

CHAPTER 3

RECOMMENDED CORRIDOR



3.1 INTRODUCTION

This chapter provides a description of the recommended concept alignment for the Outer Metropolitan Ring/E6 (OMR/E6) Transport Corridor, and a discussion of the rationale for choosing this alignment. The recommended alignment is shown as Figure 3-1 Recommended Option. Further details of the recommended alignment, including plans on a cadastral base, longitudinal sections and cross-sections are contained in Appendix E.

The recommended alignment is indicative only. Any road or rail alignment constructed within the OMR/E6 Transport Corridor may have a different vertical or horizontal alignment to that shown on the attached concept drawings. For example, crossing roads may ultimately pass underneath the corridor rather than over where shown on the plans, or alternatively vice versa. The proposed reservation would provide for interchanges at a number of locations. However, final decisions about where interchanges are actually to be provided will be made in the future.

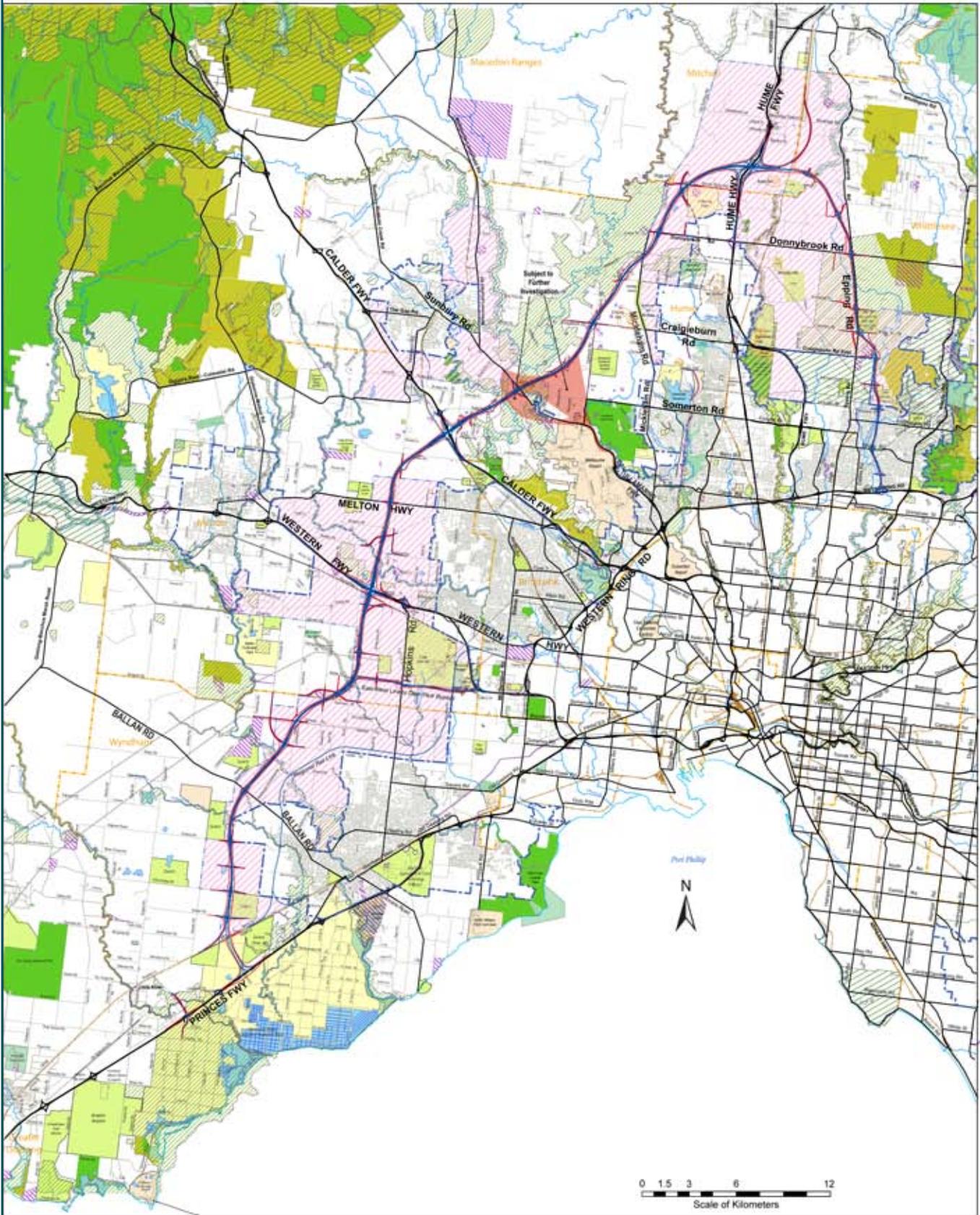
The proposed reservation would protect the maximum width transport corridor considered likely to be needed. However, initial construction may be to a lesser standard based upon traffic requirements and funding availability.

The OMR Transport Corridor would ultimately provide for an eight lane freeway (four lanes in each direction) with four rail lines within the median. It would extend from the Princes Freeway at Werribee to the Melbourne – Sydney rail line at Kalkallo. The E6 Transport Corridor would continue from the OMR at the Melbourne – Sydney rail line (Kalkallo) to the Metropolitan Ring Road at Thomastown. Together, these would form an outer ring transport route of 93 kilometres from Werribee to Thomastown.

As well as ultimately providing for through freeway carriageways of four lanes in each direction, the corridor would also enable auxiliary lanes to be provided where interchanges are closely spaced.

The horizontal and vertical alignments of the OMR are largely governed by the requirements of the proposed rail lines. The OMR rail grades would have a maximum grade of 1% and a minimum horizontal alignment of 2600m radius providing for railway design speeds of 160 km/h for conventional trains and 250 km/h for tilt trains. Freight-only sections of the line (for example, connection from the OMR/E6 Transport Corridor to the Melbourne-Ballarat railway) may have lesser radii.

FIGURE 3.1: RECOMMENDED OPTION



Legend

- OMR & E6 Corridor
- Environmental Significance Overlay
- Public Conservation & Resource
- Urban Growth Boundary
- Vegetation Protection Overlay
- Public Park & Recreation
- Public Acquisition - Roads
- Commonwealth Land
- Rural Conservation
- Heritage Overlay
- Special Use
- Municipal Boundary
- Public Use
- GAA Investigation Area

**Outer Metropolitan Ring / E6 Transport Corridor
Recommended Option
Figure 3.1**

Note: Planning Scheme Overlays Data June 08. Simplified overlay descriptions for clarity purposes.

