SCOPING REQUIREMENTS

ENVIRONMENT EFFECTS STATEMENT

FRANKSTON BYPASS

SEPTEMBER 2007

Contents

1 Introduction

On 19 April 2007, the Southern and Eastern Integrated Transport Authority (SEITA) wrote to the Minister for Planning seeking his advice whether the Frankston Bypass required assessment under the *Environment Effects Act 1978*.

SEITA advised that the proposed bypass would be either a freeway standard dual carriageway or a limited access arterial road from the EastLink/Frankston Freeway interchange (under construction) at Carrum Downs to the Mornington Peninsula Freeway at Mount Martha.

The Minister for Planning decided on 1 June 2007 that an Environment Effects Statement (EES) would be required for the Frankston Bypass.

An EES is a document, prepared by a proponent, which describes their proposal, relevant alternatives and likely environmental effects.

For the purpose of environmental impact assessment, the *Ministerial guidelines for the assessment of environmental effects under the Environment Effects Act 1978* state that the meaning of 'environment' is taken to include the physical, biological, heritage, cultural, social, health, safety and economic aspects of human surroundings, including the wider ecological and physical systems within which humans live.

The Department of Planning and Community Development's (DPCD) Office of Planning and Urban Design will manage this EES process on behalf of the Minister for Planning.

The first step in the EES process is the preparation of Scoping Requirements which set out the scope of matters required to be investigated and documented in the EES.

Public comments were invited on Draft Scoping Requirements for the Frankston Bypass EES for a period of three weeks closing on 14 August 2007. The responses by individuals and groups on the draft were taken into account in preparing the final Scoping Requirements.

While the Scoping Requirements are intended to be complete in their coverage of potential effects, the EES may need to address any additional potential effects that emerge during EES investigations and consultation.

2 The Proposal

The proposal is to develop a bypass for Frankston that is:

- A freeway standard dual carriageway facility with interchanges and grade separations; or
- A limited access arterial road partly or wholly along the freeway reservation and/or the existing road network; or
- A combination of the above.

The primary objective of the Frankston Bypass, as articulated by SEITA, is to provide a continuous and balanced road network into the future with sufficient road system capacity in the Frankston-Mornington Peninsula corridor to meet the likely road travel demands resulting from *Melbourne 2030 – Planning for Sustainable Growth,* having due regard to the social, environmental and economic implications.

The secondary objectives, as articulated by SEITA, are to:

- Reduce existing road congestion through the central area in Frankston, particularly at the southern terminal of the existing Frankston Freeway (and its intersection with Cranbourne-Frankston Road), and along Moorooduc Highway.
- Assist the development of Frankston as a Transit City by providing better access and improved amenity.
- Improve access to the Mornington Peninsula thus assisting the region's business and tourism.
- Improve road safety in particular along the Moorooduc Highway.
- Assist the Frankston and Mornington Peninsula Shire Councils achieve their long term access, mobility and planning objectives (such as reduction in traffic along the Nepean Highway).

The planning for the greater Mornington Peninsula Freeway (including the proposed Frankston Bypass) began in the 1960s in the then Metropolitan Planning Scheme. Subsequent planning scheme reviews have made provision for a future Frankston Bypass. The currently proposed bypass route is identified by a combination of a Public Acquisition Overlay (PAO) and Road Zone - Category 1 (RDZ1) in the Frankston and Mornington Peninsula Planning Schemes. The alignment of the PAO and RDZ1 is shown on Figure 1.

The Victorian Government has directed SEITA to undertake the assessment/approvals process. SEITA is therefore the proponent for the Frankston Bypass for the purpose of the EES process, though another body may oversee implementation of the project.

The need for the proposed Frankston Bypass was identified most recently in the *Mornington Peninsula Access and Mobility Study – Draft Transport Plan* (October 2006). This study was prepared in collaboration between the Frankston City Council, Mornington Peninsula Shire Council, Department of Infrastructure and VicRoads. The study examined a number of bypass options (including upgrades of existing roads) and a base case scenario (public transport upgrades but no bypass).

SEITA has advised that all the road alternatives modelled in the *Mornington Peninsula Access and Mobility Study* will be comprehensively analysed during the EES investigations for the Frankston Bypass. Further, this analysis will examine other design options to mitigate any effect on The Pines Flora and Fauna Reserve.

3 Assessment and Approvals Process

3.1 The EES Process

DPCD will oversee the EES process, while SEITA is responsible for preparing the EES, including undertaking the studies and engaging with stakeholders.

Figure 2 illustrates the key stages in the assessment process under the *Environment Effects Act 1978*.

DPCD will convene a Technical Reference Group (TRG) to provide technical advice to DPCD and SEITA on the preparation of the EES for the bypass. The TRG comprises officer representatives from DPCD, relevant Victorian Government agencies, the City of Frankston and Mornington Peninsula Shire Council.

The role of the TRG is to provide advice to DPCD and the proponent, as appropriate, on:

- the scoping requirements for the EES;
- the design and adequacy of technical studies;
- the technical adequacy of the draft EES documentation; and
- coordination of statutory processes.

3.2 Approvals Required

The Frankston Bypass may require a range of approvals under Victorian legislation, depending on its final form and route. These approvals may include:

- Planning scheme amendments under the *Planning and Environment Act 1987* for deviations outside the land identified as PAO and RDZ1 in the Frankston and Mornington Peninsula Planning Schemes.
- Approval of a cultural heritage management plan under the *Aboriginal Heritage Act 2006*.
- Permits for waterway crossings under the *Water Act 1989*.
- Permits for taking flora under the *Flora and Fauna Guarantee Act 1988*.

Planning scheme amendments for the preferred bypass route, if required, may be placed on public exhibition concurrently with the EES.

