Doncaster Rail Study

Study Scope

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State Government Victoria

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Purpose

The purpose of this document is to outline the broad scope of the Doncaster Rail Study and provide a clear understanding of the objectives, funding, timing, consultation methodology, deliverables and governance arrangements.

2. Background

The Victorian Government recently announced the provision of $6.5 million to examine a number of options for providing a high quality heavy rail link to Doncaster.

Doncaster is one of the most important commercial and civic centres within the City of Manningham. Although there has been significant growth in patronage of recently upgraded bus services from Doncaster to the CBD, the City of Manningham remains the only metropolitan Melbourne municipality without train or tram services.

Detailed investigations are being done to help the Government understand the requirements of a high quality heavy rail link for communities within the Manningham, Boroondara, Yarra, Whitehorse, Banyule and Maroondah municipalities.

Planning for Doncaster Rail will be undertaken in the context of a broader network development strategy - noting other planning initiatives committed to by the government including the Melbourne Airport Rail Link Study and Rowville Rail Feasibility Study.

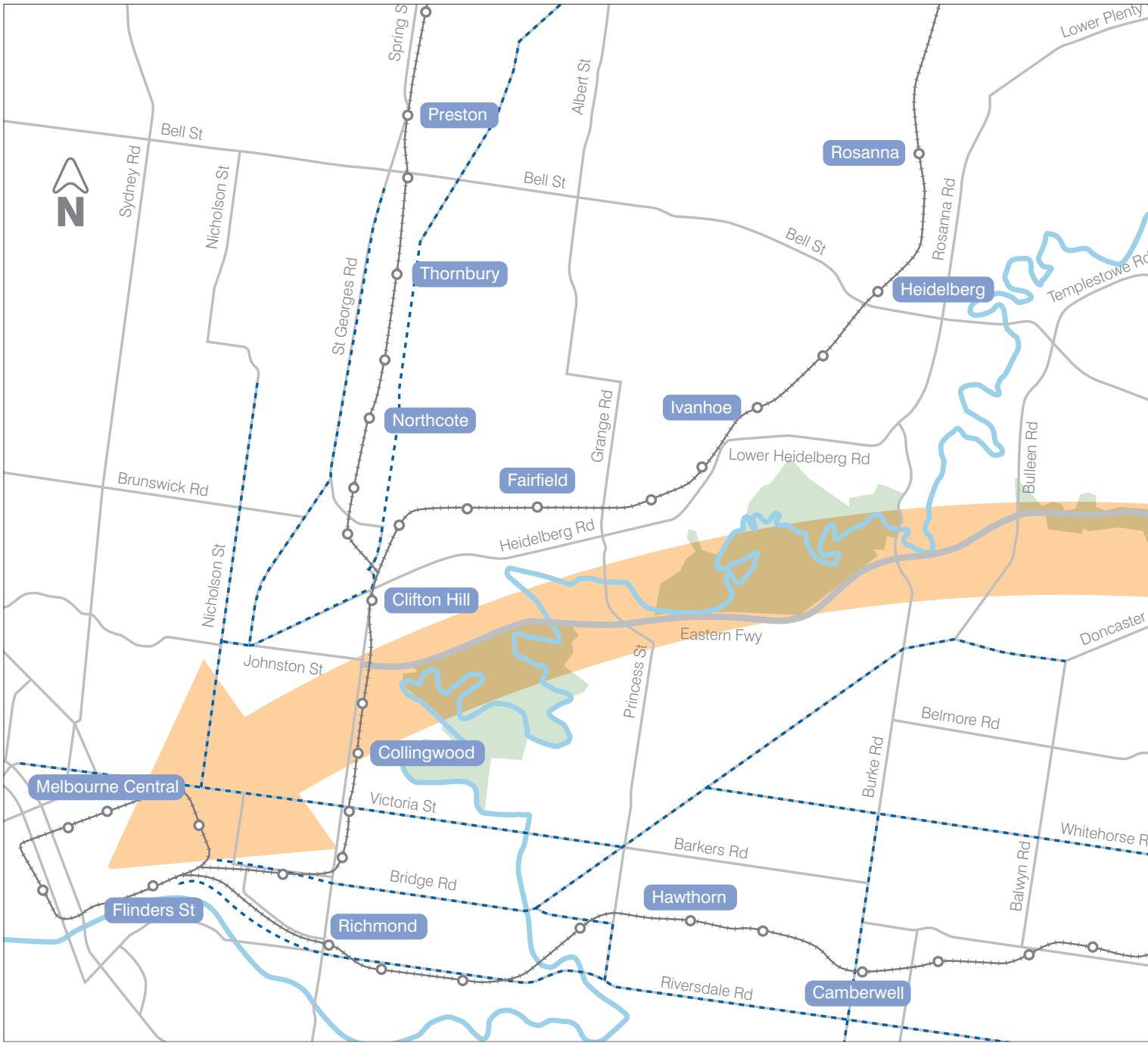
3. Study Objectives

The aim of the Doncaster Rail Study is to provide an independent assessment of the requirements of constructing a heavy rail line to Doncaster. The study aims to:

- engage with key stakeholders and the community to assess travel needs and establish views on concept designs for a Doncaster rail line
- provide concepts for a proposed Doncaster railway line
- ensure that the interface to the rail proposal integrates with all operational and strategic plans for the existing and future rail, tram and road network
- identify key issues, constraints and opportunities relating to transport efficiency and reliability, land use planning, and environmental, social and economic sustainability
- develop a report that provides recommendations to government for a heavy rail solution, with an assessment of potential impacts and how to minimise them.

The study will work out the best way to:

- meet patronage demand in the medium and long term
- provide a frequent, clean, reliable and higher capacity mode of public transport service for local communities
- improve integrated transport opportunities and land use
- achieve broader social, economic and environmental outcomes.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Spring St
