GGlossary and Abbreviations

Glossary of key terms

| 1. **Term** | 1. **Definition** |
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| 1. Accessibility | 1. The ability of people to reach desired goods, services, jobs and activities from a particular geographic location |
| 1. Agglomeration | 1. The ability of businesses to achieve higher productivity through economies of scale and scope. In urban economies, economies of agglomeration are the benefits that firms obtain by locating near each other or in areas that have a high density of economic activity. |
| 1. Alignment | 1. The proposed linear infrastructure route for Melbourne Metro as set out in the Concept Design. This includes the vertical and horizontal route. |
| 1. Alternative design option | 1. Potential alternative solutions to the project’s design or route alignment within the proposed project boundary that have been assessed as part of the EES process. |
| 1. AM peak period | 1. Two-hour period between 7am and 9am |
| 1. Amenity | 1. Attractiveness or value of a geographic location |
| 1. Arterial road | 1. High capacity urban road that moves traffic from local roads to highways / freeways |
| 1. Aurecon, Jacobs and Mott MacDonald Joint Venture | 1. The contracted entity that is providing the Technical, Planning and Engagement Advisory Services for Melbourne Metro |
| 1. Benefits | 1. Benefits or improvements that can be attributed directly to some aspect of the project’s design, construction and operation |
| 1. Burnley Group | 1. The Belgrave, Lilydale and Alamein Lines, operating via the Burnley Loop |
| 1. Caulfield Group | 1. The Cranbourne and Pakenham Lines and (dependent on the constitution of the Cross-City Group) the Frankston and Sandringham Lines |
| 1. Cavern | 1. Caverns are excavated using the heading and bench method. This is a sequential technique, whereby the upper section is excavated first, followed by the middle section (bench) and finally the invert. Roadheaders (which have a boom-mounted cutting head mounted on a crawler travelling track) are used as the primary excavation equipment. |
| 1. CBD | 1. The Central Business District of Melbourne, which is bordered by Spencer Street to the west, La Trobe Street to the north, Spring Street to the east and Flinders Street to the south |
| 1. Central Melbourne | 1. The area that includes the CBD, Fishermans Bend, Docklands, Southbank, St Kilda Road, Parkville and the Arden-Macaulay urban renewal precinct |
| 1. City cordon | 1. The stations immediately prior to the City Loop on the existing network: currently Richmond, North Melbourne and Jolimont. Once Melbourne Metro is operational, the Cranbourne/Pakenham Line cordon would be measured at Domain station and the Sunbury Line cordon at Parkville station. |
| 1. City Loop | 1. Also known as the Melbourne Underground Rail Loop (MURL). Comprises four single track tunnels for each of the four metropolitan rail groups (Caulfield, Northern, Burnley and Clifton Hill). Trains operate in either direction through thee underground stations: Parliament, Melbourne Central and Flagstaff. The tunnels connect to Flinders Street and Southern Cross Stations over the Flinders Street Viaduct to form the ‘loop’. |
| 1. Commissioning | 1. Final project stage that involves full testing of a system or systems before bringing them into use |
| 1. Concept Design | 1. A comprehensive design proposal for constructing and operating the proposed project, used for assessment purposes. The Concept Design is not the final, detailed design for the project. The design could be refined further within the approved Project Area (see below) by the parties who are contracted by the State to develop Melbourne Metro, provided the final design meets the approved project objectives and the recommended Environmental Performance Requirements. 2. The Concept Design demonstrates a technically feasible way for the project to achieve the Victorian Government’s objectives and meet the Environmental Performance Requirements for Melbourne Metro. It has negotiable and non-negotiable components. Non-negotiable items include station locations and station entrance locations. |
| 1. Connectivity | 1. The ability to have several points of transport ingress or egress to a location. Good connectivity means having a number of options to get to a destination. |
| 1. Construction contractor | 1. The private party or parties engaged by the State to design, construct, operate and maintain the project |
| 1. Construction Environmental Management Plan (CEMP) | 1. A plan that sets out detailed processes and actions to meet the Environmental Performance Requirements. CEMPs are generally prepared for the construction and operation phases of a project. |
| 1. Construction footprint | 1. Includes areas required for the location of permeant structures and areas required for construction works and activities. The construction footprint is contained within the proposed project boundary. |