The Frankston Bypass requires approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Victorian EES process for the Frankston Bypass has been accredited as the required assessment approach under the EPBC Act.

The Minister for Planning's Assessment under the *Environment Effects Act 1978* will inform the approvals decisions under Victorian legislation and the EPBC Act, but does not constitute a statutory approval in its own right.

4 Matters to be Addressed in the EES

4.1 General Content and Style of the EES

The EES should comprise: a short, hardcopy summary of the EES; a main report addressing the matters in the scoping requirements; and technical appendices providing details of the study investigations underpinning the main report.

The EES summary document needs to be prepared by SEITA for wide distribution to the community and interested parties. It should include details of the EES exhibition and availability.

The main EES report should provide a clear, evidence-based response to the matters set out in these scoping requirements, and any other relevant issues, in the context of the decisions to be informed by the assessment process. Other relevant aspects in the Ministerial Guidelines should also be addressed. It should be analytical rather than encyclopaedic in approach, addressing issues in a depth proportionate to the environmental risk. A clear explanation should be provided if specific matters in the scoping requirements are not addressed.

Technical appendices should provide details of literature reviews, methodologies and results of field and laboratory investigations, methodologies and results of impact assessment studies (eg. air quality modelling, user surveys), including estimates of the reliability of results and description of sources of uncertainty. There should be cross-referencing between the main report and the supporting appendices.

Overall, the main EES report should include:

- An executive summary of the potential effects of the proposal;
- A description of the proposal's objectives and rationale, as well as its relationship to strategic policies and plans;
- A description of the entire proposal, including specific components;
- A description of relevant alternatives capable of meeting the proposal's objectives to a substantial degree;
- Where a preferred alternative is nominated, the basis for this choice;
- An outline of the various approvals required for the proposal to proceed;
- A description of the existing environment in the Frankston Bypass corridor and the surrounding area, particularly where this is relevant to the assessment of potential effects;
- Detailed predictions of potential effects of the proposal and relevant alternatives. This analysis should include direct and indirect, combined, short- and long-term, as well as beneficial and adverse effects and consequences, together with an estimation of the likelihood and degree of certainty for each prediction;
- Evaluation of the implications of the proposal and relevant alternatives for the implementation of applicable legislation and policy, including the principles of ecologically sustainable development;
- Measures for avoiding, minimising, managing and monitoring effects and risks, including a statement of commitment to implement the measures; and

- Responses to issues raised during public and stakeholder consultation.

Close consultation with DPCD during the investigations and preparation of the EES will be advisable to minimise the need for revisions prior to a decision that the EES is suitable to exhibit for public comment.

Further and more specific detail on the required scope and content of the EES is covered in the following sections. Relevant issues identified through EES investigations and consultation that are not identified here also need to be addressed in the EES.

4.2 Project Description

The EES should provide a clear and sufficiently detailed description of the proposed Frankston Bypass to enable the effective assessment of potential environmental effects. This description should set out:

- project rationale and objectives;
- location, technology and design of project components;
- site characteristics and surrounding area;
- communities, properties and/or residences that may be affected by the proposal, including a description of the way that they may be affected;
- proposed methods for mitigating adverse environmental effects and risks.

4.3 Assessment of Alternatives

An EES should investigate and document the environmental effects of relevant alternatives for the bypass. In addition to the "no project" scenario, alternatives may include:

- different route alignments;
- different design options for the overall bypass (limited access arterial road, freeway standard or combination of these);
- tailored design solutions for critically sensitive areas;
- staging options.

The EES should include a description of the process of screening alternatives as part of the project planning or design process, leading to a short-list of preferred alternatives.

Where a technically feasible option provides a distinct opportunity for superior environmental outcomes, this should be investigated and documented in the EES. Detailed assessment of particular alternatives is necessary where alternatives have the potential to deliver a suitable balance of social, environmental and economic outcomes. Before preparing the EES, SEITA should confirm with DPCD the short-listed alternatives that will be subject to detailed evaluation in the EES.

The 'no project' scenario should provide the baseline for describing the potential environmental effects from the Frankston Bypass project. The 'no project' scenario should describe the current and anticipated conditions if the project did not proceed.

The EES should present sufficient information to enable a sound and reasoned evaluation amongst relevant alternatives, in the context of specific statutory and policy requirements and the evaluation objectives and criteria (see Section 4.5 below).

An exhaustive assessment of alternatives is not required. Rather, assessment effort should be directed towards a reasoned elimination of unsuitable or clearly inferior alternatives within the appropriate stages of the EES study. This will ensure SEITA only undertakes detailed assessment for potentially superior alternatives.

4.4 Relevant Legislation, Policies and Strategies

The EES should identify all approvals required for the project to proceed, as well as legislation, policies and strategies that may impinge upon the project and therefore be relevant to its evaluation, as well as assess their specific implications and requirements for the proposal and impact assessment. Relevant legislation, policies and strategies include:

- *Planning and Environment Act 1987* and relevant provisions of the Frankston and Mornington Peninsula Planning Schemes;
- *Aboriginal Heritage Act 2006;*
- *Water Act 1989;*
- *Catchment and Land Protection Act 1994;*
- *Flora and Fauna Guarantee Act 1988;*
- *Heritage Act 1995;*
- *Wildlife Act 1975;*
- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth);
- *Victoria's Biodiversity – Directions in Management 1997;*
- *Victoria's Native Vegetation Management – A Framework for Action;*
- *Melbourne 2030 – Planning for Sustainable Growth;*
- *Linking Melbourne – Metropolitan Transport Plan 2004;*
- *Linking People and Places 2002;*
- *Port Phillip and Western Port Regional Catchment Strategy (2004);*
- *Port Phillip and Western Port Native Vegetation Plan (2006);*
- *Port Phillip and Western Port Regional River Health Strategy (2006)* and *Addendum (2007).*

4.5 Evaluation Objectives and Criteria

The EES should provide an integrated assessment of the proposal, in terms of the implications of likely effects and associated risks, with respect to:

- key requirements or objectives under statutory provisions, including policy;
- best practice techniques and technologies;
- objectives and principles of ecologically sustainable development and environmental protection.