Albert St
Lower Plenty
Preston
Bell St
Rosanna
Sydney Rd
Nicholson St
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Thornbury
Templestowe Rd
Heidelberg
St Georges Rd
Ivanhoe
Northcote
Grange Rd
Lower Heidelberg Rd
Bulleen Rd
Brunswick Rd
Fairfield
Heidelberg Rd
Nicholson St
Clifton Hill
Eastern Fwy
Doncaster
Johnston St
Princess St
Belmore Rd
Collingwood
Burke Rd
Melbourne Central
Victoria St
Barkers Rd
Whitehorse R
Bridge Rd
Balwyn Rd
Hawthorn
Flinders St
Richmond
Riversdale Rd
Camberwell

4. Cost and Duration

The Study will be delivered in two phases. This Study Scope is for Phase One only.

Phase 2 will develop more detailed proposals subject to the findings of Phase One.

Cost: $6.5 million

Duration: 2 years

Phase One

2011-12

Phase Two

2012-13

The aim of the Doncaster Rail Study is to independently assess the needs of building a heavy rail line to Doncaster.

5. Consultation and Communication

A key part of the study is to engage with key stakeholders, business, industry, transport operators and the community. Early engagement will add value to the study process through assessing the community's travel needs and their perspective on current and future transport requirements for the local area and surrounds.

A range of engagement tools and techniques will be used as part of the study process, including community workshops and drop-in sessions, targeted interviews with key stakeholders, online engagement and a public submission process. In particular, engagement with relevant local governments will be critical throughout the study.

Policy

The Victorian Government and the Department of Transport have a number of policies and plans that aim to incorporate open, early and extensive community consultation into all projects.

In developing the community consultation and communication framework, the study team must give consideration to the:

- *Transport Integration Act 2010*
- IAP2 Stakeholder Engagement Guidelines
- DOT Stakeholder Engagement Policies and Guidelines
- Victorian Government Web 2.0 Action Plan
- policies and practices of local municipalities.

Local Government

Engaging with local government is an integral part of the study. The study team will work alongside councillors and officers to ensure that local municipalities are able to provide input into all aspects of the study by:

- assisting in understanding social needs and communicating with local stakeholders
- providing technical expertise and advice in relation to land use planning, infrastructure, engineering and the environment
- identifying risks and opportunities
- reviewing technical reports.

