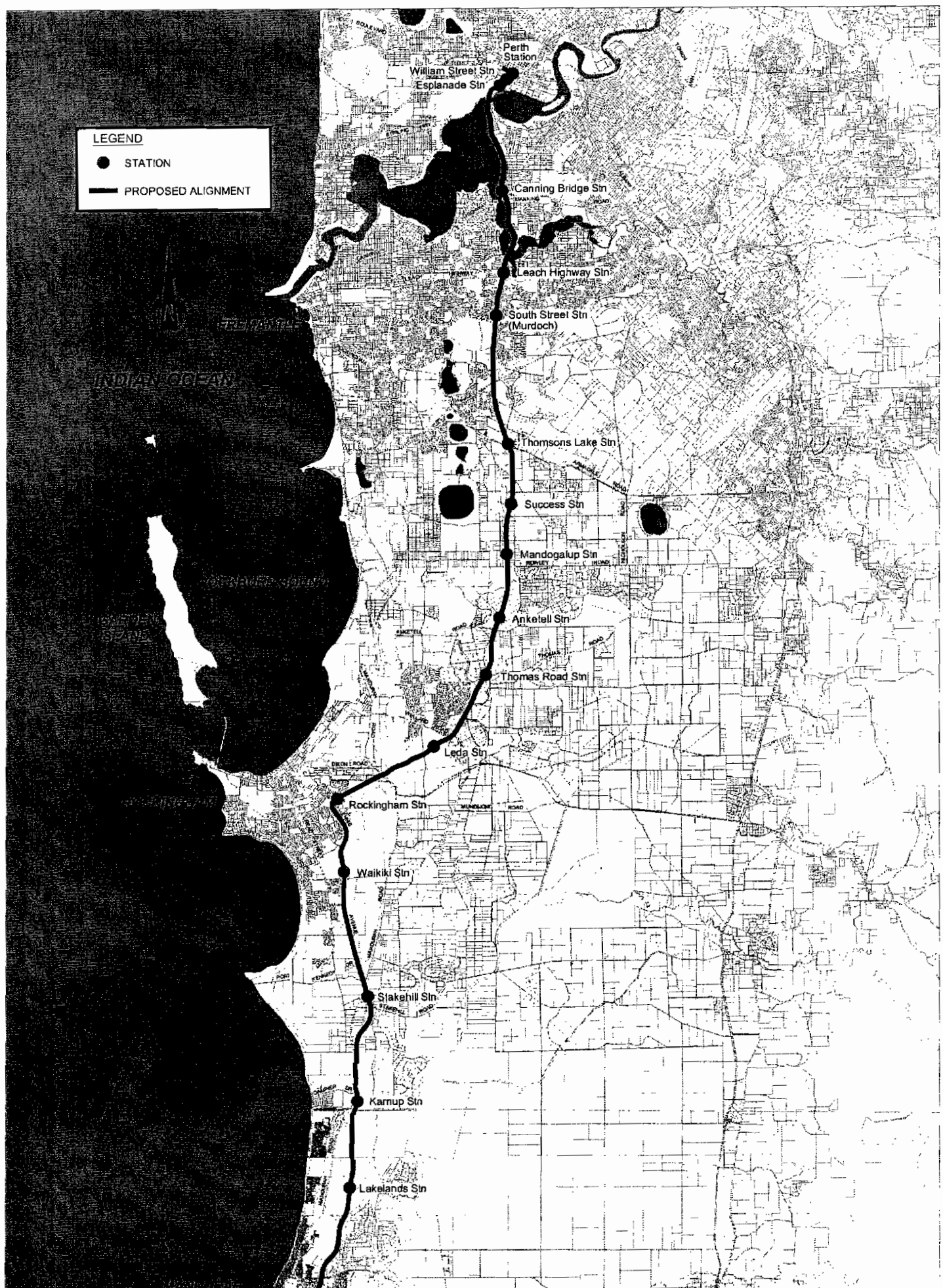
	<ul style="list-style-type: none"><li>• Any other land adjustments required from Bush Forever sites or significant wetlands and their buffers that are additional to the above and are not in the gazetted Railways reservation, subject to the following:<ul style="list-style-type: none"><li>○ the area is in excess of that which will be returned to the conservation estate in the general vicinity</li><li>○ the land is to be used for purposes other than an unfenced access track used by a number of agencies.</li></ul></li></ul>
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**Figures (attached)**

Figure 1 – Overview of the South West Metropolitan Railway alignment; and  
Figure 2 – Land within which the South West Metropolitan Railway will be located.

