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Figure 3.22 Optimal Length-ways axis for residential lots for achieving solar access. Source: WA Planning Commission (1997) 33
Figure 3.21 Lot Widths can be varied to maximize solar access. Source WA Planning Commission (1997) 33
Figure 3.20 Design options for achieving residential frontage to open space. Source: WA Planning Commission (1997) 34

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Table 4.1 Summary of infrastructure requirements to service new development in Mernda 38
The Plenty Valley Strategic Plan (PVSP) was approved by the Victorian State Government in 1990. The plan was the culmination of a rigorous planning process that considered the entire Plenty Valley growth corridor. This process confirmed the future of Mernda as an urban growth corridor and initiated amendments to the Whittlesea and then Diamond Creek Planning Schemes to facilitate this process.

The Plenty Valley Strategic Plan recognised that more specific, localised plans would need to be prepared for each component of the Plenty corridor – South Morang, Mernda/Doreen and Whittlesea Township. This requirement was formalised through a provision in the former Urban Development Zone, which required that a Local Structure Plan (LSP) be prepared and incorporated into the Whittlesea Planning Scheme before subdivision and development could proceed.

Local Structure Plans were subsequently approved for South Morang, Whittlesea Township and the north-east portion of Mernda/Doreen (Laurimar Estate). The Mernda Strategy Plan will constitute the LSP (now described as an Incorporated Plan under the VPPs) for the balance of the designated urban growth area in Mernda and Doreen.

The status of the Mernda Strategy Plan in the plan hierarchy is explained in Figure 1.1.

Figure 1.1 Hierarchy of plans applicable to Mernda growth area

The Mernda Strategy Plan builds on the foundations of the PVSP and introduces many new principles associated with sustainable development. It articulates a vision for a series of new communities that will be much more than new residential estates on Melbourne’s northern fringe. As well as meeting future housing needs, development in Mernda will foster economic development, environmental preservation and social progress.

Realisation of the Mernda vision, as expressed in the Key Objectives that follow will require Council and developers to embrace new design and development paradigms. These include: neighbourhood planning; water sensitive urban design; transit orientated design; quality public realms, and the celebration and natural and cultural heritage.


Plan 1.1 shows the area in Mernda and Doreen that is affected by the Mernda Strategy Plan.
### 2.0 Understanding and Using the Mernda Strategy Plan – Incorporated Document

#### a) The status and role of the overall Mernda Strategy Plan and the individual Precinct Plans

The MSP – Incorporated Document provides broad-level guidance to the development of land in the Mernda/Doreen component of the Plenty Valley growth corridor. It sets out the Key Objectives and Strategic Actions that will be applied in all stages of the planning process. Moreover, the MSP will ensure that the growth area develops in an integrated and holistic fashion to meet social, economic and environmental imperatives.

The Mernda Strategy Plan is consistent with the City of Whittlesea’s Local Planning Policy Framework, which requires a four-tiered approach to the planning of growth areas (refer to Figure 1.1).

This document represents the Incorporated Plan for the entire growth area (save the area affected by the Mernda Local Structure Plan – Part 2). Before development can occur, a Development Plan and Subdivision Plan(s) must be approved by Council. Individual Development Plans will be required to cover the areas nominated on Plan 2.1.

The individual Precinct Plans are derived from the overall Mernda Strategy Plan but provide more detailed and site-specific guidance on land-use and design requirements.

All Development Plans must be generally in accordance with the relevant Precinct Plan. The Precinct Plans should be read in conjunction with the Key Objectives and Strategic Actions presented in Section 3 of this document.

Where Development Plans propose minor departures from the Precinct Plan it must be demonstrated that any modified design remains consistent with the Key Objectives and Strategic Actions.

Council will not alter the MSP – Development Contributions Plan (DCP) to take account of minor refinements to the open space network that may result from the Development Plan and Subdivision Plan processes.

#### b) The status and Role of Key Objectives and Strategic Actions

The Key Objectives and Strategic Actions presented in Section 3 of this document draw on the principles of sustainable development and provide a planning and design framework to guide lower-order plans.