| 1. Cross-City Group | 1. Currently consists of the Werribee, Williamstown and Frankston Lines. Once Melbourne Metro is operational, this group would comprise the Werribee, Williamstown and Sandringham Lines. This group would operate via Flinders Street and Southern Cross Stations. |
| 1. Cross passages | 1. Transverse tunnels connecting main running tunnels |
| 1. Crossover | 1. Two turnouts arranged to connect two adjacent tracks |
| 1. Cut and cover construction | 1. A large cut and cover box is a common construction technique for underground railway stations. Cut and cover construction can be conducted through a top-down or bottom-up configuration. |
| 1. Dandenong Group | 1. The Pakenham and Cranbourne Lines, operating via the City Loop |
| 1. Decline structure | 1. The approach structure to the portal (tunnel entrance) |
| 1. Design and Development Overlay (DDO) | 1. An overlay to a local planning scheme to protect activities or structures from inappropriate or incompatible development. A new DDO would be applied to identify and protect the Melbourne Metro tunnels, stations and associated infrastructure from future development that could potentially affect its capacity to operate in the Melbourne, Port Phillip and Stonnington Planning Schemes. |
| 1. Draft evaluation objectives | 1. Evaluation objectives included within the Scoping Requirements (see below) that set out the key matters to be investigated for the EES |
| 1. Dwell time | 1. The length of time a train is stopped at the platform with doors open |
| 1. Early works | 1. Works undertaken prior to the main construction contract commencing |
| 1. Eastern portal | 1. Term used to describe the section between the tie-in to the Dandenong Line and the service facility/TBM retrieval box in the South Yarra area |
| 1. Enabling works | 1. Works undertaken before completion of the EES process to enable the delivery of the Melbourne Metro in a timely manner and to minimise disruption to businesses, residents and visitors to the Melbourne CBD. These works do not form part of the declared ‘public works’ under the *Environment Effects Act 1978.* |
| 1. Emergency access shaft | 1. A vertical opening to grant access to the tunnels for emergency services personnel. Shafts are spaced at appropriate intervals to meet safety requirements. |
| 1. Environment Effects Statement (EES) | 1. A statement prepared under Victoria’s *Environment Effects Act 1978* that assesses projects with the potential to have a significant effect on the environment. On 3 September 2015, the Minister for Planning determined that the works proposed to be undertaken for Melbourne Metro could reasonably be considered to be capable of having a significant effect on the environment and that the MMRA, as the project proponent, must prepare an EES to allow the Minister to assess the environmental effects of the works. |
| 1. Environmental Management Framework (EMF) | 1. Documents that include verifiable commitments on how environmental impacts would be managed, minimised or avoided during construction and operation of the project. The framework provides the basis for placing clear obligations on the constructor(s) delivering the project. |
| 1. Environmental Management System (EMS) | 1. A document prepared by the contractor(s) that provides an overview of environmental management during the construction and operation phases of the project. The EMS is an overarching document from which the more specific EMPs are developed. The EMS ensures that commitments for environmental protection and management (as set out in the EES and required by approvals) are met. |
| 1. Environmental Performance Requirements (EPRs) | 1. A set of environmental outcomes the project must achieve during its design, construction and operation. The project would be delivered in accordance with performance requirements developed through the EES assessment process. This performance-based approach aims to achieve acceptable outcomes for the community and environment, while allowing for a delivery model with sufficient flexibility to encourage innovation by the private sector. |
| 1. Gross Domestic Product | 1. The market value of all final goods and services produced nationally in Australia in a given period |
| 1. Gross State Product | 1. The market value of all final goods and services produced within a state or territory in a given period |
| 1. Gross Value Added | 1. Measure of the value of goods and services produced in an area, industry or sector of the economy |
| 1. High Capacity Metro Train | 1. Trains that are longer, can carry more passengers and are designed to minimise boarding and alighting times |