**LEGEND**

- STATION
- PROPOSED ALIGNMENT





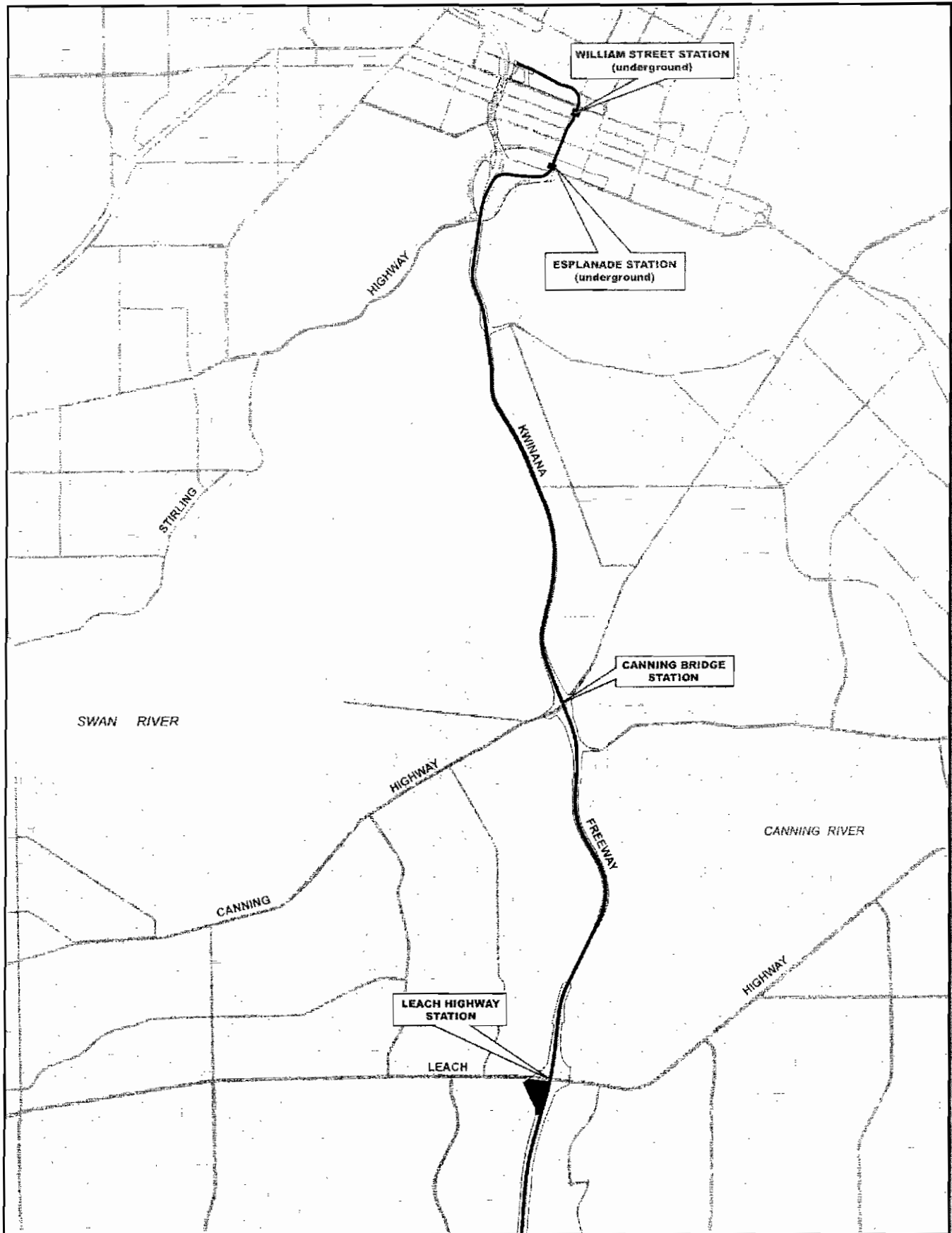


Figure 2(a)



Land Within Which the  
South West Metropolitan Railway is Located

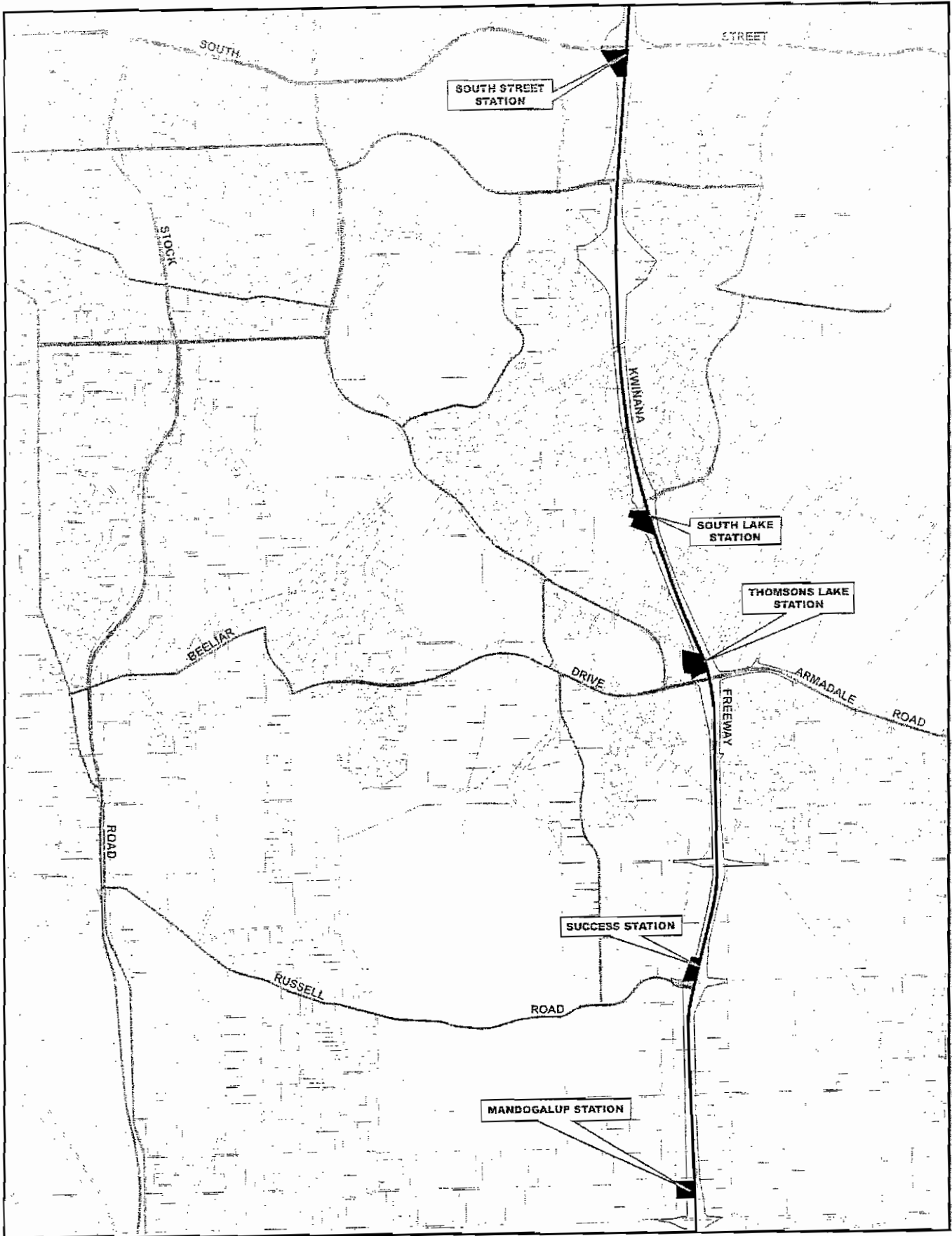
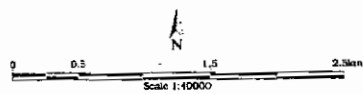


Figure 2(b)