The study team will work with local government to determine the most appropriate and effective processes for engaging both councillors and officers throughout the course of the study.

Inter-Government & Agency Liaison

Given the emphasis on developing integrated options, and the range of related projects that are likely to be occurring or developing within the Melbourne metropolitan area, it is expected that the study team will regularly liaise with other departments and agencies. The team will also engage with engineering and integrated transport planning staff within the Department of Transport.

Online Engagement & Social Media

As an integral part of the consultation process, the use of Web 2.0 applications will contribute to a more transparent, collaborative and participatory approach. Consistent with the Victorian Government Web 2.0 Action Plan, the online engagement strategy will incorporate:

- open, moderated forums
- accessibility for culturally and linguistically diverse (CALD) communities
- accessibility for people with a disability
- regularly updated information, including study reports for discussion
- advanced reporting mechanisms – including qualitative and quantitative research results
- links to local government and other key stakeholder websites
- links to other social media tools.

Public Reporting

Preliminary results of technical and environmental investigations, as well as the outcomes of information sessions and workshops will be summarised for public information purposes and made available in a range of formats.

Community Information Sessions

A number of community forums and workshops will take place through the course of the study. These workshops will be independently facilitated and the outputs will be made available for review by the local community.

Public Submissions

In addition to online forums and workshops, the community will be given the opportunity to make formal public submissions, which will be incorporated into the final Recommendations Report.

A number of community forums and workshops will take place through the course of the study.

6. Study Scope

Phase One

1. Route alignment identification and short listing

A broad range of route options will be identified and considered. The default rail alignment is generally considered to include the 1969 route from Melbourne Central (formerly known as Museum) Station via Victoria Park and the Eastern Freeway to Doncaster.

Variations of this could include a connection from Flinders Street Station via the existing Clifton Hill corridor, deviating along the Eastern Freeway. The original default from Museum Station could also be transposed north to avoid direct connection with the existing Melbourne Underground Rail Loop.

Alternative alignments will also be considered that have the potential to reduce impacts on future road proposals in this area including an east-west link, Hoddle Street and North-East Link.

A number of other routes are expected to be identified by the study team, and key stakeholder groups may provide inputs that could identify further routes. Options with the greatest potential to meet the overall project objectives will be short-listed.

Any route selection will give consideration to longer term extensions easterly beyond Doncaster and generally beyond the City of Manningham in the context of potential metropolitan growth.

2. Network and engineering implications

Alignment options will be developed in the context of the broader network. Network implications that will be examined include:

- geographic coverage
- potential land value capture
- trip generation assessed against operational fit
- other potential opportunities and constraints.

Each potential alignment will be short-listed and then studied from an engineering and environmental impacts perspective. A significant number of connections will be examined in enough detail to short-list for further examination in Phase Two.

3. Station Locations

Key nodes for station locations along each corridor will be identified that integrate with activity centres and/or provide urban regeneration opportunities. This will be analysed at a high level, and optional station locations may be suggested for further study in Phase Two.