| 1. Immersed tube tunnel | 1. A tunnel construction method commonly used for crossing a body of shallow water. A trench is dredged and prefabricated steel or concrete elements floated to the tunnel site and sunk into place inside the trench. Water is then pumped out from inside the elements. The elements are then linked together and sealed to form a watertight tunnel. |
| 1. Infrastructure | 1. Basic facilities and networks needed for the functioning of a local community or broader society |
| 1. Inner suburbs/ inner urban | 1. Areas of metropolitan Melbourne within about seven to 10 kilometres of the CBD |
| 1. Interchange | 1. A location where passengers can change to an alternative route or mode of transport |
| 1. Load | 1. Number of passengers travelling on a tram or train, often measured over a rolling hour or over the AM peak period |
| 1. Load breach | 1. For existing rolling stock, where there is more than a rolling average of 798 people on board |
| 1. Melbourne Metro Rail Authority | 1. An Administrative Office within the Department of Economic Development, Jobs, Transport and Resources, which is responsible for the delivery of Melbourne Metro on behalf of the Victorian Government |
| 1. Melbourne Metro Rail Project | 1. The project being assessed in the EES, which includes:  * Twin nine-kilometre rail tunnels from Kensington to South Yarra * Rail tunnel portals (entrances) at Kensington and South Yarra * New underground stations at Arden, Parkville, CBD North, CBD South and Domain * Train/tram interchange at Domain station * A turnback at West Footscray. |
| 1. Metro Trains Melbourne | 1. Franchise operator of the suburban railway network in Melbourne. MTM is a joint venture between the Hong Kong-based MTR Corporation, John Holland Group and UGL Rail |
| 1. Mitigation measure | 1. Measure that would manage, minimise or avoid an identified environmental impact and enable the Environmental Performance Requirement set for the project to be met |
| 1. Northern Group | 1. The Craigieburn, Upfield and Sunbury Lines, operating via the City Loop |
| 1. Opportunities | 1. Opportunities or improvements that arise indirectly as a result of the project and that do not fall within the scope of the project. These opportunities could be created through action taken by the public or private sectors. |
| 1. *Plan Melbourne* | 1. The Victorian Government’s metropolitan planning strategy for Melbourne’s growth to 2050. A refreshed plan is proposed for release in 2016. |
| 1. Planning Scheme Amendment (PSA) | 1. A change to a local planning scheme to achieve a desirable outcome or to support a new project or policy direction. Melbourne Metro would require a Planning Scheme Amendment to the Melbourne, Port Phillip, Stonnington and Maribyrnong Planning Schemes. |
| 1. Portal | 1. The entrance to a tunnel |
| 1. PM peak period | 1. Two-hour period between 4.30pm and 6.30pm |
| 1. Precinct | 1. For assessment purposes, the proposed project boundary for Melbourne Metro has been divided into nine precincts based on the location of project components and required construction works, the potential impacts on local areas and the character of surrounding communities. |
| 1. Project | 1. The Melbourne Metro Rail Project |
| 1. Project Area | 1. The area declared under the *Major Transport Projects Facilitation Act 2009* within which all the project components would be contained |
| 1. Project components | 1. The specific pieces of infrastructure that would need to be built in each precinct to complete Melbourne Metro |
| 1. Project objectives | 1. High-level objectives set by MMRA to establish the broad strategic direction for designing and developing Melbourne Metro |
| 1. Project proponent | 1. The person or body who is carrying out or proposing to carry out any works that could be subject to the *Environment Effects Act 1978*. MMRA is the project proponent for Melbourne Metro. |
| 1. Proposed Project boundary | 1. The proposed project boundary encompasses all areas that would be used for Melbourne Metro’s permanent structures and temporary construction areas, and provides the basis for the specialist assessments conducted for the EES. The proposed project boundary will inform the declaration of the ‘Project Area’ under the *Major Transport Projects Facilitation Act 2009* following consideration of the EES. |
| 1. Public Transport Victoria | 1. Statutory authority responsible for providing, coordinating and promoting public transport in Victoria |
| 1. Reliability | 1. Reliability is measured as the percentage of the timetable that is delivered. Non-delivery of services includes cancellations, trains that run short and trains that bypass the City or Altona Loops. |
| 1. Retrieval shaft/site | 1. Structure/working area used to retrieve the tunnel boring machine |
| 1. Risk Register | 1. A full list of all risks identified for the project |
| 1. Roadheader | 1. An excavating machine with a rotating head mounted on crawler tracks developed for cutting a wide range of medium to hard rocks in underground mining and tunnelling |
