



Melbourne Metro Rail Tunnel, VIC

The Melbourne Metro Rail Tunnel project is the critical enabler of a metro-style rail system in Melbourne, which is needed to deal with population growth, decreasing access to jobs and services, a poorly performing and congested transport system and declining productivity growth.

It is a pivotal city-shaping transport and land use initiative to transform Melbourne's rail network to a metro-style system and will be Victoria's largest ever rail investment.

The rail tunnel from South Kensington to South Yarra will dramatically increase transport capacity to central Melbourne, improving accessibility to Melbourne's knowledge economy and facilitating inner urban renewal through a major mixed-use development precinct in North Melbourne.

Approximately nine kilometres long and including five new underground stations, the new tunnel adds vital capacity to the inner core rail network and provides direct rail connections for the first time to the St Kilda Road and Parkville knowledge districts on the outskirts of Melbourne CBD. It also relieves pressure on the congested St Kilda Road – Swanston Street tram corridor, one of the world's busiest, and provides the opportunity to reconfigure the tram network and better serve other parts of the inner city.

The project enjoys strong support from the community and the Commonwealth Government.

Evans & Peck's role

Evans & Peck was initially engaged to prepare a project development budget to progress the definition of the project to concept design suitable for the business case and which would achieve statutory planning and environmental approval.

Evans & Peck has subsequently provided the leader for the systematic assessment of options, facilitating and coordinating a decision-based options assessment to confirm the preferred alignment and station locations.

The merits of deviating from the default were tested along the corridor against numerous criteria, including urban development potential, transport network integration and operations, patronage, constructability, risk and cost.

A key consideration in the options assessment was the cost and constructability of the new rail tunnels in the vicinity of CityLink's Domain tunnel, a major road tunnel south of the CBD.

Evans & Peck then led the creation of the comprehensive business case. This included development of a value-management framework to precisely define the scope of the project and also the policy framework, business need, assessment of patronage, land use and operational impacts, triple bottom line assessment, delivery framework and risk-assessed costs.

Evans & Peck coordinated all of the various inputs to the business case, including planning, costing, risk, economics, design, urban development, constructability, trams, rail operations, and engaged with government departments (Treasury, Premier & Cabinet, Planning and other parts of Transport).

FACTS AND FIGURES

Client: Victorian Department of Transport

Project value: \$5 billion +

E&P involvement: 2010 - ongoing

Developing a comprehensive business case which was designated as 'ready to proceed' by Infrastructure Australia

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Melbourne Metro Rail Tunnel (continued)

Evans & Peck has been involved in the project on a number of other assignments to support the advancement of the project. Tasks have included:

- managing the risk process for the project, including consolidation of the discipline risk registers to underpin the risk-adjusted cost and comprehensive risk analysis for the business case
- providing a project delivery advisory specialist, particularly addressing tunnelling, project delivery and commercial considerations
- providing advice on the architectural, geotechnical and engineering technical reference design briefs.

In early 2011, Evans & Peck was engaged to undertake a detailed constructability assessment of an alternative vertical alignment to that of the first concept design, the subject of the Business Case. The purpose of the assessment was to provide feedback on the proposed alternative design, to assess the impacts of its construction and provide a comparison to the Business Case design and provide input to the planning process and examination of the alternative design solutions for construction and commissioning options.

Evans & Peck has also developed subsequent versions of the business case, including a preliminary business case for Corridor Protection and a complete update of the business case to incorporate the latest design and policy framework.

Results

Melbourne Metro has been designated as 'ready to proceed' in the Transforming our Cities category by Infrastructure Australia, one of only two projects (in June 2010) in Australia in this category.

The business case was highly commended as part of the independent Gateway review facilitated by State Treasury.