This integrated assessment may be assisted by the formulation of performance criteria to address particular effects or risks. These criteria might usefully be linked to higher-order objectives for the integrated evaluation of project effects or outcomes. The following draft objectives include a potentially suitable framework, which could be

refined as the EES proceeds. They reflect relevant legislation and government policy (see above), as well as the key environmental issues identified to date.

The proposed draft objectives to guide the evaluation of potential impacts of the proposal, in the context of the objectives and principles of ecologically sustainable development, are:

- To provide a continuous and balanced road network into the future with sufficient road system capacity in the Frankston-Mornington Peninsula corridor to meet the likely road travel demands resulting from *Melbourne 2030 – Planning for Sustainable Growth*
- To reduce traffic congestion in the central area of Frankston and assist its development as a Transit City under the framework established by *Melbourne 2030* and *Linking Melbourne*.
- To protect residents' amenity and well-being, and minimise any dislocation of residents or severance of communities, to the extent practicable.
- To avoid or minimise impacts on species and communities listed under the *Flora and Fauna Guarantee Act 1988 (Vic)* and *Environment Protection and Biodiversity Act 1999(Cth)* to the extent practicable, to avoid or minimise impacts on other indigenous species and communities and habitat connectivity, and to comply with net gain requirements for biodiversity outcomes.
- To avoid or minimise impacts on Aboriginal and post-settlement cultural heritage, to the extent practicable.
- To minimise any impacts on the long-term viability of rural land uses potentially affected by the infrastructure corridors.
- To protect waterway and floodplain function, including river health values, surface water quality and stream flows and groundwater quality.
- To protect catchment and biodiversity values (including habitat connectivity) and protect against weed invasion.
- To protect the character of significant landscapes, open space and recreation values, to the extent practicable.
- Overall, to provide a clear societal benefit, taking account of residual environmental effects as well as economic outcomes.

The proponent should confirm and refine the "synthesis" evaluation objectives in the context of the performance criteria.

4.6 Existing Environment

The EES should incorporate a general description of the character of the environment for the relevant alternatives, including locations, access, landforms, drainage, land use, heritage values and remnant vegetation. Further, the description of the existing environments should be sufficiently detailed to provide a firm and suitably reliable basis for impact prediction, especially with respect to key environmental assets and values that may be affected.

4.7 Potential Environmental Effects

4.7.1 General Approach

The EES documentation should be prepared in the context of the principles of a systems approach and proportionality to risk, as set out in the Ministerial Guidelines.[1]

The EES must assess potential environmental effects as a result of the construction and operation of the Frankston Bypass. The assessment of environmental effects in the EES, at least in the case of significant risks, should include:

- Potential effects on individual environmental assets, in terms of magnitude, extent and duration of change in the values of each asset;
- Relationships between different effects;
- The likelihood of effective avoidance and mitigation of potential adverse effects;
- The likelihood of adverse effects and associated uncertainty of available predictions;
- Implications of likely effects for implementation of statutory provisions, including policy, as well as consistency with principles and objectives of ecologically sustainable development.

Potential effects of the relevant alternatives need to be systematically identified and assessed in the EES. The depth of investigation of alternatives should be proportionate to their potential to both meet the aims of the proposal in the context of relevant evaluation objectives and performance criteria (Section 4.5).

The scope of field investigations and modelling to be conducted should be discussed with DPCD and the TRG. Ultimately it is the proponent's responsibility to ensure that adequate studies are undertaken and reported, particularly where there are specific information requirements to support statutory applications.

Specific impacts and aspects of investigation are set out below under relevant categories of potential impacts. However, SEITA will need to address any other issues that may emerge and warrant assessment during the investigations and preparation of the EES.

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[1] A *systems* approach involves the consideration of potentially affected environmental systems and interacting environmental elements and processes. This would enable potential interdependencies to be identified, helping to focus relevant investigations and identify opportunities to avoid, mitigate or manage adverse effects. An inter-disciplinary approach should be adopted where appropriate.

A *risk-based* approach should be adopted in the assessment of environmental effects so that suitable, intensive, best practice methods can be applied to accurately assess those matters that involve relatively high levels of risk of significant adverse effects and guide the design of strategies to manage these risks. Simpler or less comprehensive methods of investigation may be applied to matters that can be shown to involve lower levels of risk.

Implementation of a risk-based approach means that a staged study design may be appropriate. The initial phase of investigation should characterise environmental assets that may be affected, potential threats arising from a project, and the potential environmental consequences. This phase should enable the design of any necessary further studies proportionate to the risk to analyse the consequences and likelihood of adverse effects.

4.7.2 Ecological systems

The EES should assess the potential effects of the Frankston Bypass on, and risks to, ecological systems. The EES should provide an inventory of existing ecological assets, as well as an analysis of ecosystem relationships that might be affected by the project.

The EES should identify key project hazards that could affect ecological assets, for example:

- removal or modification of habitat
- reduction in connectivity of habitat
- fragmentation of populations and communities
- changes to hydrological regimes (groundwater and surface water)
- increased risk of weed invasion and disease
- noise, light and pollutants.