| 1. Scoping Requirements | 1. Requirements prepared to ensure that the EES:  * Responds properly to the Order made by the Minister for Planning * Identifies what the environmental effects of the work will be * Explains how the environmental effects of the works would be managed across the different stages and aspects of the project * Provides sufficient and appropriate information to allow the Minister to assess the environmental effects of the works under the *Environmental Effects Act 1978* |
| 1. Spoil | 1. Rock and soil removed during the excavation of the tunnels and construction of the stations |
| 1. State Environment Protection Policy | 1. Victorian environmental policies that set guidelines to protect the environment and to measure, monitor and address environmental issues |
| 1. Station box | 1. A box-like underground structure for a Melbourne Metro underground station |
| 1. Study area | 1. The study area established for each specialist assessment undertaken for the EES. Generally, the study area is the same as the proposed project boundary. In some instances, a broader study area was adopted to ensure that regional impacts are considered. 2. The study area will inform the Project Area under the *Major Transport Project Facilitation Act 2009* following considerations of the EES. |
| 1. TBM launch shaft/site | 1. Structure/working area used for lowering in and launching the TBM |
| 1. TBM retrieval box | 1. A shaft of adequate dimensions to receive a TBM at the end of its drive and allow it to be dismantled and lifted to the surface |
| 1. Technical Reference Group | 1. Agency-based advisory group convened by the Department of Environment Land, Water and Planning to advise it and MMRA on aspects of the project |
| 1. Tunnel boring machine (TBM) | 1. A mechanically operated machine used to excavate a tunnel with a circular cross section through a variety of ground strata |
| 1. Tunnel invert | 1. Lowest point within the tunnel cross section |
| 1. Tunnel ventilation system | 1. A system to provide an acceptable environment in the tunnel in terms of both temperature and air quality and also to remove smoke in the event of a fire |
| 1. Turnout | 1. Track device which permits traffic to turnout from one track to another |
| 1. Urban Design Strategy | 1. A document that provides guidance on the design of the project’s above ground structures. Adoption of the strategy would ensure high quality design applies across the project. |
| 1. Urban renewal | 1. The improvement or rehabilitation of urban areas. Urban renewal traditionally involves demolishing old or run-down buildings on brownfield sites in inner city areas to build new residential or commercial developments or large scale public works projects (such as convention centres, stadiums or freeways). Urban renewal can also build on an area’s existing strengths to make better use of underutilised land located close to jobs, services and transport. |
| 1. Utility Service Provider | 1. A person, other than a public authority or municipal council, having responsibility under an Act for the generation, transmission, distribution or supply of electricity, gas, power, telecommunications, water supply, drainage or sewerage services |
| 1. Ventilation shafts | 1. Shafts used to control air quality during tunnel maintenance and in the event of an emergency |
| 1. Victorian Integrated Transport Model | 1. The four-step strategic traffic model developed by PTV, which is used for strategic modelling of transport projects located in metropolitan Melbourne |
| 1. Victoria Planning Provisions (VPPs) | 1. Specify matters that must be taken into account in considering any application to carry out works. The VPPs include a range of zones and overlays, which councils can select to include in their Planning Schemes. |
| 1. VicTrack | 1. Trading name of the Victorian Rail Track Corporation, a Victorian Government-owned enterprise, which owns all railway and tram lines, associated rail lands and other related rail-related infrastructure in Victoria |
| 1. Wider network enhancements | 1. Further improvements that could be undertaken following the completion of Melbourne Metro to enable further uplift in capacity across the rail network. Wider network enhancements are not within the scope of the EES as they would be developed at a later stage and are yet to be planned in detail. They are not essential to the operation or functionality of Melbourne Metro. |
| 1. Westbound track | 1. Track heading towards Sunbury |
| 1. Western portal | 1. Term used to describe the section between the tie-in to the Sunbury Line and the service facility /TBM retrieval box in the Kensington area |

Note: Technical terms are defined in the glossaries attached to the individual specialist impact assessments, which are attached as appendices to the EES main report.