3.2 CORRIDOR DESCRIPTION

The following provides a more detailed discussion of the alignment within the corridor.

3.2.1 OMR – PRINCES FREEWAY TO WERRIBEE RIVER

3.2.1.1 MAIN CORRIDOR

The interchange at Princes Freeway would provide for all movements from the Princes Freeway to the OMR with ramps having a minimum posted advisory speed of 80 km/h. The main carriageways would be grade separated at a height of 13m above the Melbourne – Geelong Railway line.

Provision has been made in the reservation width for an interchange at either Bulban Road or Kirks Bridge Road. An interchange at Bulban Road would better suit industrial development to the south of Bulban Road. An interchange at Kirks Bridge Road would better suit residential development to the east of the OMR. The reservation has not been designed to enable both interchanges to actually be constructed. However, in the event that an interchange at Kirks Bridge Road was provided, then an overpass may still be provided at Bulban Road. However, if an interchange is provided at Bulban Road, there may not necessarily be any crossing of the OMR/E6 at Kirks Bridge Road.

The OMR railway line would turn off from the Geelong – Melbourne Railway line west of the OMR. The OMR railway line would enter the OMR under the north bound carriageway at around Bulban Road to run within the central median of the OMR. Further north, the vertical gradeline of the OMR would be governed by the railway line requirement of a maximum grade of 1%.

The reservation for the Bulban Road overpass of the OMR/E6 Transport Corridor would enable the provision of two lanes in each direction, to suit traffic requirements if an interchange were to be provided at Bulban Road. To the west of the OMR, Bulban Road would narrow to a one lane in each direction to serve property access to the west of the OMR.

The Kirks Bridge Road overpass of the OMR/E6 Transport Corridor would provide two lanes in each direction. To the west of the OMR/E6, Kirks Bridge Road would either narrow to a to a one lane in each direction to serve property access to the west of the OMR, or not be provided, depending on the requirements of the proposed grassland reserve.

Black Forest Road would be anticipated to pass over the OMR/E6 with one lane in each direction, if it were to be provided. (Note: there is ROW provision for two lanes in each direction).

At Greens Road there would be a full diamond interchange providing for on and off movements in both directions. The Greens Road overpass would have a four lane divided cross section with separate turning lanes. To the west of the OMR, Greens Road would narrow to a two-lane, two way road cross section to serve property access to the west of the OMR.

Ballan Road would have a full diamond interchange providing for on and off movements in both directions.

TABLE 3.1: NON-FREEWAY ROADS CROSSING THE OMR RESERVATION

Road	Proposed cross-section at the OMR	Road over/under the OMR	Interchange type at the OMR
Bulban Road	4 lane divided	Road over the OMR	Provision for full diamond interchange (one only at either Bulban or Kirks Bridge Roads)
Kirks Bridge Road	4 lane divided	Road over the OMR (if required)	Provision for full diamond interchange (one only at either Bulban or Kirks Bridge Roads)
Black Forest Road	2 lane 2 way	Road over the OMR (if required)	Nil
Greens Road	4 lane divided	Road over the OMR	Full diamond interchange
Ballan Road	6 lane divided	Road under the OMR	Full diamond interchange

3.2.1.2 ACCESS RESTORATION

The location of the OMR interchange at the Princes Freeway would require that the easterly oriented ramps at the Princes Freeway – Little River Road interchange be closed. This interchange would remain with an overpass and westerly oriented ramps to serve the area to the east of the Princes Freeway.

Access to Little River would be provided from the Princes Freeway interchange with Point Wilson Road. This interchange would be modified from its current arrangement to a conventional rural full-diamond interchange arrangement. A new access road would be constructed from this location to Little River Road.

3.2.2 OMR – WERRIBEE RIVER TO KOROROIT CREEK

The OMR would cross the Werribee River on structures approximately 26 metres above the river.

Leakes Road in Tarneit would be a major east-west arterial road. Leakes Road is proposed to be extended and turn to the north to connect with Mt Cottrell Road, creating an arterial route between the Truganina and Laverton North areas, and Melton. A full diamond interchange with Leakes Road passing over the OMR is proposed.

Dohertys Road would pass over the OMR. Both Faulkners and Shanahans Roads are proposed to have offset intersections with Dohertys Road.

Sewells Road would pass under the OMR as a four-lane divided road.

Boundary Road would be a major east-west arterial road. It is proposed to be realigned to cross under the OMR at a moderate skewed angle to allow a full diamond interchange with the OMR.

The realignment of Boundary Road would ensure that its intersections with Troups Road South, the OMR ramps and Downing Road intersections would be appropriately spaced apart.

Troups Road South would be terminated on the south side of the OMR. On the north side of the OMR, Troups Road South would be realigned west to connect directly to Middle Road.

From Boundary Road, the OMR would follow a north-south direction generally to the east of Troups Road South through to Rockbank.

West of the OMR, a new local access road would extend south from Middle Road to serve properties whose access has been severed.

North of the OMR, it is proposed that the north/south roads of Troups Road South, Downing Road and Faulkners Road would be not further widened beyond their current reservation widths, because of the abutting sensitive grassland areas.

There would be a full diamond interchange at Riding Boundary Road (passing over the OMR). This would enable an access to the OMR from the main north/south arterial of Hopkins Road – Derrimut Road to serve to the proposed development areas between the OMR and Hopkins Road. Riding Boundary Road, to the west of the OMR, would narrow to a two-lane, two way road cross section to serve property access to the west of the OMR.

There is provision for a dual track rail connection from the OMR from the south to the Ballarat-Melbourne Railway line to the east. This would provide a major access connection from the interstate line into inner Melbourne.

A full freeway to freeway interchange would be provided at the Western Freeway to provide for all movements between the OMR and the Western Freeway. Western Freeway would be realigned slightly north of its existing alignment between the Hopkins Road interchange and Leakes Road interchange. The interchange is located so that existing houses in Rockbank to the west of Troups Road North would not be directly impacted.

A new access road extending eastwards from Troups Road North would pass under the OMR on the northern side of the Melbourne-Ballarat railway reserve.

The existing interchange of the Western Freeway with Hopkins Road would be modified with interchange ramps provided on the eastern side of Hopkins Road, due to the need to maintain adequate spacing between this interchange and the OMR – Western Freeway interchange. The interchange would provide for all traffic movements.