Specifically, the EES should:

- Assess any impacts the project may have on ecological communities of particular conservation or other significance, including any communities listed under the *Flora and Fauna Guarantee Act 1988* or *Environment Protection and Biodiversity Conservation Act 1999.* For example, the EES should address potential effects on the Herb-rich Plains Grassy Wetland near the EastLink connection.
- Assess any impacts the project may have on species of particular conservation or other significance, including any species listed under the *Flora and Fauna Guarantee Act 1988* or *Environment Protection and Biodiversity Conservation Act 1999.* Relevant species include the Southern Brown Bandicoot, Growling Grass Frog, Swamp Skink and Dwarf Galaxias.
- Assess potential impacts on other indigenous flora and fauna and the biodiversity values of affected areas, in particular The Pines Flora and Fauna Reserve.
- Address requirements pursuant to *Victoria's Biodiversity – Directions in Management 1997* and *Victoria's Native Vegetation Management – A Framework for Action*, and the hierarchy of principles for avoiding, minimising and providing 'net gain' offsets arising from this framework.
- Assess the impact of development of the bypass on habitat areas and the continuity and connectivity of wildlife corridors, including:
    - increased risk of weed invasion and disease
    - the impact of the project, if any, on fragmenting populations of the Eastern Grey Kangaroo and Southern Brown Bandicoot along the line of the Bypass.

  This assessment should address any implications for the Living Links initiative coordinated by the Port Phillip and Westernport Catchment Management Authority.
- Assess the impact of the bypass construction and operation on aquatic species and river health values of the waterways, tributaries, drains, wetland systems or drainage reserves that may be crossed, in particular Boggy Creek, Watsons Creek, Balcombe Creek (including tributaries and drains), Devil Bend Creek and Tuerong Creek.

- Assess any effect of the project on other conservation values, sites or areas of wilderness, scientific or other special conservation significance, including any potential effects on the ecological character of the Edithvale-Seaford Ramsar area.

In addition, the EES will need to document:

- Any intended measures to minimise and mitigate disturbance to habitats and species/communities, specifically those with high conservation status;
- Proposed measures to manage potential invasion by weeds, pests and disease;
- An outline of proposed rehabilitation of vegetation in disturbed areas;
- Proposed off-sets to achieve a net gain under the *Native Vegetation Management – A Framework for Action*.

A summary assessment of impacts on matters of national environmental significance should be provided in a separate section of the EES. These matters and the potentially affected species/communities have been identified in the advice provided to DPCD by the Department of the Environment and Water Resources, as reproduced in Appendix 1 of these Scoping Requirements. This assessment should draw on pertinent findings in the EES which provide an integrated assessment of effects on ecological systems.

4.7.3 Geology and Soils

The EES should:

- Assess erosion, soil stability and sedimentation hazards associated with construction of the proposed bypass and any proposed control measures.
- Address geotechnical issues such as batter stability, suitability of material from cuts and erosion potential scour and dispersal indices.

The EES should also provide an assessment of the presence of acid sulphate soils and soils potentially contaminated through existing and past land use within the corridor for the bypass. If such soils are present, the EES should detail their implications for the construction of the Frankston Bypass, the environmental effects of their excavation and disposal and the potential measures for treatment and management. Investigations should take account of the requirements of *State Environment Protection Policy (Prevention and Management of Contamination of Land) 2002*.

4.7.4 Surface Water

The EES should assess potential impacts related to surface drainage, water quality, flooding/hydrology, and the conditions and river health values of floodplains and waterways (including tributaries and drains), wetland systems and drainage reserves.

Specifically the EES should:

- Assess the existing conditions of waterways including Boggy Creek, Watsons Creek, Balcombe Creek and its tributaries, Devil Bend Creek, Tuerong Creek, floodplains and drainage paths in the vicinity of the road alternatives.
- Assess the existing and post-project hydraulic behaviour of drainage paths, waterways and floodplains, with particular reference to designated flood levels in the vicinity of the relevant alternatives.
- Identify and assess the potential for short- and long-term impacts of the construction and operation of the Frankston Bypass on the quantity and quality

of surface runoff and waterway water quality, as well as on the hydrology and character of local waterway and floodplain management.

- Detail the proposed short- and long-term water sensitive road design measures and opportunities to minimise the impact of the construction and operation of the Frankston Bypass on waterway functions and values.
- Describe proposed measures to rehabilitate affected waterways, drains, wetland systems and drainage reserves, particularly those with high ecological and/or social values, to improve their condition in line with the *Port Phillip and Western Port Regional Health Strategy (2006)* and *Addendum (2007).*

The EES will need to address all relevant policy and requirements for managing discharges and protecting water quality and river health values, in the context of the *State Environment Protection Policy (Waters of Victoria),* floodplain management plans and other water-related policies and strategies e.g. *Urban Stormwater - Best Practice Environmental Management Guidelines,* and the *Port Phillip and Western Port River Health Strategy (2006)* and *Addendum (2007).*

4.7.5 Groundwater

The EES should assess the potential impacts of the construction and operation of the Frankston Bypass on groundwater, in the context of the *State Environment Protection Policy (Groundwaters of Victoria).* Specifically the EES should:

- Characterise the existing geological and hydrogeological conditions for relevant alternatives, particularly of any significant sites, features or resources, including sub-surface channels;
- Assess the implications of soil and substrate conditions for infiltration of surface water from road runoff to the groundwater table;
- Assess the potential short- and long-term impacts of the relevant alternatives on groundwater (quality and movement);
- Identify mitigation measures required in the design and construction of the proposed bypass to minimise risks to groundwater and impacts on existing bores and other beneficial uses.

