Mordialloc Bypass (Freeway)
Design and Construction Overview
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Introduction to Major Road Projects Victoria

Major Road Projects Victoria (MRPV) is a dedicated government body charged with planning and delivering major road projects.
Project Overview

• The 9-kilometre Mordialloc Freeway will connect the Mornington Peninsula Freeway at Springvale Road to the Dingley Bypass

• The project area is a key transport corridor that connects the Mornington Peninsula and bayside suburbs to the city and national innovation employment clusters in Monash and Dandenong

Project Overview

• The Mordialloc Freeway will:
  • provide the community with better access to key employment areas and local amenities
  • improve travel times and ease congestion
  • enable more reliable bus services
  • promote active transport options with an off-road shared walking and cycling path
  • improve safety in the area
Existing Conditions

Northern section of the project area
Existing Conditions

Southern section of the project area

Existing Conditions

Looking towards Old Dandenong Road from the Dingley Bypass

Artist’s impression only
Existing Conditions
Looking towards Chadwick Reserve from Centre Dandenong Road

Existing Conditions
Looking towards Chadwick Reserve

Artist’s impression only
Existing Conditions
Looking towards Braeside Park from Lower Dandenong Road

Existing Conditions
Looking towards Woodlands Wetlands

Artist’s impression only
Existing Conditions
Looking towards Waterways from Governor Road

Existing Conditions
Looking towards Waterways Wetlands

Artist's impression only
Project Design

Design Overview

- The Freeway design has been informed by:
  - **Design Standards:**
    - AustRoad Standards
    - VicRoads Standards
  - **Legislation, Framework and Policies**
    - Environmental Protection Act
    - VicRoads Policies
    - Environmental Management Framework
    - Urban Design and Land Use Framework
    - ISCA Management Framework
Design Constraints

• When designing the Freeway, we considered:
  
  • safe road design, posted speed of 100km/hr Mornington Peninsula Freeway and the Dingley Bypass
  
  • Existing land reserved for the project
  
  • Surrounding land uses
  
  • Environmental factors Mordialloc Creek, wetland areas and vegetation

Initial Design

• The project was first announced as a 9-kilometre arterial road with traffic lights at each intersection

• The community strongly expressed their preference for the road to be built as a freeway with overpasses instead

• Chelsea Heights residents also wanted direct access at Thames Promenade
Design Features

- The reference design includes:
  - bridges over all side roads
  - new ramps at Thames Promenade
  - a pedestrian underpass at Braeside Park
  - a new shared walking and cycling path
  - bus ‘queue jump’ lanes
  - provision for future upgrades

Design Overview

Typical mid-block freeway cross-section near ground level
Design Overview
Typical mid-block freeway cross-section at approach to bridge structure including on and off ramps

Mordialloc Freeway at the Dingley Bypass

Artist's impression only
Design Overview
Mordialloc Freeway at Old Dandenong Road

[Image: Artist's impression only]

Design Overview
Mordialloc Freeway at Centre Dandenong Road

[Image: Artist's impression only]
Design Overview
Mordialloc Freeway in Dingley Village

Design Overview
Mordialloc Freeway at Lower Dandenong Road

Artist's impression only
Design Overview
Woodlands Drive reference design

Design Overview
Mordialloc Freeway at Braeside Park Pedestrian Underpass

Artist’s impression only

Artist’s impression only
Design Overview
Mordialloc Freeway at Governor Road

Artist’s impression only

Design Overview
Mordialloc Freeway at Springvale Road

Artist’s impression only
Design Overview

Mordialloc Freeway at Thames Promenade

Landscape Concept Plan

- We plan to implement:
  - integrated architectural landscaping and design
  - ecological responsive design
  - site specific Environmental Performance Requirements (EPRs)
Landscape Concept Plan
Section of the Landscape Concept Plan
Habitat and Vegetation Protection

• To preserve and facilitate habitat connectivity:
  • twin-bridge structure at Waterways
  • fauna crossings
  • multi-function fauna barriers
  • landscaping and revegetation

Fauna Protection

Example of a culvert structure

Example of multi-purpose fauna fencing
Vegetation Protection

• To protect the local vegetation, we plan to:
  • minimise large tree removal through design
  • establish ‘no-go zones’ and extend these where practicable
  • have an ecologist on site to identify and relocate fauna as required
  • conduct on-site inspections to confirm vegetation to be removed

Noise Mitigation

• To minimise noise, we plan to:
  • include noise walls to protect residential properties in Dingley Village, Waterways and Aspendale Gardens
  • use Open Grade Asphalt for the road’s surface
Water Sensitive Road Design

• We will produce Construction Environment Management Plans and Water Management Monitoring Plans

• The design also includes:
  • Grass swales
  • Bioretention swales
  • Spill containment

Infrastructure Sustainability

• The IS Rating Scheme is a comprehensive system to evaluate sustainability of infrastructure programs

• The project aims to achieve a rating of Excellent in the design and as built phases
Construction Overview

• Construction will only commence following the Environment Effects Statement (EES) process and key approvals being obtained

• We expect the project to take two years to construct
Construction Overview

• Construction activities will be undertaken in accordance with:

  • the contractor’s environmental management system
  • all measures in the environmental management framework of the EES including EPRs

Construction Overview

• Key Activities:

  • Site establishment
  • Site investigation and service and utility works
  • Habitat and vegetation protection
  • Earthworks and haulage
  • Structural works
Earthworks and Haulage

• The area is well serviced by the arterial road network

• As a large quantity of fill is required, we will:

  • prepare detailed Transport Management Plans (TMPs) to manage traffic impacts, including restrictions along Edithvale Road

  • import fill in accordance with EPA guidelines

  • only bring fill in during daylight hours

Structural Works – Driven Piles

![Driven Piles Diagram]

- Placement of pile
- Installation of pile
- Repetition of process
Structural Works – Beam Lifts

Operation and Maintenance
Operation and Maintenance

• MRPV and the Contractor will maintain defects for two years from when the road becomes operational

• The Freeway will then be operated and maintained by VicRoads, the Victorian statutory road authority
  • The handover will include all Environmental Performance Requirements and other measures specified in the project’s subsequent approval conditions

• The shared walking and cycling path will be maintained by the relevant local council