TABLE 3.2: NON-FREEWAY ROADS CROSSING THE OMR RESERVATION

Road	Proposed cross-section at the OMR	Road over/under the OMR	Interchange type at OMR
Leakes Road	6 lane divided	Road over the OMR	Full diamond interchange
Dohertys Road	4 lane divided	Road over the OMR	Nil
Sewell's Road	4 lane divided	Road under the OMR	Nil
Boundary Road	6 lane divided	Road under the OMR	Full diamond interchange
Riding Boundary Road	4 lane divided	Road over the OMR	Full diamond interchange
Greigs Road	4 lane divided	Road under the OMR	Nil
New Access Road (north of Melbourne-Ballarat railway)	2 lane undivided	Road under the OMR	Nil

3.2.3 EAST WEST LINK - OMR TO WESTERN FREEWAY (DEER PARK BYPASS)

The East West link would be a new freeway link between the OMR and the Deer Park Bypass (and thus to the Western Ring Road). The proposed freeway interchange at the OMR would provide for south to east and east to south movements. At the Western Freeway (Deer Park Bypass), there would be direct Y –type ramp connections between the Western Freeway and the East-West Link to the OMR.

The East West link would run roughly parallel to, and south of Middle Road, and would pass over Hopkins Road, the proposed Regional Rail Link, Christies Road and Robinsons Road. It would provide up to three lanes in each direction and would mostly be elevated.

There would be easterly and westerly orientated Y-type interchanges at Hopkins Road, and a westerly orientated half diamond interchange at Robinsons Road.

Braided ramps would be provided on the OMR between the interchange of East West link and the OMR, and the full-diamond interchange at Boundary Road. These braided ramps would eliminate weaving movements between these two closely spaced interchanges.

Middle Road would be truncated between the OMR and Hopkins Road. Middle Road would be maintained between Hopkins Road and Christies Road with realignments at either end.

3.2.4 OMR – KOROROIT CREEK TO DEEP CREEK

North of Kororoit Creek, the OMR would swing slightly east and proceed north to the west of Plumpton Road.

Taylor's Road would terminate on the east side of the OMR.

Beattys Road (six lane divided) would pass under the OMR. Beattys Road would be realigned and cross the OMR with a full diamond interchange. This interchange would allow communities in Hillside and Caroline Springs to access the OMR via Beattys Road and Taylor's Road respectively. Plumpton Road would be realigned at its intersection with Taylor's Road to provide a more direct connection.

The Melton Highway (Keilor-Melton Road) (six lane divided) would pass over the OMR.

A full diamond interchange would be located at the Melton Highway (six lane divided road) which would pass over the OMR. This interchange would provide access to the Melton and Sydenham communities from the OMR.

North of the Melton Highway, the OMR would swing to the east and pass under Plumpton Road.

Holden Road is a local 2 lane, 2 way road and would be realigned to connect to Plumpton Road on the south side of the OMR. Holden Road would be truncated on the west side of the OMR.

Holden Road would be terminated at the Melbourne – Bendigo Rail line. Holden Road currently crosses the Melbourne – Bendigo Rail line at a level crossing and has connections to the Calder Freeway via a west to north and south to west ramps. Ramps for the OMR/Calder Freeway interchange extending to the service centre on the northbound carriageway of the Calder Freeway would inhibit the construction of a new rail overpass connection to Holden Road.

The OMR – Calder Freeway interchange would provide for all traffic movements to and from each freeway.

A new overpass for Bulla-Diggers Rest Road over the Calder Freeway would be provided. Bulla- Diggers Rest Road would not have ramp access to the Calder Freeway due to the interference of ramps from the OMR interchange. Access to the Calder Freeway for Bulla-Diggers Rest Road traffic would be via the existing interchange at Vineyard Road at the northern end of Diggers Rest township.

There would be a number of road realignments in the vicinity:

- > Duncans Lane/Thompsons Road in the south east corner of the interchange;
- > Duncan Road realigned to pass under the OMR; and
- > Maninga Park Court extended to Morefield Court.

A new road off Duncans Lane (north of the OMR) would serve properties whose access has been severed by the OMR.

Bulla-Diggers Rest Road would be realigned along the north-western side of the OMR and a new access road would pass over the OMR to provide access to properties on the south side of the OMR.

The OMR would cross Jacksons Creek on three separate structures (two road and one rail structure) that would be 400 metres long and approximately 45 metres above Jackson Creek.

Sunbury Road would be realigned to the south west so that the interchange would not extend onto the 1.4 kilometre long bridge over Deep Creek. The deviated Sunbury Road would pass over the OMR and would have a full diamond interchange.

TABLE 3.3: NON-FREEWAY ROADS CROSSING OMR RESERVATION

Road	Proposed cross-section at the OMR	Road over/under the OMR	Interchange type at the OMR
Beattys Road	6 lane divided	Road under the OMR	Full diamond interchange
Plumpton Road	4 lane divided	Road over the OMR	Nil
Keilor Melton Highway	6 lane divided	Road over the OMR	Full diamond interchange
Holden Road	2 lane 2 way undivided	Road realigned	Nil
Duncans Lane	2 lane 2 way	Road under the OMR	Nil
Local access road	2 lane 2 way	Road over the OMR	Nil
Sunbury Road	6 lane divided	Road over the OMR	Full diamond interchange

3.2.5 OMR – DEEP CREEK TO MELBOURNE – SYDNEY RAIL LINE

The OMR would pass over Deep Creek on separate road and rail structures that would be approximately 1.4 kilometres long. The structures would be approximately 74 metres above Deep Creek at their highest point.

Wildwood Road, a local road, would pass under the OMR and would connect to a new access road on the north side of the OMR that would link to St Johns Road.

North of the OMR overpass of Wildwood Road, the road carriageways would dip to broadly follow the terrain. The rail would remain on a 1% grade on a separate rail structure approximately 1km long and reaching a height of 19 metres above the terrain, approximately 1.25 km north of Wildwood Road.

On the southern side of the OMR, St Johns Road would be terminated, with a new road providing access to severed properties.

Craigieburn Road would pass over the OMR and would have a full diamond interchange with the OMR.

Oaklands Road would be realigned on either side of the OMR to intersect with Craigieburn Road.