4.7.6 Landscape

The EES should:

- Describe the landscape character of the viewshed for the Frankston Bypass, in the context of the topography, land cover and land uses of the area.
- Assess the potential changes to the landscape, and associated visual impacts of the proposal, in the context of both alternative designs and planned mitigation measures. Specifically, this assessment should address:
  - Appearance of the landscape after construction of the proposal;
  - Impact of removal of indigenous and exotic flora, especially significant individual trees and groups of trees, as well as proposed landscaping for the bypass and native revegetation offsets;
  - Landscape impact on cultural heritage places;
  - Impacts on continuity and connectivity of the riparian zone along waterways;
  - Impact of high fills in valleys and deep cuts in ridge lines from the proposal on the landscape;

  - Impact on viewsheds from significant vantage points in the vicinity of the proposal;
  - Impact of any required relocation or alteration of significant infrastructure, including electrical transmission or sub-transmission lines;
  - Landscape capacities to accommodate the relevant alternatives;
  - Implications for landscape character objectives in relevant Significant Landscape Overlays and relevant environmental objectives in Environmental Significance Overlays.
- Specify any proposed measures to minimise and mitigate the landscape impacts of the Frankston Bypass, and integrate the proposal with the surrounding landscape, including planting and revegetation and rehabilitation of any waterway, tributary or drain.
- Assess the effects of the Frankston Bypass (including any necessary acoustic barriers) on the visual amenity of local dwellings and recreational areas. Proposed measures to minimise and mitigate visual amenity impacts should be described.

4.7.7 Land Use Effects

The EES should assess the potential effects of the Frankston Bypass on existing land uses and infrastructure that support current patterns of economic and social activity, as well as its implications for future shifts in patterns of activity and associated implications for land use and development.

Potential project effects on existing and proposed land uses and infrastructure (such as major sewerage pipes in the vicinity of the bypass corridor) will need to be evaluated in light of relevant planning scheme provisions. The links between land use effects and other physical, ecological and social and economic effects should be described.

Specifically, the EES will need to:

- Assess compatibility of the proposal with existing land use in the vicinity of relevant alternatives;
- Assess likely opportunities for and constraints resulting from the Frankston Bypass for future land use and development in the vicinity of the bypass, taking into account the provisions of the Green Wedge Zone;
- Identify opportunities to minimise impacts of the Frankston Bypass on the use and development of surrounding land-uses (for relevant alternatives); and
- Assess the consistency of relevant alternatives with the policies and provisions in the Frankston and Mornington Peninsula Planning Schemes and other relevant planning strategies.

4.7.8 Roads and Traffic

The EES should describe the regional and local road network and assess the potential effects of the relevant alternatives on the road network, during construction and operation of the Frankston Bypass. Detailed traffic modelling is not required for the construction phase.

Traffic modelling should address changes in traffic volumes, travel times and user costs resulting from the Frankston Bypass, having regard to:

- Future demographic patterns arising from Melbourne 2030;
- Future employment foci;
- Changes in seasonal and permanent populations on the Mornington Peninsula;
- Identified areas for accommodating population growth on the Mornington Peninsula.

Traffic modelling for relevant alternatives should take into account, to the extent practicable, strategic land use and transport initiatives that may have implications for future traffic volumes on the Frankston Bypass, such as development of the Port of Hastings and related transport infrastructure.

The assessment should include:

- Examination of the existing public road network that would connect with the relevant alternatives;
- Consideration of a range of likely vehicle type and fuel cost scenarios;
- Potential traffic safety implications of relevant alternatives, relative to the "no project" scenario;
- Assessment of effects of changed volumes of vehicle movements on roads in the vicinity of interchanges or intersections with the proposed Frankston Bypass, including on: road safety, access to community facilities, local amenity and users, and road maintenance;
- Assessment of potential effects on public transport services in the vicinity of the Frankston Bypass, as well as the potential implications of expanded public transport services; and
- Proposed measures for managing changed traffic effects associated with the Frankston Bypass, in terms of traffic volumes and flows on the surrounding roads (for the relevant alternatives).

The EES should describe proposed traffic management principles and outline proposed mitigation and management measures for the construction phase, covering road safety, different traffic routes, hours of use, traffic speeds and types of vehicles.

4.7.9 Air Quality

The EES should assess the potential effects of the Frankston Bypass on air quality. Specifically this assessment should:

- Identify the potential effects on air quality associated with relevant alternatives for the Frankston Bypass;
- Assess the likelihood that applicable air quality standards could be exceeded in residential areas; and
- If relevant, describe proposed route, design or other measures to avoid unacceptable impacts on air quality.

4.7.10 Greenhouse Gas Emissions

The EES should assess the implications of the Frankston Bypass for greenhouse gas emissions and energy consumption associated with the proposal, as well as the measures to be implemented for their management, in the context of relevant policies and strategies.

The EES should:

- Address any relevant requirements of *State Environment Protection Policy (Air Quality Management)*; and
- Estimate the greenhouse gas emissions resulting from the construction and operation of the Frankston Bypass relative to the 'no project' scenario and other relevant alternatives, in the context of projected urban growth and traffic growth.

4.7.11 Noise

The EES should assess the noise impacts of the proposal on the community. Specifically, the EES should:

- Estimate the generation of noise from all sources and at different periods during the day (24 hours) associated with the construction and operation of the Frankston Bypass and establish the likely levels at sensitive receptors, particularly dwellings; and
- Describe proposed noise management and mitigation measures and demonstrate that the proposal can comply with applicable traffic noise policy.

This assessment is to be in the context of current government policy and practicable noise mitigation options with respect to road management and environment protection.

4.7.12 Aboriginal Cultural Heritage

The EES should assess the impact of the Frankston Bypass and relevant alternatives on Indigenous cultural heritage values. As required under the *Aboriginal Heritage Act 2006*, a cultural heritage management plan (CHMP) should be prepared in close consultation with any relevant Registered Aboriginal Party. The CHMP should aim at the conservation and protection of any Indigenous archaeological sites identified during the preparation of the EES.