Land Within Which the  
South West Metropolitan Rail

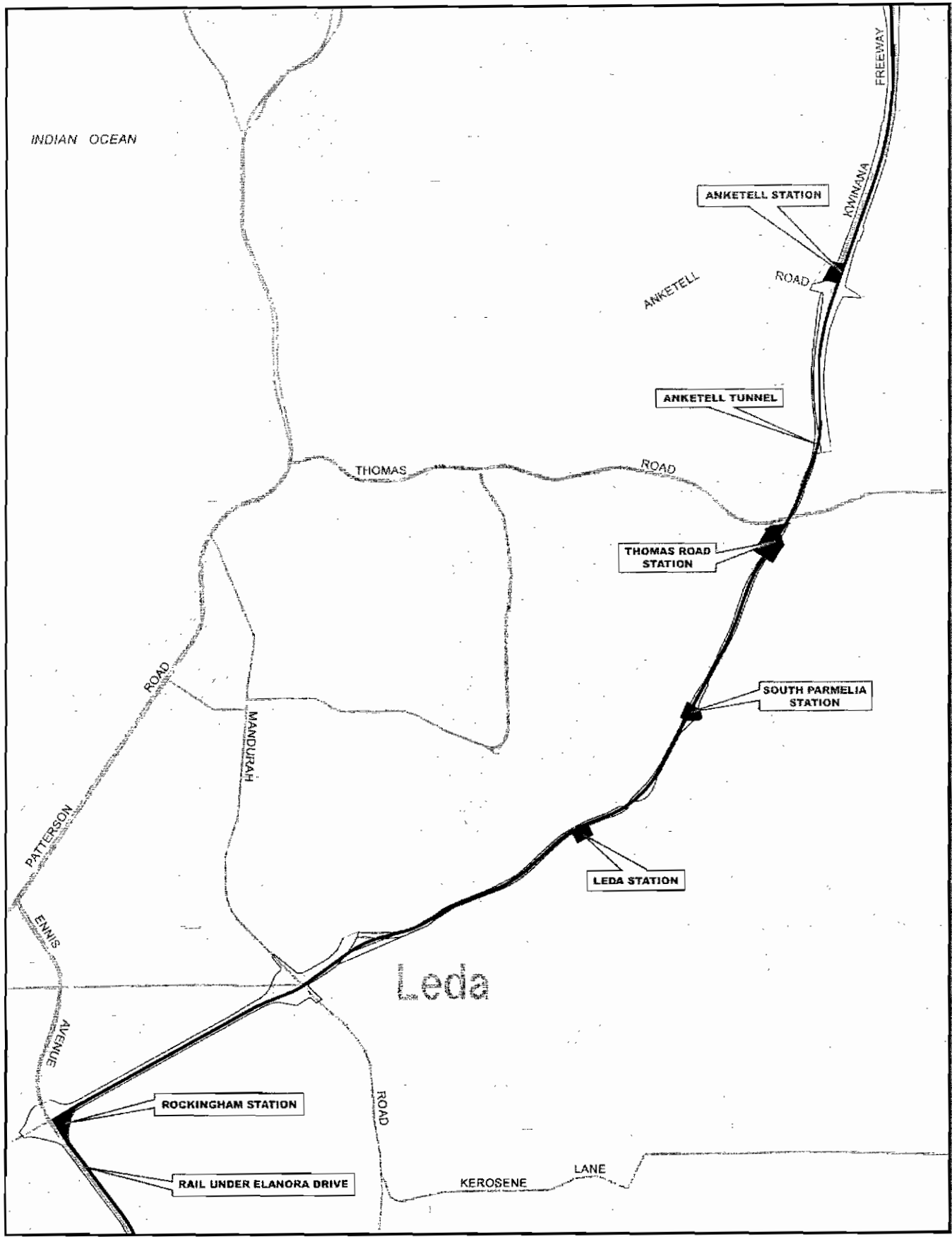


Figure 2(c)