Abbreviations

| 1. **Abbreviation** |  |
| --- | --- |
| 1. ABS | 1. Australian Bureau of Statistics |
| 1. ANZECC | 1. Australian and New Zealand Environment & Conservation Council |
| 1. ASS / ASR | 1. Acid sulfate soil/acid sulfate rock |
| 1. CBD | 1. Central Business District |
| 1. CEMP | 1. Construction Environmental Management Plan |
| 1. CHMP | 1. Cultural Heritage Management Plan |
| 1. COAG | 1. Council of Australian Governments |
| 1. CoM | 1. City of Melbourne |
| 1. CoPP | 1. City of Port Phillip |
| 1. CoS | 1. City of Stonnington |
| 1. CPLU | 1. Cranbourne / Pakenham Line Upgrade |
| 1. DDA | 1. *Disability Discrimination Act 1992* (C’th) |
| 1. DDO | 1. Design and Development Overlay |
| 1. DEDJTR | 1. Department of Economic Development, Jobs, Transport and Resources (Victoria) |
| 1. DELWP | 1. Department of Environment Land, Water and Planning (Victoria) |
| 1. DoE | 1. Department of the Environment (Commonwealth) |
| 1. DPC | 1. Department of Premier and Cabinet (Victoria) |
| 1. DTF | 1. Department of Treasury and Finance (Victoria) |
| 1. EES | 1. Environment Effects Statement |
| 1. EMF | 1. Environmental Management Framework |
| 1. EMP | 1. Environmental Management Plan |
| 1. EPA | 1. Environment Protection Authority (Victoria) |
| 1. EPBC Act | 1. *Environment Protection and Biodiversity Conservation Act 1999* (C’th) |
| 1. EWLNA | 1. East West link Needs Assessment |
| 1. GDP | 1. Gross Domestic Product |
| 1. GHG | 1. Greenhouse gas |
| 1. GSP | 1. Gross State Product |
| 1. GVA | 1. Gross Value Added |
| 1. HCMT | 1. High Capacity Metro Train |
| 1. HCS | 1. High Capacity Signalling |
| 1. IA | 1. Infrastructure Australia |
| 1. ICT | 1. Information and communications technology |
| 1. IS | 1. Infrastructure Sustainability (IS) Rating Tool |
| 1. ISCA | 1. Infrastructure Sustainability Council of Australia |
| 1. LGA | 1. Local Government Area |
| 1. LSIO | 1. Land Subject to Inundation Overlay |
| 1. Melbourne Metro | 1. Melbourne Metro Rail Project |
| 1. MMRA | 1. Melbourne Metro Rail Authority |
| 1. MTM | 1. Metro Trains Melbourne |
| 1. OH&S | 1. Occupational Health and Safety |
| 1. PPP | 1. Public Private Partnership |
| 1. PSA | 1. Planning Scheme Amendment |
| 1. PTV | 1. Public Transport Victoria |
| 1. RMIT | 1. Royal Melbourne of Institute of Technology University |
| 1. RRL | 1. Regional Rail Link |
| 1. SEPP | 1. State Environment Protection Policy (Victoria) |
| 1. TBM | 1. Tunnel boring machine |
| 1. TRG | 1. Technical Reference Group |
| 1. USP | 1. Utility service provider |
| 1. VHI | 1. Victorian Heritage Inventory |
| 1. VHR | 1. Victorian Heritage Register |
| 1. VCCC | 1. Victorian Comprehensive Cancer Centre |
| 1. VITM | 1. Victorian Integrated Transport Model |
| 1. VKT | 1. Vehicle kilometres travelled |
| 1. VPPs | 1. Victoria Planning Provisions |