Specifically the EES should:

- Include the development of a complex CHMP as specified in regulation 61 of the *Aboriginal Heritage Regulations 2007*.
- Describe proposed measures to avoid or mitigate impacts of the proposed bypass on Indigenous cultural heritage values.
- Identify activities associated with the Frankston Bypass which would require cultural heritage permits, such as geotechnical investigations along the proposed route and other works activities involving ground disturbance prior to bypass construction.

4.7.13 Non-Aboriginal Cultural Heritage

Sites and places of historical significance or other cultural heritage value in the area should be identified, and the extent and significance of potential effects assessed. Assessment of non-Aboriginal cultural heritage sites and places should consider the cultural and related scientific and recreation/tourism values of any significant sites and places, in particular those protected under the *Heritage Act 1995* or through Heritage Overlays in the Frankston and Mornington Peninsula Planning Schemes.

The EES should:

- Identify sites and places of non-Aboriginal cultural significance or sensitivity, because of heritage, recreational or educational values, by drawing upon existing sources, field studies and appropriate consultation;
- Assess potential impacts of the proposed Frankston Bypass on significant sites and places; and
- Propose measures to preserve, record, treat, remove/relocate relics and manage heritage sites and places.

4.7.14 Economic Effects

The EES should assess the likely economic effects of the Frankston Bypass, during both the construction and operational phases, including:

- The magnitude and distribution of significant benefits and costs effects on sectors of the state and regional economies, including tourism and related businesses, and the employment implications of those effects;
- The economic effects of relevant alternatives at the local and regional level in relation to other land uses in the area, including agriculture, business and tourism;
- The direct and indirect jobs created by construction of the Frankston Bypass;
- The effects on the productivity of agricultural land and other adjoining land uses;
- The effects on key infrastructure in the vicinity of the Frankston Bypass corridor;
- The economic implications of staging the construction of the bypass and delaying its commencement.

Financial implications, such as influences on specific business enterprises or compensation issues, will not need to be assessed as part of the EES.

The EES should provide a benefit-cost analysis of each relevant alternative, including the "no project" scenario. This should take account of both the construction cost and ongoing operational and maintenance costs of the proposed bypass. The cost-effectiveness of various options for environmental mitigation or rehabilitation should be described.

4.7.15 Social and Health Effects

The EES should assess the likely social effects of the project, particularly on affected landholders, nearby residents and surrounding communities and interest groups. It should include an assessment of:

- The existing community within the study areas for each relevant alternative, including the distribution of residents in the vicinity, the social and demographic characteristics of the local population and patterns of community interaction and social foci;
- The potential for residents in local areas to be either directly affected through acquisition of their land or indirectly affected through severance or reduction of their amenity, including visual amenity;
- Potential effects on places with particular cultural, recreational or aesthetic values, particularly with regard to significant locations and vantage points;

- Potential effects on the accessibility of services for local communities affected by the Frankston bypass;
- Potential effects on the accessibility of existing and proposed open space;
- Local community attitudes towards the project, and any proposed measures to address current and potential concerns; and
- Impact on emergency services.

The EES should include a separate summary statement on the health implications of the short-listed options for the bypass, drawing upon the assessments of air quality, noise, traffic safety, contamination and physical hazards.
The EES should assess the overall implications of the Frankston Bypass for different social groups in communities along the bypass route, particularly with respect to the amenity and social networks of relatively vulnerable social groups.

4.8 Environmental Management Framework

The EES should incorporate a framework for managing the environmental risks and outcomes of the project, including:

- the envisaged statutory approvals and agreements that will underpin environmental management plans and measures;
- the Environmental Management System to be adopted (eg. based on ISO 14001), including organisational responsibilities and accountabilities;
- proposed environmental indicators and objectives to guide environmental monitoring and management actions;
- an outline of environmental management plans for the construction and operational phases, where relevant;
- a summary of environmental management measures proposed in the EES to address specific issues, including key environmental commitments of the proponent to mitigate adverse effects and enhance environmental performance
- the proposed program for evaluating environmental outcomes, reviewing and revising environmental management plans, as well as the auditing and reporting of performance;
- arrangements for management of and access to baseline and monitoring data, to ensure the transparency and accountability of environmental management as well as to contribute to the improvement of environmental knowledge.

4.9 Consultation and Communications

The EES needs to include in an appendix the proponent's consultation plan for communicating and consulting with the public and stakeholder groups during the course of the EES preparation.