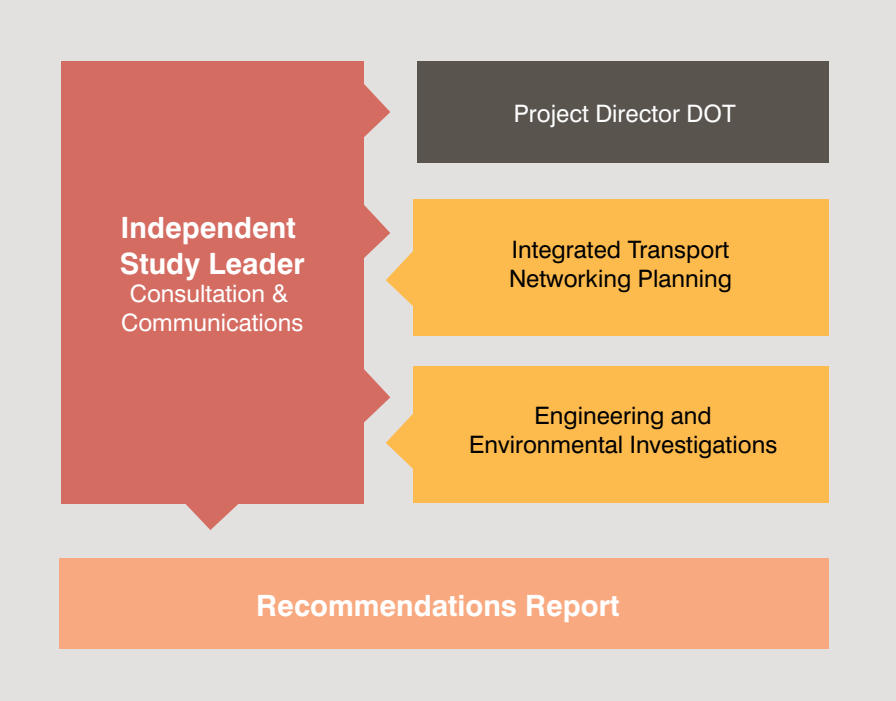
Phase Two

The exact nature of the work in Phase Two is dependant on the recommendations at the conclusion of Phase One.

During Phase Two, a full impact assessment of preferred routes will be undertaken, with an examination of short-listed options involving:

- more detailed corridor design analysis to clarify corridor options studied and refine the preferred options
- proposed station locations along these preferred routes – station options identification and clarification with preferred design identification
- urban design – key urban design issues identification with each location
- investment options and investment strategies
- detailed discussions with various stakeholders and the community.

7. Study Delivery



8. Leadership

The study is being led by an independent study leader who is the single point of reference and key liaison with the Department of Transport, providing direction, independent oversight and reporting.

The study leader will:

- lead the community consultation process
- be well-regarded in the transport industry, with sufficient skill and relevant knowledge
- coordinate, review and lead technical direction undertaken by the various technical streams
- provide expert opinion and judgement drawn from tangible experience
- lead discussions from a transport, land-use and community perspective.

The study leader will review all technical studies through the testing of assumptions, outcomes and recommendations and provide review commentary. At the conclusion of these studies, the study leader will prepare a Recommendations Report summarising their findings and providing a summary of Phase One and its issues, opportunities, constraints and outcomes – recommending a course of action for Phase Two of the study.

The Recommendations Report will incorporate:

- a high level Investment Logic Framework
- project risk and economic assessments
- a Cost-Benefit Analysis - referencing the Transport System Management National Guidelines
- overall environmental, engineering, construction and rail operational risks.

9. Integrated Transport Network Planning

The integrated transport network planning will investigate route opportunities, identify potential routes, and provide a clear methodology to filter and shortlist routes against an analysis of information specifically gathered for this study.

This background information will concentrate on areas from Doncaster to the Melbourne CBD but will also extend at a higher level east to at least Ringwood, and in key directions from city nodes to pick up route extensions beyond Doncaster and the CBD. The investigations will lead to the development of a Route Appraisal Framework including:

Demographic and Land Development Analysis

Demographic and social service provision analyses will examine the best route locations based on population numbers, characteristics, densities and changes over time. This will include population and employment forecasts, as well as a social connections analysis – including community services and social facilities in and around various routes.

Land Development Feasibility Potential (value capture analysis)

The study team will examine the actual and potential increase in land values – for example, land rental value changes over time, identification of potential real estate increase or value capture. This analysis will also show geographic differences at a scale to support route selection.

Transport Demand Analysis

Travel pattern potential and patronage demand will be analysed, including known origins and destinations of Doncaster-based travel and potential origins and destinations in the future. This will start with transport patronage modelling and will also involve the extensive use of the Victorian Integrated Transport Model (VITM) and/or Zenith Models.

Rail Operations Analysis

An analysis of how a new railway could operate in relation to existing rail operations and other planned rail strategies will be undertaken. This will include high level rail operational planning to resolve short and long term operational constraints, including provision for track and train stabling capacity.

The study team will conduct investigations with input from the Department of Transport to identify the current and planned service patterns on the rail network including:

- opportunities and implications for the introduction of new rail services into the existing rail network
- rolling stock and stabling facilities requirements
- the need for further infrastructure including indicative placement of infrastructure
- traction power considerations
- a concept timetable.