Land Within Which the South West Metropolitan Railway is Located



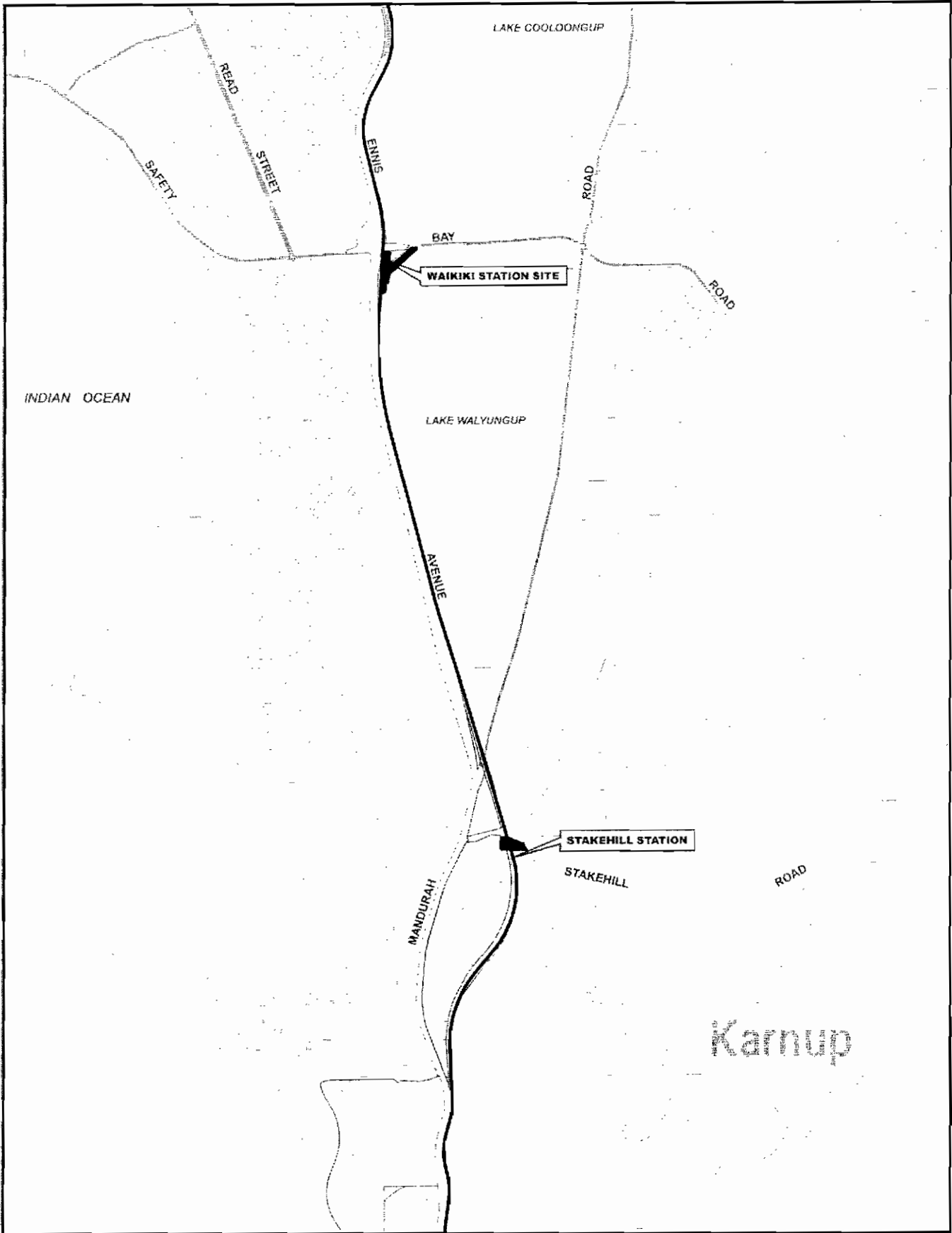


Figure 2(d)

Land Within Which the  
South West Metropolitan Railway is Located



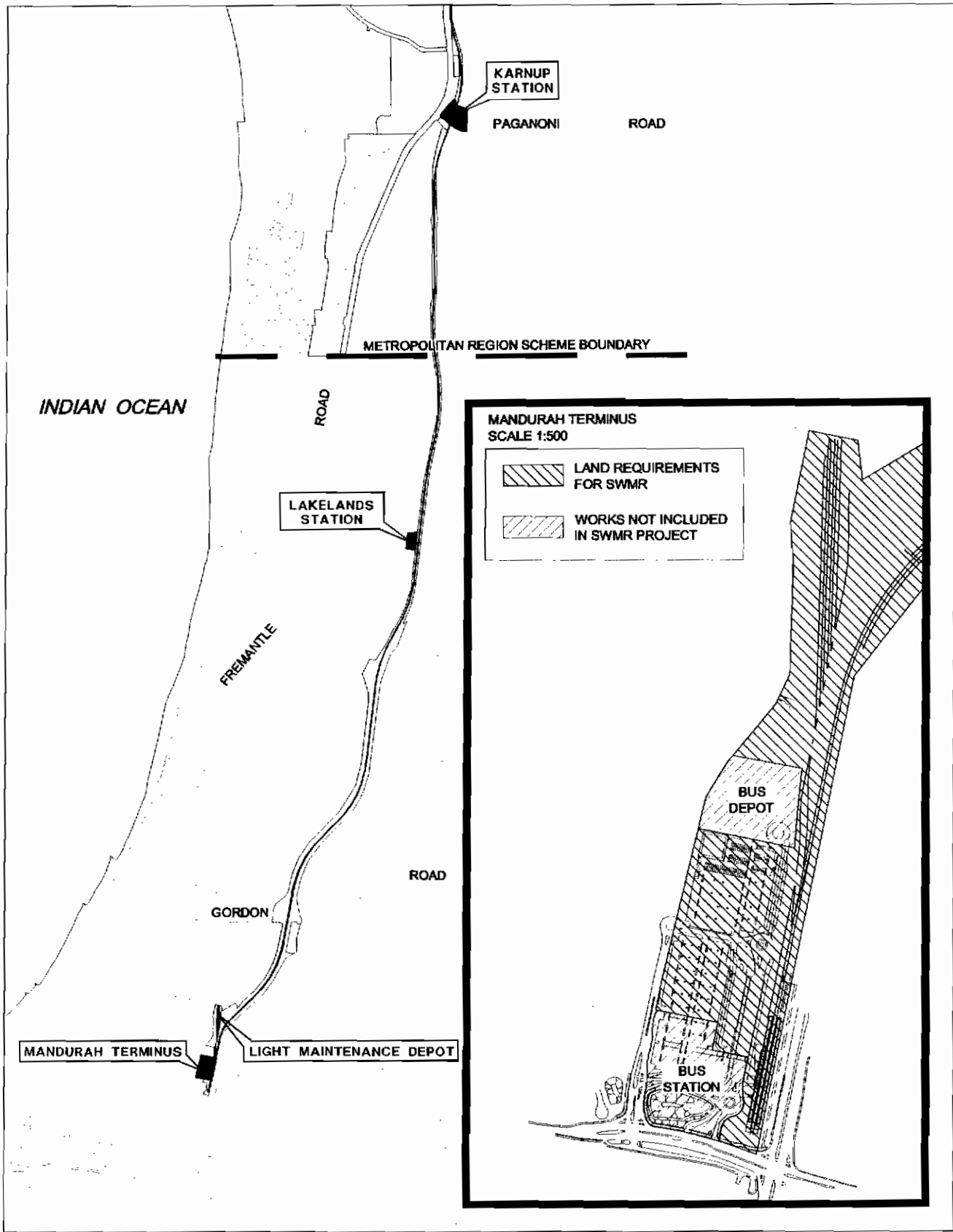


Figure 2(e)

Land Within Which the South West Metropolitan Railway is Located

**Proponent's Environmental Management Commitments**

6 November 2003

**South West Metropolitan Railway  
Perth to Mandurah**

(Assessment No. 1395)