Mt Ridley Road would pass over the OMR. In this area there would be a number of minor realignments and terminations of roads:

- > Parkland Crescent would terminate either side of the OMR;
- > Farleigh Court would be realigned to near Mt Ridley Road;
- > Bardwell Drive would be realigned near Mickleham Road; and
- > A new access road from Mickleham Road (south of the OMR) to provide access to severed properties).

Mickleham Road would pass over the OMR.

There would be a full diamond interchange at Donnybrook Road with an overpass of the OMR.

East of the OMR, a new access road would be constructed north from Donnybrook Road to provide access to properties severed by the OMR.

The E14 would be a new arterial route from the south to the proposed new development areas to the west of the existing community of Beveridge and south of Wallan. The E14 would have a full diamond interchange with the OMR.

Gunns Gully Road is currently constructed as a local road from the existing Hume Freeway to approximately 3 km west. Part of Gunns Gully Road is currently unmade. It is proposed that Gunns Gully Road would be constructed through to Old Sydney Road. West of the OMR, there would be a minor realignment of Gunns Gully Road from the existing road reservation to provide a satisfactory gradient through to Old Sydney Road.

The OMR – Hume Freeway interchange would provide for all traffic movements between the two freeways. The OMR would pass under the existing Hume Freeway. There would be two levels of interchange ramps above the existing Hume Freeway.

Immediately east of the proposed interchange, the east bound carriageway would climb at a 3% grade to allow the OMR Railway lines to leave the transport corridor. The railway line would climb at its maximum grade of 1% to enable it to pass over the Melbourne – Sydney Railway line. The railway line would then turn northwards to join onto the Melbourne-Sydney rail line. This proposed railway line may require further realignment depending on the requirements at the proposed Donnybrook/Beveridge Interstate Rail Freight Terminal.

New access roads are proposed to run adjacent to the Hume Freeway from Kalkallo through the OMR interchange area to the Hume Freeway interchange at Beveridge. These access roads would provide a direct arterial link from the proposed business/ industrial areas south of the OMR to the northern area.

The proposal includes a rail connection from the OMR from the west to the Melbourne-Sydney Railway line to the north.

TABLE 3.4: NON-FREEWAY ROADS CROSSING THE OMR RESERVATION

Road	Proposed cross - section at the OMR	Road over/under the OMR	Interchange type at the OMR
Duncans Lane	2 lane undivided	Road under the OMR	
Sunbury Road	6 lane divided	Road over the OMR	Full diamond interchange
Wildwood Road	2 lane undivided	Road under the OMR	
Craigieburn Road	6 lane divided	Road over OMR	Full diamond interchange
Mt Ridley Road	2 lane undivided	Road over OMR	
Mickleham Road	4 lane divided	Road over OMR	
Donnybrook Road	6 lane divided	Road over OMR	Full diamond interchange
E14	6 lane divided	Road over OMR	Full diamond interchange
Gunns Gully Road	4 lane divided	Road over OMR	

3.2.6 E6 – MELBOURNE SYDNEY RAIL LINE TO FINDON ROAD

Continuing on from the OMR, the E6 would head east before swinging to the south broadly along the west side of Epping Road, then turning to the east to head south along the east side of Bindts Road.

The first interchange (west of the Melbourne – Sydney rRailway line) would be a full diamond to enable a direct arterial road connection to the proposed Donnybrook/Beveridge Interstate Rail Freight Terminal, for heavy transport.

Near Grants Road, a new road would link Epping Road to the E6. There would be a full diamond interchange with the new road overpassing the E6.

Between the Melbourne – Sydney Railway line and the proposed second interchange, a number of the properties would not have road access. A new road south of the second interchange would provide access to those properties whose access would be severed by the E6.

From Grants Road to Bridge Inn Road, Epping Road would function largely as a local road.

Donnybrook Road would overpass E6 and would have a full interchange with the E6. Generally, the E6 road level would be at or slightly below ground level, minimising its visual impact on future development.

Mason Lane, Bridge Inn Road and Lehmanns Road would all pass over the E6. Further investigations are required to assess where interchanges would ultimately be located, having regard to future development. At this stage, the proposal provides for land to be reserved to enable interchanges to be constructed at all three locations, namely Mason Lane, Bridge Inn Road and Lehmanns Road.

Epping Road, south of Bridge Inn Road, would be deviated to the west to maintain an arterial connection with Bridge Inn Road.

From Lehmanns Road, the E6 would follow on the east side of Bindts Road. An interchange may be located at Lehmanns Road to provide for southerly orientated movements. The proposed interchange at Lehmanns Road has been designed as a “partial cloverleaf” interchange to avoid impacting land within the existing Urban Growth Boundary.

Harvest Home Road would pass over the E6. Bindts Road would be terminated on the north side of the E6. On the south side, Bindts Road would connect to Lehmanns Road (west of the E6 overpass).

At Harvest Home Road, the E6 would cross the Darebin Creek, and then swing to the east and then south towards Findon Road.

There are a number of small remnants of land whose access would be severed by the E6. These are shown marked ‘S’ on the design drawings. It is proposed to investigate the consolidation of these remnant areas with adjacent properties.

TABLE 3.5: NON-FREEWAY ROADS CROSSING THE PROPOSED E6 RESERVATION

Road	Proposed Cross – section at the E6	Road over/ under the E6	Interchange type at the E6
New Access Road to Donnybrook/Beveridge Interstate Rail Terminal	6 lane divided	Road over	Full diamond interchange
Access Road to Epping Road (nth)	6 lane divided	Road over	Full diamond interchange
Donnybrook Road	6 lane divided	Road over	Full diamond interchange
Masons Lane ¹	4 lane divided	Road over	Full diamond interchange
Bridge Inn Road ¹	6 lane divided	Road over	Full diamond or ‘parclo’ ramps interchange
Lehmanns Road ¹	4 lane divided	Road over	Diamond and ‘parclo’ ramp providing full movements
Harvest Home Road	4 lane divided	Road over	Nil

¹ Note: Further investigations are required to assess where interchanges would ultimately be located, having regard to future development.

3.2.7 E6 – FINDON ROAD TO METROPOLITAN RING ROAD

The following discussion has been included in this Planning Assessment Report because it is necessary to define an appropriate vertical gradeline for the road within the existing E6 reservation in order to be able to adequately develop a northerly extension of the E6 reservation.

This section of the E6 would continue in the existing road reservation established in 1978 through from Findon Road to the Metropolitan Ring Road. This section would run through the established built residential community of Mill Park. No additional land acquisition along this section is currently proposed.