Route Engineering and Environmental Filtering Information

Engineering and environmental information provided by engineering investigations will be fed into the analysis to enable a comprehensive understanding of potential routes and their benefits and constraints - especially those that could affect an effective railway solution. This information will be provided at a very high level initially.

Multi-Criteria Analysis

Each route will be subjected to a robust multi-criteria analysis in accordance with the requirements of the Transport Integration Act including:

- social, economic and environmental impact assessments
- opportunities and constraints identification.

As the study progresses, clear corridor results will be identified. Engineering investigations for more detailed mapping and analysis will then be undertaken.

Impacts on Current Services

The study team will conduct investigations, with operational input from the Department of Transport, to determine the likely effect on existing road traffic and public transport services caused by the introduction of a Doncaster rail line.

This will include the potential impacts on:

- existing Doncaster Area Rapid Transit (DART) bus services
- local bus and tram services
- neighbouring railway lines
- traffic volumes on the Eastern Freeway and key arterial roads.

Demographic and social service provision analyses will examine the best route locations based on population numbers, characteristics, densities and changes over time.

10. Engineering and Environmental Investigations

Civil engineering and environmental investigations will develop and/or test alignment options and possible solutions for a new railway.

Alignment Options Overview

A number of alignment options will be drawn in detail. These options will incorporate the information gathered from the integrated transport network planning work, along with the outputs of technical studies, to create feasible routes.

In preparing a design for each option the study team will provide:

- a plan view of the corridor showing route alignment, affected properties, and possible land acquisition
- vertical profile or grade lines shown juxtaposed on the same plan at the same relative scale
- details of how the corridor connects, intersects (actively or passively) to the existing rail network
- details of how the corridor intersects with other major transport infrastructure
- the location and form of possible stations
- sketch designs of architectural concepts for stations and rail infrastructure
- the approximate number of substations and other high cost items of rail infrastructure to assist cost estimation
- concept designs of indicative train stabling locations and maintenance access points.

Any route selection will consider longer term extensions easterly beyond Doncaster and generally beyond the Melbourne CBD in the context of potential metropolitan growth.

Infrastructure

Investigations will include the identification and analysis of existing assets such as:

- rail infrastructure (track, structures, signalling, power and communication)
- roads (signals, structures, buildings and land boundaries)
- utilities (water, power, gas, petrochemical and communications)
- major civil structures such as buildings – including indicative land boundaries and access points.

The study team will also provide at a high level:

- structural asset assessments for the condition and structural adequacy of any assets likely to be impacted by design, construction, operation or maintenance of the rail line
- a signalling concept plan identifying the implications of a fixed signal block system and new generation signalling design
- an electrification concept plan for the Doncaster rail line and interfaces including potential sites for substations
- a desktop geotechnical assessment to inform concept design, including:
  - high level foundation techniques
  - excavation (including mechanical excavation, blasting and tunnelling)
  - treatment of excavated material
  - any specialist tunnel boring or drilling equipment requirements.

Major Utility Asset Location

A desktop study will be done to locate all major services and assets that could be affected by the options investigation corridors, including:

- major water mains
- high tension powerlines and major telecommunications installations
- roads, tramways and railways
- civic and community infrastructure including parks, reserves and major buildings that could impact a rail alignment.

Engineering and Architectural Concept Plans

The study team will:

- provide an overview of the proposed new stations including the location, proposed catchments, and concept plans
- identify possible railway station upgrades required including station, platform and building modifications
- comment on the need for further track works, civil works, bridge/ culvert modifications and develop concept plans
- identify level crossing modifications on the network as a result of changes to operational service patterns of the proposed Doncaster rail line
- provide grade line plans and typical cross sections; and
- consider rolling stock requirements and stabling facilities.

Rail Asset Interface

Where a connection is proposed to the existing rail network, the study team will investigate and map the:

- suitability of the existing rail assets to connect to the new railway

- works required to upgrade existing railway assets to allow connection.