Chief Executive Officer, Public Transport Authority

15	Contamination Assessment and Management Plan	<p>Have in place and make publicly available a Contamination Assessment and Management Plan which addresses:</p> <ol style="list-style-type: none"> <li>1. Soil and groundwater quality at sites requiring further investigation as identified in the Public Environmental Review and by the Land and Water Quality Branch, DEP;</li> <li>2. Investigations and procedures where there is a risk of disturbing acid sulphate soils; and</li> <li>3. Management/remediation.</li> </ol>	<p>Ensure the soil and groundwater quality are appropriate for the intended land use and acceptable standards are maintained.</p>	Design.	WC, Land and Water Quality Branch, DEP.
16	Vegetation Management Plan for Unexploded Ordnance Search Areas	<p>Have in place and make publicly available a Vegetation Management Plan for Unexploded Ordnance Search Areas which addresses:</p> <ol style="list-style-type: none"> <li>1. Potential impacts on native vegetation;</li> <li>2. Delineation of search areas;</li> <li>3. Measures to minimise impacts on native vegetation; and</li> <li>4. Management of disturbed areas to promote repair where disturbance is outside area to be cleared for rail construction purposes.</li> </ol>	<p>Minimise impacts on native vegetation.</p>	<p>Before commencement of siteworks in areas where unexploded ordnance search required by FESA.</p>	<p>FESA, DCLM, relevant Local governments.</p>
17	Sustainability Strategy	<p>Prepare a Sustainability Strategy aimed at maximising sustainability outcomes in the design, construction and operation of the rail system and associated infrastructure, in line with 'The Western Australian State Sustainability Strategy'.</p> <p>This Strategy will address the following:</p> <ul style="list-style-type: none"> <li>- Establishing sustainability principles in purchasing and contracting;</li> <li>- Ensuring efficient energy and water use;</li> <li>- Minimising waste and encouraging recycling; and</li> <li>- Providing for industry and community partnerships.</li> </ul> <p>Note: Consultation on plans and strategies and supporting community engagement is addressed in the Stakeholder Consultation Strategy.</p>	<p>To ensure that sustainability principles are incorporated, as far as practicable, into the construction and operation of the rail system.</p>	<p>Prior to commencement of site preparation work.</p>	<p>DPC, Local government, DCLM, DPI, DoIR, State Supply Commission.</p>
18	Sustainability Strategy	<p>Implement the Sustainability Strategy required by commitment 17.</p>	<p>Achieve the objectives of commitment 17.</p>	<p>During construction and operation.</p>	<p>DPC, Local government, DCLM, DPI, DoIR, State Supply Commission.</p>

19	Aboriginal Heritage	Implementation of the proposal will not commence prior to consent granted by the Minister for Indigenous Affairs under section 18, <i>Aboriginal Heritage Act 1972</i> , other than for those sections of the proposal for which section 18 consent has already been granted.	DIA.
		To protect aboriginal heritage within the area of impact of the proposal.	-

**Note:**

The following Plans which overlap with the requirements of Ministerial Statement No. 368 (Changes of Land Use Affecting System Six Areas and Lakes Protected under the Environmental Protection Policy to Urban, Industrial, Special Uses and Transportation Purposes, to be Reflected in the Major Metropolitan Region Scheme Amendments for the South-West Corridor) published 11 October 1994, will be released for public review for four weeks:

- Construction Management Plan – Perth to Mandurah;
- Visual Amenity, Rehabilitation and Landscape Management Plan;
- Fauna Management Plan;
- Wetlands, Hydrology and Drainage Management Plan; and
- Access Management Plan.

**Abbreviations:**

- DCLM Department of Conservation and Land Management
- DEP Department of Environmental Protection
- DIA Department of Indigenous Affairs
- DoIR Department of Industry and Resources
- DPC Department of Premier and Cabinet
- DPI Department for Planning and Infrastructure
- FESA Fire and Emergency Services Authority
- MRWA Main Roads Western Australia
- SRT Swan River Trust
- WC Water Corporation
- WRC Water and Rivers Commission



## Proponent's Environmental Management Commitments

South West Metropolitan Railway (Assessment No. 1395) – 6 November 2003

**Note:** The term “commitment” as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the ‘action’ to be undertaken by the proponent;
- the objective of the commitment;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environmental Protection.

No.	Topic	Action	Objective	Timing	Advice
1	Construction Management Plan – <i>Perth to Mandurah</i>	<p>Have in place and make publicly available a Construction Management Plan which addresses:</p> <ol style="list-style-type: none"> <li>1. A schedule for the preparation and implementation of each phase of construction (see also commitments 2 and 3);</li> <li>2. Implementation at the appropriate time of actions specified in other environmental management plans in these commitments that are relevant to the construction phase, including actions in the Stakeholder Consultation Strategy, the Biodiversity and Wetlands Mitigation Plan, the Fauna Management Plan, the Wetlands Hydrology and Drainage Management Plan and the Contamination Assessment and Management Plan;</li> <li>3. Measures to limit clearing (in liaison with DCLM);</li> <li>4. Delineation and protection of environmentally significant areas (in liaison with DCLM);</li> <li>5. Measures to minimise and manage impacts on fauna (in liaison with DCLM);</li> <li>6. Protection of declared rare and priority flora and other flora of conservation significance, including detailed investigation of entire route (in liaison with DCLM);</li> </ol>	<p>Ensure that construction impacts (direct and indirect) on flora, fauna, wetlands, Bush Forever sites and other environmentally significant places, surface water and groundwater, and the community, are minimised.</p>	<p>Prior to site preparation work commencing.</p>	<p>DIA, WRC, SRT, DCLM, FESA, DPI, WC, Heritage Council, Local governments - Perth to Mandurah.</p>