The original planning for the E6 road reservation had included the following roads crossing the reservation:

- > Findon Road;
- > McDonalds Road;
- > Childs Road; and
- > McKimmies Road.

Two other roads now cross the reservation: Derby Road and Sycamore Street:

Other key features of this section of the route are the proposed Epping - South Morang rail line in a rail reservation crossing the E6 reservation, south of McDonalds Road and the Yan Yean 'pipe - track'; a pipe easement containing some of Melbourne's significant water supply pipes (near McKimmies Road).

The E6 Transport Corridor would also include a bicycle path along the route.

Generally it is proposed that the E6 along this section of the transport corridor would be slightly below natural surface to limit visual intrusion.

Findon Road is a major east-west arterial through Epping. It is proposed that Findon Road would pass over the E6. A full diamond interchange at Findon Road would ultimately be provided.

It is proposed that Derby Road (a local road) would pass over the E6 with no interchange.

McDonalds Road would pass over the E6 with no interchange ramps.

South of McDonalds Road, the E6 would pass over the proposed Epping – South Morang Railway line. The proposed grading of the planned Epping – South Morang Railway line is such that the E6 would be below flood level if it were to pass underneath the Epping – South Morang Railway line.

Childs Road would pass over the E6 and a full diamond interchange would be provided in an ultimate configuration.

Midway between Childs Road and McKimmies Road, Sycamore Street (a local road) crosses the E6 reservation. The E6 would pass over Sycamore Street to allow Sycamore Street to retain its connection across the E6 reservation. It would not be possible to provide a connection of Sycamore Street across the reservation without affecting houses outside the current E6 reservation, if Sycamore Street were to overpass the E6.

McKimmies Road (a local road), would cross over the E6 with no interchange.

The E6 would interchange with the Metropolitan Ring Road. Further planning is required in the future to resolve the form of this interchange and of the adjacent ones at Dalton Road and Plenty Road.

TABLE 3. 6: NON-FREEWAY ROADS CROSSING THE E6 RESERVATION

Road	Proposed Cross – section at the E6	Road over/under the E6	Interchange type at the E6
Findon Road	4 lanes divided	Road over the E6	Full diamond interchange
Derby Drive	2 lane undivided	Road over the E6	Nil
McDonalds Road	4 lanes divided	Road over the E6	Nil
Epping South Morang Rail line	2 Broad gauge rail tracks	The E6 over Epping – South Morang Rail line	NA
Childs Road	4 lanes divided	Road over the E6	Full diamond interchange
Sycamore Street	2 lane undivided	Road under the E6	Nil
McKimmies Road	4 lanes undivided	Road over the E6	Nil

3.3 RATIONALE FOR THE SELECTION OF THE RECOMMENDED CORRIDOR

3.3.1 INTRODUCTION

This section briefly describes the rationale for the location of the recommended corridor for the OMR/E6 Transport Corridor. Appendix B sets out a detailed discussion of the rationale.

3.3.2 OMR - PRINCES FREEWAY TO WERRIBEE RIVER

The recommended corridor would pass to the west of a proposed quarry on the north side of Bulban Road and east of Ball Road; and to the east of the proposed Western Plains grassland reserve. The alignment cannot be located further west in this area without adversely impacting the proposed grassland reserve. Such an impact would not be acceptable. An alternative alignment to the east of the proposed quarry was considered, but is not recommended. The recommended alignment would allow an increased area (120 ha) for future urban development to the east of the OMR/E6 Transport Corridor than the alternative. The recommended alignment would be \$50m more expensive than the alternative easterly alignment. However, the recommended alignment would provide an ultimately shorter travel distance (1.8 km) for traffic between the OMR and the Geelong-bound direction, with resultant travel time and travel cost savings over the life of the project.

There is insufficient land area for the OMR/E6 Transport Corridor in the corridor through Wyndham Vale that is proposed to be used for the construction of the Regional Rail Link, so this alternative was not seriously considered.

South of Ballan Road, the recommended alignment would pass between a proposed quarry and the western boundary of the existing Urban Growth Boundary.

North of Ballan Road, the recommended alignment would avoid existing and proposed quarry sites. The proposed location to cross the Werribee River is a satisfactory location in terms of its alignment as it would cross the Werribee River with a reasonable angle to minimise environmental impacts and bridge construction costs. The proposed location would also avoid known sites of aboriginal cultural heritage sensitivity and significant impact on the recently constructed high pressure gas main.

3.3.3 OMR - WERRIBEE RIVER TO KOROROIT CREEK

The proposed alignment would pass to the east side of Troups Road South and east of the Rockbank settlement. An alignment further west of Troups Road South would adversely affect sensitive grassland areas and impact on existing housing in Rockbank.

An alignment to the east of Hopkins Road would adversely affect a major quarry at Deer Park and houses in Caroline Springs (due to the Western Freeway Interchange). It would also not offer an acceptable transport outcome.

An alignment to the west of Hopkins Road would not offer an acceptable social outcome as it would adversely impact a Hindu temple that is currently under construction. An alignment along the line of Mt Atkinson Road would not offer an acceptable land use outcome.

A more westerly alignment of the OMR would be located too close to the Western Freeway – Leakes Road interchange and would require its realignment and reconstruction.

The OMR crossing of the Kororoit Creek would be located to minimise the impact on environmental values on the creek.

3.3.4 OMR – WESTERN FREEWAY (DEER PARK BYPASS) CONNECTION

The easterly most point of this connection is governed by the location of the Western Freeway (Deer Park Bypass). Key constraints east of Robinsons Road are the residential area to the north, and the industrial area to the south. West of Robinsons Road, the secure area of the Remand Centre, the grassland area managed by Parks Victoria, and the Boral Quarry are important land uses to avoid. The Boral Quarry is understood to have a 100 year life, including quarrying, land fill for household garbage and extraction of gas, and is a major strategic quarry site for Melbourne for the foreseeable future. It is desirable for the connection to avoid a recently constructed high pressure gas pipeline as far as possible, and to minimise impact on a proposed industrial development to the south of Middle Road, between Robinsons and Christies Roads. It is also necessary to avoid heritage sites in the vicinity of Middle Road and Hopkins Road.

Planning for this connection needs to ensure that it can be constructed having regard to the proposed horizontal and vertical alignments of the Regional Rail Link (RRL). The RRL is proposed to be located on a north south alignment just east of Christies Road. The RRL corridor could ultimately contain up to six tracks with express and stopping passenger train lines and separate freight train lines. This would require 7.1 m clearance to the underside of an overpass structure such as a road.