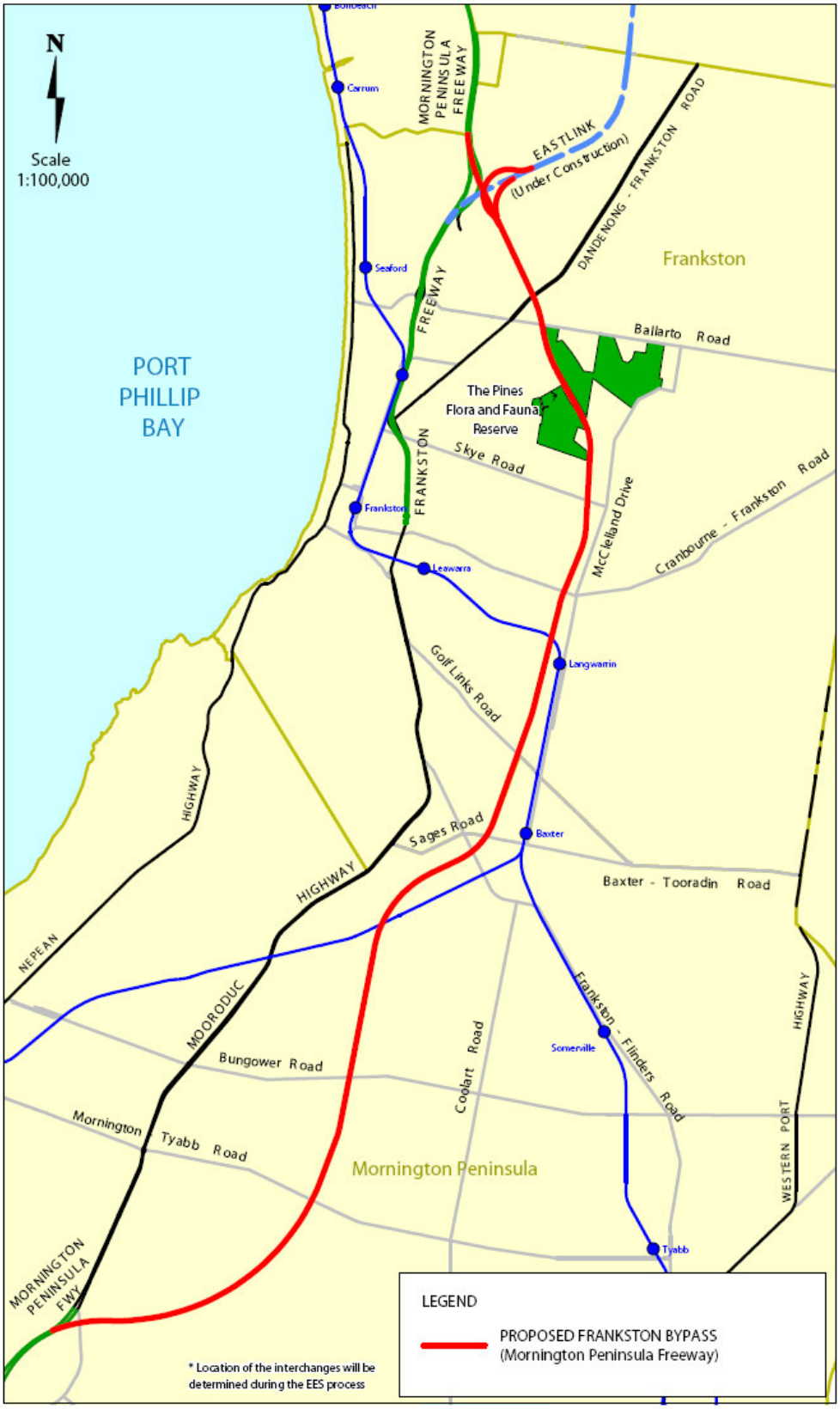
It should also describe the outcomes of consultation undertaken as part of specific impact studies, the issues and suggestions put forward by stakeholders or members of the public (by theme and source, rather than individually) and the response made by the proponent as part of the EES studies or through refinements to the proposal.

4.10 Project Management

The EES needs to describe the:

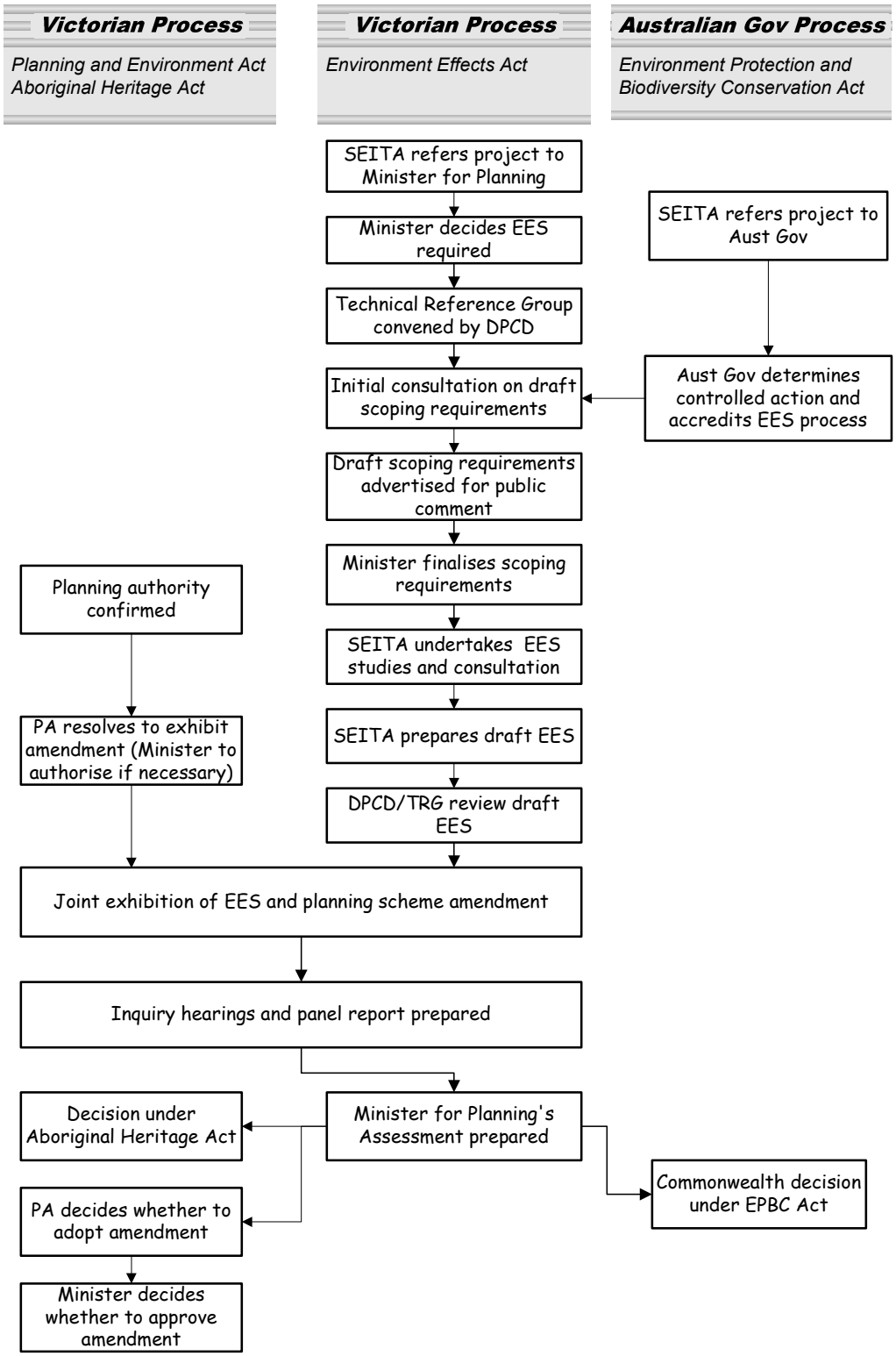
- EES project management arrangements;
- Coordination between the interrelated investigations and studies, to inform the preparation of the EES and the likely implementation of the project;
- Proposed project implementation strategy, including the procurement process, oversight and accountabilities, to ensure that the framework for managing the environmental risks is effectively implemented.