	<p>7. Protection of Threatened Ecological Communities (in liaison with DCLM);</p> <p>8. Hygiene measures to minimise the spread of disease and weeds (in liaison with DCLM);</p> <p>9. Water quality, erosion and sedimentation control;</p> <p>10. Aboriginal and European heritage;</p> <p>11. Dust management;</p> <p>12. Fire management (in liaison with DCLM);</p> <p>13. Access during construction (in liaison with DCLM);</p> <p>14. Construction lay-down sites;</p> <p>15. Fencing;</p> <p>16. Light spill;</p> <p>17. Hours of construction;</p> <p>18. Public liaison and information;</p> <p>19. Procedures for response to complaints and issues raised by the public on construction matters of an environmental nature, including nomination of an independent party to determine and advise on the appropriate response by the proponent;</p> <p>20. Registers of waste materials/contamination, monitoring and site audit sheets;</p> <p>21. Movement, storage and refuelling of machinery during construction;</p> <p>22. Storage and handling procedures for all construction materials and hazardous chemicals;</p> <p>23. Hazardous spill contingency plan;</p> <p>24. Contamination contingency plan including measures for acid sulphate soils;</p> <p>25. Works in the vicinity of high pressure gas pipelines;</p> <p>26. Dewatering near environmentally significant areas and water supply;</p> <p>27. Description of environmental standards, safeguards and emergency responses;</p> <p>28. Schedules for corrective action and verifications;</p> <p>29. Licensing requirements and approvals;</p> <p>30. Management structure and reporting;</p> <p>31. Environmental briefing, training and induction of personnel;</p> <p>32. Monitoring; and</p> <p>33. Progress and compliance reporting.</p>
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2	Construction Management Plan - Northern end Narrows Bridge to the freight railway at Jandakot	Have in place and make publicly available a Construction Management Plan which addresses those actions outlined in commitment no. 1, which are relevant to the section of railway from the Northern end Narrows Bridge to the freight railway at Jandakot.	Ensure that construction impacts (direct and indirect) on flora, fauna, wetlands, Bush Forever sites and other environmentally significant places, surface water and groundwater, and the community, are minimised.	Prior to site preparation work commencing.	DIA, WRC, SRT, FESA, DPI, WC, Heritage Council, Local governments South Perth to Cockburn.
3	Construction Management Plan - Northern End of Narrows Bridge to Perth Station	Have in place and make publicly available a Construction Management Plan which addresses those actions outlined in commitment no. 1, which are relevant to the section of railway from the Northern end Narrows Bridge to Perth Station.	Ensure that construction impacts (direct and indirect) on flora, fauna, wetlands and other environmentally significant places, surface water and groundwater, and the community, are minimised.	Prior to site preparation work commencing.	DIA, WRC, SRT, FESA, DPI, WC, Heritage Council, Local government - Perth.
4	Stakeholder Consultation Strategy	Have in place and make publicly available a Stakeholder Consultation Strategy which: <ol style="list-style-type: none"> <li>1. Identifies relevant stakeholders, including nearby residents, community groups, environmental groups, local governments, service utilities and government agencies;</li> <li>2. Describes stakeholder consultation measures having regard for the Government's consultation strategy; and</li> <li>3. Requires stakeholder input into the Plans and Strategies required to be prepared to fulfil these commitments.</li> </ol>	To ensure consultation with stakeholders continues and outcomes are incorporated into the management of the proposal to achieve the objectives and criteria established by the Environmental Protection Authority (Bulletin 1102).	Prior to commencement of siteworks.	
5	Biodiversity and Wetland Mitigation	5.1 Prepare a Biodiversity and Wetland Mitigation Plan in liaison with DEP / WRC (with responsibilities in catchment management and ecosystems) and DCLM, to provide mitigation measures as replacement for the environmental values of the following areas of land that are to be cleared or are otherwise required for this proposal: <ul style="list-style-type: none"> <li>• Portions of Pickle Swamp and the buffer of Pickle Swamp in the Leda Nature Reserve and Gilmore Avenue Road reserve;</li> </ul>	Mitigate the effects of clearing and disturbance of regionally significant bushland, wetlands and wetland buffers and achieve the objective of no net loss of regional biodiversity and	Design.	WRC, DPI, DCLM, relevant local governments.

	<ul style="list-style-type: none"> <li>• Areas of threatened ecological community 19b in the Garden Island Highway reserve north of Lake Cooiloongup;</li> <li>• Land outside the existing gazetted Railways reserve and the previous cleared alignment of Safety Bay Road that is required for the Waikikj Station Site, including portions of threatened ecological community 19b and floristic community type 24;</li> <li>• Portions of land within the 50 metre buffer of Paganoni Swamp and Black Swan Lake (Fremantle Road sumpland);</li> <li>• Land containing floristic community type 24 in the Peel Region Scheme area north of Gordon Road, Mandurah;</li> <li>• Any other land adjustments required from Bush Forever sites or significant wetlands and their buffers that are additional to the above and are not in the gazetted Railways reservation, subject to the following: <ul style="list-style-type: none"> <li>o the area is in excess of that which will be returned to the conservation estate in the general vicinity; and</li> <li>o the land is to be used for purposes other than an unfenced access track used by a number of agencies.</li> </ul> </li> </ul>	<p>wetland values and functions, in relation to areas for which mitigation is required.</p>
	<p>The Biodiversity and Wetland Mitigation Plan will contain the following:</p> <ol style="list-style-type: none"> <li>1. Demonstration that each area of land for which mitigation is required (see above) is minimised as far as practicable;</li> <li>2. Detailed delineation of the areas for which mitigation is required;</li> <li>3. Detailed identification of the biodiversity and wetland values and functions of land for which mitigation is required;</li> <li>4. Specification of detailed mitigation measures including areas to be acquired or managed, and other measures, to meet the objectives for this commitment;</li> <li>5. Where appropriate, an Environmental Management Plan for mitigation measures that involve a specific area of land;</li> <li>6. Mitigation to be by the acquisition of natural areas rather than rehabilitation or other natural area management measures, where practicable;</li> <li>7. Where acquisition is not considered practicable, demonstration that acquisition has been reasonably explored, and the reasons why it is not practicable;</li> <li>8. Where rehabilitation is proposed, an area of land the equivalent of at least twice the area of that for which mitigation is required, will be rehabilitated, and rehabilitation will meet completion criteria specified in the relevant Environmental Management Plan;</li> <li>9. Details on vesting, maintenance and long term management responsibility in relation to each mitigation measure; and</li> <li>10. Investigation of the area of land between Paganoni Swamp and Black Swan Lake as a possible option for mitigation.</li> </ol>	