3.3.5 OMR - KOROROIT CREEK TO DEEP CREEK

The OMR/E6 Transport Corridor must avoid features such as the Organ Pipes National Park and the Calder Park Raceway. Impacts on housing at Diggers Rest should also be minimised. These factors set the required interchange location with the Calder Freeway, with there being little opportunity to vary this location.

The location of the OMR/E6 Transport Corridor in this section is also governed by the need to find a satisfactory crossing location of Jacksons and Deep Creeks that minimises both environmental impacts and costs to cross these two major valleys and allows for an interchange with Sunbury Road and a future connection to Melbourne Airport. There is very limited opportunity to vary the alignment of the OMR/E6 Transport Corridor at the Deep Creek crossing as the shape of the valley and a nearby ridge provide significant controls on the location.

3.3.6 OMR – DEEP CREEK TO MELBOURNE-SYDNEY RAILWAY

The east-west section of the OMR needs to be located as far south as possible, to take into account the constraints stated below and still to maximise its utility as a ring road. This would also enable the OMR/E6 Transport Corridor to satisfactorily service the proposed Donnybrook/Beveridge Interstate Rail Freight Terminal, without road freight vehicles being required to traverse arterial roads through residential areas. Alternative potential locations for the OMR/E6 Transport Corridor - such as just to the south of Wallan or north of Beveridge, or through Beveridge - would not satisfy this overall requirement.

A key driver of the location of the OMR in this section is the need to serve the Craigieburn area with only one crossing of Deep Creek. This would require the OMR to cross of Deep Creek as far south as possible, taking into account the location of the township of Bulla and the need to avoid impact on Melbourne Airport. It is also important to maximise opportunities for urban development west of Craigieburn. Additionally, it is important to locate the OMR as close as reasonably possible to Melbourne Airport to enable the OMR to address one of its key objectives: serving international terminals.

There is a need to avoid, as far as possible, the following specific constraints:

- > Avenue of Honour at Mickleham;
- > Need for the OMR/E6/ Hume Freeway interchange to avoid impacts on Kalkallo and Beveridge;
- > Need for satisfactory alignment and grade for the rail connection to avoid Bald Hill and cross the existing Melbourne-Sydney railway;
- > Impacts on historic features such as Mickleham Primary school;
- > Current quarry in Oaklands Road;
- > Intruding on the Deep Creek Valley other than at the crossing point;
- > Planned developments within the existing Urban Growth Boundary along Donnybrook Road;
- > Melbourne Water retarding basin;
- > Settlements such as Kalkallo; and
- > Geographic features such as Bald Hill and Crowe Hill.

3.3.7 E6 – MELBOURNE-SYDNEY RAILWAY TO FINDON ROAD

Broad considerations in the location of the E6 are:

- > The need to maximise the potential for urban development, whilst providing a major north – south transport connection to serve proposed development areas;
- > The need to minimise environmental impacts on the Darebin Creek and other sensitive environments;
- > The need to minimise impacts on approved developments within the existing Urban Growth Boundary;
- > The need to avoid impact, as far as possible, on quarry operations; and
- > The need to avoid, as far as possible, geographic features such as hills.

3.4 BENEFITS AND IMPACTS

The Outer Metropolitan Ring/E6 Transport Corridor is an integral element of a land use transport system that aims to cater for a major part of Melbourne’s and regional Victoria’s population growth and economic development as Melbourne approaches a population of 5 million.

The road element of the corridor would provide a high standard of access to interstate road corridors, major regional Victorian centres such as Geelong, Ballarat, Bendigo and Shepparton and the international transport terminals of Melbourne Airport, Avalon Airport and the Port of Geelong. The corridor would also provide improved access between residential and employment growth areas in Melbourne’s north and west, including to the Donnybrook/Beveridge Interstate Rail Terminal.

At a strategic level, the OMR/E6 corridor has been located to avoid key features of environmental importance including the Organ Pipes National Park, Mt Ridley Woodland and areas of Western Plain Grassland to be protected.

The corridor would unavoidably impact some areas of high biodiversity value as it is not possible to avoid all such areas, having regard to the need to fit within the overall terrain and the existence of large areas of high biodiversity value.

The proposed corridor would have social benefits at the macro level by better linking communities.

The corridor has been located to avoid, as far as possible major concentrations of populations such as Wyndham Vale, Caroline Springs, Rockbank and Diggers Rest. The corridor however, would adversely impact a total of 152 houses/business premises. These houses/business premises would not be required until construction is about to commence which is unlikely to occur before 2020. The corridor has also been located to avoid, as far as possible, major existing and future quarries.

The Desktop surveys have identified sites of either aboriginal or post – settlement cultural heritage that would be impacted.

Table 3 – 7 sets out an “Overall Corridor Assessment”. The strong performance of the recommended corridor in achieving the primary transport objectives is offset by adverse environmental impacts, some of which will be subject to offset arrangements.

The corridor would also provide for a long term rail corridor that would enable very long double – stacked container freight trains to serve the Donnybrook/Beveridge Interstate Rail Terminal and bypass Melbourne, thereby lowering freight costs and improving competitiveness.