Urban Planning

In investigating the wider implications of a rail line on the surrounding municipality, the study team will:

- conduct a desktop review of planning schemes affecting the identified routes advising planning controls covering the routes
- review municipal strategic statements and structure plans, advising of potential for transport land use integration, constraints or conflict and policy support for transport infrastructure
- identify high level opportunities for transport land use integration.

Land Acquisition by Broad Category and Amount

In assessing the potential impact on the local community, the study team will:

- undertake a desktop review of key land owners (including major public-owned sites) along proposed routes and a broad identification of properties that may need to be acquired
- identify the number of properties listed by major land use categories.

Environmental

Investigations undertaken by the study team will include analysis of:

- groundwater and surface water conditions – outlining constraints and recommendations for integration with rail engineering works
- the potential future need for dilapidation surveys
- potential site contamination;
- flora and fauna
- culture and heritage.

Sustainability

The study team will identify and analyse:

- opportunities for sustainable transport infrastructure (e.g. solar powered shelters, water saving devices, solar orientation, natural ventilation and regenerative braking systems)
- other sustainable modes of transport including walking and cycling (such as shared paths, access, and underpasses).

Accessibility

Accessibility requirements will be assessed in accordance with the *Disability Standards for Accessible Public Transport* (DSAPT) and the *Disability Discrimination Act* 1992 (DDA).

Noise and Vibration

Railways have the potential to create noise and vibration adjacent to the track alignment during their construction, operation and ongoing maintenance, as well as from fixed sites such as stations and electrical infrastructure. The study team will conduct a desktop study to analyse the noise and vibration impacts generated from:

- railway operations such as rolling noise from wheel/rail interface, engine, motor, and aerodynamic noise
- fixed infrastructure sites such as stations, plant and stabling locations
- construction and ongoing maintenance.

Constructability Report

The constructability report will review each of the route options and provide high level comment on the:

- construction program, staging and timing
- impact of the construction process on surrounding properties, road users and existing public transport services
- amenity impacts of proposed designs, with regards to vibration, noise and visual impact
- safety of the proposed designs with regard to rail operations, trespass, fire and evacuation.

Cost estimates

The study team will prepare a high level cost estimate for each option which will:

- provide separate costs for each of the areas of the design
- separately identify the costs associated with plant, materials and labour to enable construction of the design in accordance with the high level constructability plan
- separately identify costs for all temporary works associated with the construction of the designs
- identify the high level Total Estimated Investment cost for the designs (including capital costs estimated in total and operational costs estimated on a per annum basis)
- identify the timing of when costs are likely to be incurred based on the constructability and planning schedule
- include contingencies to address any identified risks or unknowns.

Technical Investigations Reporting

Against each of the routes identified for study by the integrated transport network planning, the results of the engineering and environmental investigations will be provided in a report that summarises key findings, identifies risk areas, and provides recommendations for later design work.

A number of alignment options will be drawn in detail. These options will incorporate the information gathered from the integrated transport network planning work.

11. Governance

The study will be the responsibility of the independent study leader contracted by the Department of Transport. The study leader will lead briefings on study progress and outcomes to stakeholders and the community, the Department of Transport and the Minister for Public Transport as required.

A State Government Interagency Advisory Group comprising of representatives from the Department of Transport (Public Transport Division), Department of Treasury and Finance and Department of Premier and Cabinet will facilitate resolution of issues during the study.

Disclaimer: *The Department of Transport, its advisers and consultants do not make any representation of warranty, express or implied, as to the accuracy, reliability or completeness of the information contained in this document.*

More information

Community input is an important part of the planning study process. As the project progresses, we will keep you informed about the range of options under consideration and give you the opportunity to provide feedback.

For more information about the project please:

Visit www.transport.vic.gov.au/doncasterrail
Join the online discussion
Email doncasterrail@transport.vic.gov.au
Call 1800 078 387

Arabic	عربي	9280 0758
Cantonese	廣東話	9280 0759
Croatian	**Hrvatski**	9280 0760
Dinka	**Dinka**	9280 0776
Greek	**Ελληνικά**	9280 0761
Italian	**Italiano**	9280 0762
Macedonian	**Македонски**	9280 0763
Mandarin	普通話	9280 0771
Polish	**Polski**	9280 0764
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