	<p>5.2 An Environmental Management Plan will be prepared for the Waikiki Station site and the land within the triangle bound by the station site and the two alignments of Safety Bay Road (in liaison with DCLM). The proponent will provide fire hydrants and educational and interpretive material at appropriate locations determined as part of this plan.</p> <p>5.3 Land purchased for the railway comprising 7.4 ha of land adjoining the southern tip of Stakehill Swamp, will be transferred to the conservation estate.</p> <p>5.4 Land purchased for the railway comprising 6.7 ha of land adjoining the north west tip of Anstey Swamp will be transferred to the conservation estate.</p> <p>5.5 The proponent will encourage the WA Planning Commission to transfer to the conservation estate land reserved for Railways purposes that is surplus to requirements and has the potential to be added to the adjoining conservation estate, in consultation with stakeholders.</p>							
6	Biodiversity and Wetland Mitigation	Implement the Biodiversity and Wetland Mitigation Plan and actions required by commitment 5.		Achieve the objectives of commitment 5.	Design to post-construction.	WRC, DPI, DCLM, relevant local governments.		
7	Visual Amenity, Rehabilitation and Landscape Management Plan	Have in place and make publicly available a Visual Amenity, Rehabilitation and Landscape Management Plan, prepared in liaison with DCLM, as appropriate, which addresses:		Ensure that the post-construction landscape is stable and self-sustaining, ecological functions are retained or reinstated where possible and that visual amenity is maximised.	Design.	DCLM, DPI, WRC, Local governments.		
	<ol style="list-style-type: none"> <li>1. Visual amenity of railway corridor in relation to landscaping and infrastructure in the rail corridor;</li> <li>2. Protection of significant flora and ecological communities;</li> <li>3. Plant/seed selection;</li> <li>4. Plant/seed/landscaping materials source and propagation methods including the use of local provenance. Priority will be given to seed collection within the reserves and surrounding areas, and revegetation by means of translocation of species, where practicable;</li> <li>5. Provision of fauna habitat as appropriate;</li> <li>6. Soil stabilisation and topsoil management, including the identification of suitable areas for topsoil and mulch stock pile locations;</li> <li>7. Weed control;</li> <li>8. Dieback and disease management;</li> </ol>							

		<p>9. Bushfire management;  10. Erosion control;  11. Fencing; and  12. Rehabilitation/landscaping criteria for clearance of this commitment.</p>			
8	Fauna Management Plan	<p>Have in place and make publicly available a Fauna Management Plan, prepared in liaison with DCLM, as appropriate, which addresses:</p> <ol style="list-style-type: none"> <li>1. Identification and replacement, in the locality, of significant fauna habitat elements;</li> <li>2. Survey before construction for targeted species including the Masked Owl (<i>Tyto novaehollandiae novaehollandiae</i>) and sampling of groundwater for stygofauna;</li> <li>3. Identification of significant fauna movements that may be impacted by the rail corridor;</li> <li>4. Actions to limit impacts on fauna including measures to accommodate fauna movement, and relocation of fauna, as appropriate; and</li> <li>5. Monitoring of impacts on fauna.</li> </ol>	Minimise impacts on native fauna.	Design.	DCLM, Local governments.
9	Wetlands, Hydrology and Drainage Management Plan	<p>Have in place and make publicly available a Wetlands, Hydrology and Drainage Management Plan, prepared in liaison with DCLM, as appropriate, which addresses:</p> <ol style="list-style-type: none"> <li>1. Potential pollutants;</li> <li>2. Drainage design and management maximising on-site infiltration;</li> <li>3. Dewatering impacts on environmentally sensitive areas;</li> <li>4. Wetland and groundwater monitoring;</li> <li>5. Minimising loss of wetland-dependant vegetation and buffer vegetation;</li> <li>6. Corrective action to local resident water supplies (if required); and</li> <li>7. Site specific drainage management actions, with special attention to environmentally significant areas, including maintenance of water levels and quality in wetlands.</li> </ol>	Minimise impacts on wetlands, surface water and groundwater.	Design.	WRC, SRT, DCLM, WC, Local governments.

10	<p>Operations Noise and Vibration Management - Northern end Narrows Bridge to Perth Station</p>	<p>Have in place and make publicly available an Operations Noise and Vibration Management Plan.</p> <p>This Plan will address the following:</p> <ol style="list-style-type: none"> <li>1. Potential sources and impacts of noise and vibration;</li> <li>2. Location and sensitivity of premises and public places that may receive noise, including heritage places;</li> <li>3. Noise and vibration level predictions and further studies for targeted areas;</li> <li>4. Regenerated noise (tunnels and bridges) and criteria to complement those in commitment 11, including further criteria for ground-borne noise if additional sensitive occupancies may be affected;</li> <li>5. Minimisation of vibration annoyance to people and impacts on buildings;</li> <li>6. Management of noise and vibration from maintenance activities;</li> <li>7. Measures to manage noise and vibration attributable to the railway and associated infrastructure, eg stations;</li> <li>8. Monitoring and reporting program;</li> <li>9. Response to community issues including provision of information and complaint response system; and</li> <li>10. A procedure for review of this Plan should operating conditions change that may affect noise and/or vibration.</li> </ol>	<p>1. Achieve noise criterion 1, vibration criterion 1, and the regenerated noise criteria specified in column 3.</p> <p>2. Minimise noise and vibration impacts on sensitive locations during operations to as low as reasonably practicable.</p>	<p>Design.</p>	<p>City of Perth, Heritage Council, WC.</p>
11	<p>Operations Noise and Vibration Management - Northern end Narrows Bridge to Perth Station</p>	<p>The proponent will meet the following criteria:</p> <ul style="list-style-type: none"> <li>• Noise criteria: <ul style="list-style-type: none"> <li>○ Criterion 1: Noise mitigation will be provided to ensure that noise levels caused by rail operations do not exceed <math>L_{Aeq}(\text{daytime})60 \text{ dB}(A)</math>, <math>L_{Aeq}(\text{night-time})55 \text{ dB}(A)</math> and an <math>L_{A \text{ max}}</math> of 80 dB(A), at a distance of 1 metre from a building with a noise sensitive use on noise sensitive premises;</li> <li>○ Criterion 2: Noise mitigation will be considered where the noise level is at or above <math>L_{Aeq}(\text{daytime})55 \text{ dB}(A)</math>, <math>L_{Aeq}(\text{night-time})50 \text{ dB}(A)</math> and an <math>L_{A \text{ max}}</math> of 75 dB(A), at a distance of 1 metre from a building with a noise sensitive use on noise sensitive premises*; and</li> <li>○ Criterion 3: Noise levels will be managed to as low as reasonably practicable.</li> </ul> </li> </ul>	<p>1. Achieve noise criterion 1, vibration criterion 1, and the regenerated noise criteria specified in column 3.</p> <p>2. Minimise noise and vibration impacts on sensitive locations during operations to as low as reasonably practicable.</p>		