TABLE 3-7: OVERALL CORRIDOR ASSESSMENT

Objective / Sub-objective	Recommended Corridor	Rating
Objective 1: Serves Key international transport hubs, eg Melbourne and Avalon Airports, Port of Geelong, other Intermodal freight hubs and freight service economy areas	1. Direct route between airports and for Geelong, Ballarat, Bendigo bound airport traffic. Would save: (compared with existing freeway network): 12.5 km for Wallan-Geelong journey 13 km for Wallan- Melbourne Airport journey 16.5 km for Gisborne-Avalon journey 8km for Gisborne- Melbourne Airport journey 2. Close to potential north Werribee/ west Melbourne freight and service economy areas. 3. Serves Donnybrook Beveridge Interstate Rail terminal	Very well
Objective 2: Serves key interstate and major regional destinations	Would meet this objective - good links to Princes, Western, Calder and Hume Freeways. Geelong - Melbourne Railway , Ballarat - Melbourne Railway and Melbourne - Sydney Railway lines.	Very well
Objective 3: Provides better links to residential and employment growth areas to the north and west of Melbourne, eg Werribee, Melton and Mickleham	Good link between future residential and industrial development areas to west and north of Werribee; good link between Melton residential area and Mickleham employment area; good link from Epping residential area to Mickleham employment area	Very well
Objective 4: The Project is capable of performing its function	Would provide Outer ring function for road and high speed rail for interregional/interstate passenger and freight.	Very well
Objective 5: The project is technically feasible		
Technically feasible	Yes - feasible. Optimal Crossing of Jacksons and Deep Creeks, Optimal near Mickleham Rd as following ridge line of Deep Ck.	Satisfactory
Technically feasible interchanges	Western Freeway interchange would requires relocation of Western Freeway slightly to the north near Rockbank.	Satisfactory
Technically feasible rail connections	Feasible but would require lowering of Bendigo - Melbourne Railway Line (outcome of more detailed design).	Satisfactory
Terrain constraints	1. Limited options for Werribee River crossing. 2. Need to avoid Mt Atkinson. 3. Optimal for Jacksons and Deep Creek crossings. 4. Follows ridge line of Deep Creek at Mickleham Rd. 5. Slightly into foothills north of Donnybrook Road	Very well
Objective 6: Avoid as far as possible, minimise where unavoidable and provide offsets for any Biodiversity impacts to achieve net gain		
Southern Section OMR - Princes Freeway at Werribee to Werribee River	<i>Flora</i> - 1 EPBC listed species has been recorded - Large-headed Fireweed (vulnerable). 1 FFG listed species has been recorded - Large-headed Fireweed (threatened). Main EVC impacted is Plains Grassland (endangered). 3 EPBC listed species have the potential to occur within the OMR Right of Way (ROW). 4 FFG listed species have the potential to occur within the OMR ROW. 1 EPBC listed ecological community has the potential to occur within the OMR ROW. 2 FFG listed ecological communities have the potential to occur within the OMR ROW.	Satisfactory
	<i>Fauna</i> - 1 EPBC listed species has been recorded - Golden Sun Moth (critically endangered). 1 FFG listed species has been recorded - Golden Sun Moth (threatened). 14 EPBC listed species have the potential to occur within the proposed OMR ROW. 14 FFG listed species have the potential to occur within the OMR ROW.	Satisfactory
Central Section OMR - Werribee River to Calder Freeway	<i>Flora</i> - No EPBC listed species have been recorded. 1 FFG listed species has been recorded - Buloke (threatened). Main EVC impacted is Plains Grassland (endangered). 3 EPBC listed species have the potential to occur within the OMR ROW. 4 FFG listed species have the potential to occur within the OMR ROW. 1 EPBC listed ecological community has the potential to occur within the OMR ROW. 2 FFG listed ecological communities have the potential to occur within the OMR ROW.	Satisfactory
	<i>Fauna</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. 14 EPBC listed species have the potential to occur within the proposed OMR ROW. 14 FFG listed species have the potential to occur within the OMR ROW.	Satisfactory
Northern Section OMR - Calder Freeway to Melbourne-Sydney rail line at Kakallo	<i>Flora</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. Main EVC impacted is Plains Grassy Woodland (endangered). 4 EPBC listed species have the potential to occur within the proposed OMR ROW. 4 FFG listed species have the potential to occur within the OMR ROW. 1 EPBC listed ecological community has the potential to occur within the OMR ROW. 2 FFG listed ecological communities have the potential to occur within the OMR ROW.	Satisfactory
	<i>Fauna</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. 14 EPBC listed species have the potential to occur within the proposed OMR ROW. 14 FFG listed species have the potential to occur within the OMR ROW.	Satisfactory
Northern Section E6 - Melbourne-Sydney rail line at Kakallo to Findon Rd	<i>Flora</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. Main EVC impacted is Plains Grassy Woodland (endangered). 4 EPBC listed species have the potential to occur within the proposed E6 ROW. 4 FFG listed species have the potential to occur within the E6 ROW. 1 EPBC listed ecological community has the potential to occur within the E6 ROW. 2 FFG listed ecological communities have the potential to occur within the E6 ROW.	Satisfactory
	<i>Fauna</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. 10 EPBC listed species have the potential to occur within the proposed E6 ROW. 11 FFG listed species have the potential to occur within the E6 ROW.	Satisfactory
Southern Section E6 - Findon Rd to Metropolitan Ring Rd (existing PAO)	<i>Flora</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. Main EVC impacted is Plains Grassy Woodland (endangered). 4 EPBC listed species have the potential to occur within the existing PAO. 4 FFG listed species have the potential to occur within the existing PAO. 1 EPBC listed ecological community has the potential to occur within the E6 ROW. 2 FFG listed ecological communities have the potential to occur within the E6 ROW.	Satisfactory
	<i>Fauna</i> - No EPBC listed species have been recorded. No FFG listed species have been recorded. 10 EPBC listed species have the potential to occur within the existing PAO. 11 FFG listed species have the potential to occur within the existing PAO.	Satisfactory
To protect catchment values including surface water quality, stream flow, aquatic health and groundwater values, to the extent practicable	Mitigation measures would enable acceptable performance	Satisfactory