Figure 1 General Route of Frankston Bypass



This map shows the freeway route currently reserved in the corridor, however, other options will be considered as part of the EES process.

Figure 2 Statutory Processes for Frankston Bypass



APPENDIX 1

MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Matters of National Environmental Significance for Frankston Bypass Project

Existing Environment

The matters of National Environmental Significance (NES) to be specifically addressed under the requirements of the *EPBC Act* are, but should not be limited to:

- Section 18 and 18A (listed threatened species and ecological communities)
  - *Endangered*
    - Southern Brown Bandicoot (*Isoodon obesulus obesulus*).
    - Frankston Spider Orchid (*Caladenia robinsonii*).
    - Cream Spider-orchid (*Caladenia fragrantissima subsp. orient*).
    - Fringed Spider Orchid (*Caladenia thysanochila*).
    - Matted Flax Lily (*Dianella amoena*).
    - Maroon Leek Orchid (*Prasophyllum frenchii*).
    - Metallic Sun Orchid (*Thelymitra epipactoides).*
  - *Vulnerable*
    - Growling Grass Frog (*Litoria raniformis*).
    - Dwarf Galaxias (*Galaxiella pusilla*).
    - Yarra Pygmy Perch (*Nannoperca obscura*).
    - River Swamp Wallaby Grass (*Amphibromus fluitans.)*
    - Thick-lip Spider Orchid (*Arachnorchis tessellata*).
    - Clover Glycine (*Glycine latrobeana*).
    - Leafy Greenhood (*Pterostylis cucullata*).
    - Swamp Fireweed (*Senecio psilocarpus*).
    - Swamp Everlasting (*Bracteantha palustris*).
- Sections 16 and 16B (Ramsar Wetlands)
  - Edithvale-Seaford Ramsar Wetland
- Sections 20 and 20A (Listed Migratory Species)
  - Sharp-tailed Sandpiper (*Calidris acuminata*)
  - Swift Parrot (*Lathamus discolor*)

In relation to the above listed threatened species and migratory species the baseline data provided in the EES should describe the known and potential presence of these species in the vicinity of the proposal and the location, extent and quality of potential habitat for these species.

In relation to the Edithvale-Seaford Ramsar Wetland the baseline data provided in the EES must provide a description of the key ecological values for the site and its proximity to the proposed Frankston Bypass, including contour maps.

Environmental Effects

The following issues should be addressed when assessing the potential impacts on matters of National Environmental Significance

Impact on a listed threatened species or ecological community:
What is considered a significant impact will vary depending on whether the species or ecological community is listed as extinct in the wild, critically endangered, endangered or vulnerable but generally impacts are considered significant if the action might:

- lead to long term decrease in the size of a population or a long term adverse affect on an ecological community,
- reduce the area of occupancy of the species or extent of occurrence of the ecological community,
- fragment an existing population or ecological community,
- adversely affect habitat critical to the survival of the species or ecological community,
- disrupt the breeding cycle of a population,
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline,
- modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for the ecological community's survival,
- result in invasive species that are harmful to the species or ecological community becoming established,
- interfere with the recovery of the species or ecological community, or
- be inconsistent with any existing recovery plan.

Impact on a listed migratory species:
What is likely to have a significant impact on a migratory species is an action which may lead to:

- loss or modification of habitat important for migratory species (including fragmentation, altered land use, fire regimes, altered nutrient cycle etc);
- introduction of invasive species; and/or
- disruption to lifecycle (breeding, feeding, migration, roosting etc).

Impact on a Wetland of National Importance
What is likely to have a significant impact on a wetland of national importance is an action which may lead to:

- Areas of wetland being destroyed or substantially modified;
- A substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change in volume, timing, duration and frequency of ground and surface water flows to and within the wetland;
- The habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected;
- A substantial and measurable change in the water quality of the wetland – for example a, substantial change in the level of salinity, pollutants or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health; or
- An invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.
- Light pollution resulting from a development.
- Pollutant and waste run off.

Proposed Mitigation (Environmental Management Framework)

The EES should clearly state all measures intended to avoid and minimize all the potential impacts on the relevant matters of NES.
This includes any intended monitoring of the proposed mitigation measures and the intended response in the event that monitoring demonstrates that the measures are not successful. Thresholds should be specified as triggers for remedial action.

The documents should also detail any environmental offsets intended to provide compensation for impacts of the proposed development.