	<ul style="list-style-type: none"> <li>• <b>Vibration criteria:</b> <ul style="list-style-type: none"> <li>◦ <b>Criterion 1:</b> vibration isolation measures will be provided where the predicted or actual vibration is Curve 2 (109 dB) or greater, as defined in AS 2670.2;</li> <li>◦ <b>Criterion 2:</b> the proposal will be designed to meet Curve 1.4 (106 dB), as defined in AS 2670.2;</li> <li>◦ Isolation measures will be considered at the design stage where vibration is predicted to be between Criterion 1 and Criterion 2; and</li> <li>◦ Vibration will be managed to as low as reasonably practicable.</li> </ul> </li> <li>• <b>Regenerated noise from ground-borne vibration:</b> <ul style="list-style-type: none"> <li>◦ Noise mitigation will be provided to ensure that regenerated noise levels caused by underground rail operations do not exceed the following criteria at the receivers listed: <table border="1" data-bbox="690 1060 982 1638"> <thead> <tr> <th>Receiver</th> <th><math>L_{A\ max}</math>* Noise Level</th> </tr> </thead> <tbody> <tr> <td>Auditorium/performing arts</td> <td>30 dBA</td> </tr> <tr> <td>Residential-private dwellings</td> <td>35 dBA</td> </tr> <tr> <td>Residential-hotels</td> <td>40 dBA</td> </tr> <tr> <td>Place of worship</td> <td>35 dBA</td> </tr> <tr> <td>Cinema</td> <td>35 dBA</td> </tr> <tr> <td>Office</td> <td>40 dBA</td> </tr> <tr> <td>Library/Educational</td> <td>40 dBA</td> </tr> <tr> <td>Specialty Retail</td> <td>45 dBA<sup>#</sup></td> </tr> </tbody> </table> </li> </ul> </li> </ul> <p>+ "Noise sensitive premises" has the meaning given in the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>*<math>L_{A\ max}</math> "Fast" response noise level (interpreted as applicable to the 95<sup>th</sup> percentile train passby event).</p> <p># Based on AS 2107 recommendation for Specialty Retail.</p>	Receiver	$L_{A\ max}$ * Noise Level	Auditorium/performing arts	30 dBA	Residential-private dwellings	35 dBA	Residential-hotels	40 dBA	Place of worship	35 dBA	Cinema	35 dBA	Office	40 dBA	Library/Educational	40 dBA	Specialty Retail	45 dBA <sup>#</sup>			
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12	<p>Operations Noise and Vibration Management - Northern end Narrows Bridge to Mandurah</p> <p>Have in place and make publicly available an Operations Noise and Vibration Management Plan.</p> <p>This Plan will address the following:</p> <ol style="list-style-type: none"> <li>1. Location and sensitivity of premises, public places and future land uses that may receive noise;</li> </ol>	<p>1. Achieve noise criterion 1, vibration criterion 1, and the regenerated noise criteria specified in column 3.</p>	<p>Design.</p> <p>Local governments, WC.</p>																			



	<p>2. Sources of noise attributable to the railway and associated infrastructure;  3. Noise management in areas of low ambient noise, and areas experiencing cumulative noise from the railway and other prominent noise sources, eg roads;  4. Noise and vibration level predictions and further studies for targeted areas;  5. Regenerated noise (tunnels and bridges) and criteria to complement those in commitment 13, including further criteria for ground-borne noise if additional sensitive occupancies may be affected;  6. Management of noise and vibration from maintenance activities;  7. Measures to manage noise and vibration attributable to the railway and associated infrastructure;  8. Monitoring and reporting program;  9. Response to community issues including provision of community information and complaint response system; and  10. A procedure for review of this Plan should operating conditions change that may affect noise and/or vibration.</p>	<p>2. Minimise noise and vibration impacts on sensitive locations during operations to as low as reasonably practicable.</p>
<p>13</p>	<p>Operations Noise and Vibration Management - Northern end Narrows Bridge to Mandurrah</p>	<p>The proponent will meet the following criteria:</p> <ul style="list-style-type: none"> <li>• Noise criteria: <ul style="list-style-type: none"> <li>◦ Criterion 1: Noise mitigation will be provided to ensure that noise levels caused by rail operations do not exceed <math>L_{Aeq}(daytime)60\text{ dB}(A)</math>, <math>L_{Aeq}(night-time)55\text{ dB}(A)</math> and an <math>L_{A,max}</math> of 80 dB(A), at a distance of 1 metre from a building with a noise sensitive use on noise sensitive premises*;</li> <li>◦ Criterion 2: Noise mitigation will be considered where the noise level is at or above <math>L_{Aeq}(daytime)55\text{ dB}(A)</math>, <math>L_{Aeq}(night-time)50\text{ dB}(A)</math> and an <math>L_{A,max}</math> of 75 dB(A), at a distance of 1 metre from a building with a noise sensitive use on noise sensitive premises*; and</li> <li>◦ Criterion 3: Noise levels will be managed to as low as reasonably practicable.</li> </ul> </li> <li>• Vibration criteria: <ul style="list-style-type: none"> <li>◦ Criterion 1: vibration isolation measures will be provided where the predicted or actual vibration is Curve 2 (109 dB) or greater, as defined in AS 2670.2;</li> </ul> </li> </ul>
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14	<p>Bushland Access Management Plan</p>	<p>Have in place and make publicly available a Bushland Access Management Plan, prepared in liaison with DCLM, as appropriate, to address bushland management access in environmentally significant areas:</p> <ol style="list-style-type: none"> <li>1. Railway maintenance access;</li> <li>2. Bushland management access (including fire services);</li> <li>3. Recreational access;</li> <li>4. Services access; and</li> <li>5. Placement of access tunnels in the Lake Coolooloopup and Walyungup Reserve areas, in consultation with stakeholders.</li> </ol>	<p>Minimise the impact of the railway on bushland and significant environments.</p>																		
			<p>Design.</p> <p>During detailed design phase.</p>																		
			<p>DCLM, DPI, FESA, Local governments, Service utilities.</p>																		

## Attachment 1 – Change to Definition of Proposal (Statement 637)

Proposal: South West Metropolitan Railway, Perth to Mandurah

Proponent: Public Transport Authority

Change: to minor part of proposal, not described in definition of proposal other than the locality

From:

Element	Quantities/Description
Location	Substation at a Karnup locality not specified in detail
Vegetation disturbance	unspecified

To:

Element	Quantities/Description
Location	Substation at Parklands locality at an existing Western Power substation just south of the Lakelands residential development
Vegetation disturbance	0.21ha of Karrakatta Complex Central and South; degraded from current land use

Approval Date: 4 March 2005