TABLE 3-7: OVERALL CORRIDOR ASSESSMENT

Objective / Sub-objective	Recommended Corridor	Rating
Objective 7: Avoid as far as possible, minimise where unavoidable and prepare a Cultural Heritage Management Plan to mitigate any Cultural Heritage Impacts		
Southern Section OMR - Princes Freeway at Werribee to Werribee River	<i>Non - Indigenous cultural heritage</i> - No sites impacted	Satisfactory
	<i>Indigenous cultural heritage</i> - Impact 7 Known sites: 6 artefact scatter sites and 2 earth feature sites. Note one site contained an artefact scatter and earth feature. Land within 200m of river and major creek valleys are of high archaeological potential to contain Indigenous cultural heritage sites.	Poorly
Central Section OMR - Werribee River to Calder Freeway	<i>Non - Indigenous cultural heritage</i> - Impact 8 sites. 1 Heritage Register site Rockbank Inn (H1933) near Beattys Rd. 3 Heritage Inventory sites - Rockbank Ridge (H7822-0258) near Beattys Rd Rockbank, Gidney Dam (H7822-0297) and Gidney Farm (H7822-0300) near the Western Fwy at Rockbank. 5 Heritage Overlay sites - Oakbank (H0233) Bulla-Diggers Rest Rd Diggers Rest, Rockbank Inn (H010), Kerr Farm Site (H0110) Boundary Rd Mt Cottrell, 'Rocklands' Homestead & Farm (H0114) Hopkins Rd Truganina and a house (H0120) on the Western Hwy near Rockbank. Note Rockbank Inn is listed on both the Heritage Register and Heritage Overlay. Rockbank Inn is of State significance. All other sites are of local significance.	Satisfactory
	<i>Indigenous cultural heritage</i> - Impact 11 Known sites. All sites are artefact scatter sites. Land within 200m of river and major creek valleys are of high archaeological potential to contain Indigenous cultural heritage sites.	Poorly
Northern Section OMR - Calder Freeway to Melbourne-Sydney rail line at Kakallo	<i>Non - Indigenous cultural heritage</i> - Impact 6 sites. 3 Heritage Inventory sites - Donnybrook Station Site (H7822-0728) near the Melbourne-Sydney rail line at Kakallo and two Donnybrook Quarry Dry Stone Wall sites (H7822-0197 & H7822-0198) are near the Melbourne-Sydney rail line at Kakallo. 3 Heritage Overlay sites - Tulloch Outbuilding (H0261) Farleigh Crt Mickleham, Warlaby (H0273) Oaklands Rd Oaklands Junction and Duncan's Lane Bridge (H030) over tributary Jacksons Creek Diggers Rest. All sites are of local significance	Satisfactory
	<i>Indigenous cultural heritage</i> - Impact 10 Known sites: 9 artefact scatter sites and 1 scarred tree. Land within 200m of river and major creek valleys are of high archaeological potential to contain Indigenous cultural heritage sites.	Poorly
Northern Section E6 - Melbourne-Sydney rail line at Kakallo to Findon Rd	<i>Non - Indigenous cultural heritage</i> - Impact 10 sites. 8 Heritage Inventory sites - Donnybrook Station Site (H7822-0728) near the Melbourne-Sydney rail line at Kakallo, Epping Rd Bridge (H7822-0205) on Epping Rd Wollert, two bluestone and granite foundation sites (H7922-0233 & H7922-0234) at Gordons Rd Epping, Hehr's Pine Park Farm (H7922-0297) Epping Rd Wollert and three houses (H7922-0304, H7922-305 & H7922-0460) on Harvest Home Rd. 3 Heritage Overlay sites - Hehrs Pine Park Farm (H010) Epping Rd Wollert, Schultz Farm (H041) Lehmanns Rd Wollert and one bluestone house (H078) located in Harvest Home Rd. All sites are of local significance. Note Hehrs Pine Park Farm is listed on both the Heritage Inventory and Heritage Overlay.	Satisfactory
	<i>Indigenous cultural heritage</i> - Impact 8 Known sites: 7 artefact scatter sites and 1 earth feature site. Creek corridors have been identified as high sensitivity to contain Indigenous cultural heritages sites.	Poorly
Southern Section E6 - Findon Rd to Metropolitan Ring Rd (existing PAO)	<i>Non - Indigenous cultural heritage</i> - No sites impacted	Satisfactory
	<i>Indigenous cultural heritage</i> - Impact 1 Known artefact scatter site. Creek corridors have been identified as high sensitivity to contain Indigenous cultural heritages sites.	Poorly
Objective 8: Minimise socio-economic impacts in relation to existing and future residential and industrial development and maximise opportunities for future urban development		
To have minimal impact on employment centres, major quarry resources and agricultural / rurally based enterprises	1. No impact major employment centres, although individual commercial enterprises will be affected. 2. Would impact 5 current and future quarry sites - Boral Wollert; Hanson Wollert; Hanson Future Wollert; Bulla Quarries north of Sunbury Road; Future quarry site south of Sunbury Road. 3. Would impact 602 properties (488 on OMR; 114 on E6), many of which would be agricultural/rurally based enterprises including a vineyard.	Satisfactory
Industrial development. Other uses , utilities, service centres, intermodal sites	1. Would impact on 2 service centres in vicinity of Rockbank (1 under construction); a third centre is in planning. 2. Any impacts on transmission lines, high pressure gas pipeline, and other utilities would be resolved with the appropriate companies/authorities prior to construction. 3. Emergency service access and would also be resolved and replacement infrastructure provided where required.	Satisfactory
To protect residents' amenity and well-being, and minimise any dislocation of residents, to the extent practicable	1. Would impact 152 houses/businesses (96 on OMR; 56 on E6) 2. Would impact Chartwell/Tarneit rural residential area; rural residential development along Troups Road North and South; Mickleham Road rural residential area; residences along Epping Road and around Epping Rd/Bridge Inn Rd intersection.	Poorly
To protect the character of significant landscapes, open space and recreation values, to the extent practicable	All significant landscapes protected by an overlay avoided. Would impact Tuttle Reserve, Epping Road.	Satisfactory
Air Quality - to have no exceedances of the SEPP intervention levels for all pollutants	Acceptable (with suitable mitigation)	Satisfactory
Maximise opportunities for future employment development	Would maximise area for development in the Melbourne @ 5 million Investigation Area north and west of Werribee and would allow flexibility for development between Melton and Caroline Springs in the Investigation Area west of Melton and also in the north in the Investigation Area in Hume/ Whittlesea.	Very well
Maximise opportunities for future residential development	Would maximise area for development in north and west of the Werribee Investigation Area and would allow flexibility for development between Melton and Caroline Springs in the Melton Investigation area	Very well
Noise - increase in noise after construction of noise barriers	Acceptable (with suitable mitigation)	Satisfactory
OVERALL OPTION ASSESSMENT	This corridor would have a very strong performance in achieving transport and land use objectives for future development. As this is a long term project, the poor performance of the preferred corridor in relation to impacts on existing residences was considered to be outweighed by the benefits of this option in relation to future land use development. In addition, the precautionary principle has been adopted in relation to Aboriginal cultural heritage as there is high potential for more sites to be discovered, particularly in relation to river crossings. These two factors plus the satisfactory rating for Environmental Impacts (assessment with proposed mitigation), Post settlement heritage impacts and technical feasibility were considered to reduce the clear benefits in relation to the principal objectives of the project 1- 4 above and maximising opportunities for future residential and industrial benefits, giving the preferred corridor an overall assessment of Well.	Well

Note: The precautionary principle has been adopted in relation to the assessment of Aboriginal cultural heritage. All assessments in this table have been rated "Poorly" as detailed studies are yet to be carried out.

Ratings of Performance: Very Well Well Satisfactory Poorly Very Poorly