There is a Key Objective and a set of Strategic Actions for each of the following subjects:
- Planning and Design
- The Transportation System
- Environmental Conservation
- Activity Centres
- Social Infrastructure & Community Development
- Housing
- The Open Space Network
- Heritage and Culture
- Servicing and Drainage

The Key Objectives articulate Council’s overall vision for the new communities in Mernda. The Strategic Actions give practical guidance on how the Key Objectives can be realised. These should be read in conjunction with the plans and figures presented in Section 3.

#### c) What is “generally in accordance with”? The schedule to the Development Plan Overlay states that all Development Plans and Subdivision Plans must be generally in accordance with the MSP – Incorporated Document.

Council will deem a Development Plan or Subdivision Plan to be generally in accordance with the MSP – Incorporated Document when it can be demonstrated that the proposal broadly conforms with the land-use and design features expressed in the overall MSP (Plan 3.1) and the relevant Precinct Plan (Plans 3.2 – 3.7). Development Plans must also be consistent with the Key Objectives and the Strategic Actions. When considering Development Plans that propose minor departures from the overall MSP and Precinct Plans, Council will need to be convinced that the proposal remains consistent with the Key Objectives and Strategic Actions.

#### d) Relationship between the MSP – Incorporated Document and other Planning Scheme controls mechanisms

Implementation of the MSP will be enabled by a range Planning Scheme instruments. Figure 2.1 shows the structure of the Whittlesea Planning Scheme and identifies the components that are of most relevance.

#### e) Relationship Between the Mernda Strategy Plan Incorporated Document and planning other documents

The planning and development of the Mernda growth area is controlled primarily by three documents. Two of these, the MSP - Incorporated Plan and the MSP - Development Contributions Plan are incorporated within the Whittlesea Planning Scheme. The third document, the MSP - Reference Document, is not incorporated within the Planning Scheme but is nonetheless an important resource that provides essential background information to assist with Development Plan preparation.

**Figure 2.1 Whittlesea Planning Scheme components relevant to Mernda**

![Figure 2.1 Whittlesea Planning Scheme components relevant to Mernda](Image)
3.0 KEY OBJECTIVES & STRATEGIC ACTIONS

3.1 Planning & Design

Key Objectives
To create an interconnected set of neighbourhoods that each has a distinctive character. They should enable community participation, economic development and adaptation to change over time.

Strategic Actions:

3.1.1 Precinct based Planning
- The Mernda growth area covers around 1,700 hectares and is projected to support around 14,000 dwellings and associated community infrastructure. Over 50 hectares of land has been designated to support retail and other commercial development. Plan 3.1 – Mernda Strategy Plan shows five distinct precincts arranged around a sub-regional activity centre and transport hub – the Mernda Town Centre.
- Each precinct should have a distinctive local character and a degree of self-containment. Precincts should be interconnected through the open space and transport systems.
- The individual Precinct Plans (Plans 3.2– 3.7) provide more detailed information on proposed land use patterns and design requirements. The Precinct Plans also identify sites requiring sensitive design to protect landscape, heritage and ecological values.

3.1.2 Residential Design and Density
In accordance with Council’s Municipal Strategic Statement, an average gross residential density of approximately 8 lots per hectare has been applied. Densities will however vary significantly across the MSP area with higher density development being concentrated around activity centres and transport nodes.
- Table 3.1 provides a land budget for each precinct. The MSP provides guidance on the residential lot sizes that should be targeted across different parts of the plan area – ranging from >700m² on the periphery to <200m² in the Mernda Town Centre.
- Residential development will generally follow a density gradient that decreases with distance from activity centres. Transitions in lot size should occur mid-block, rather than mid-street, to achieve streetscape consistency. Refer to Figure 3.1.
- On sites near the Mernda Town Centre, the dimensions of residential lots and the siting of buildings should enable future intensification – which may be appropriate following the introduction of rail-based public transport services. Figure 3.2 gives design treatments that will facilitate this.
- Innovative medium density housing forms are encouraged around activity centres and open space. Figure 3.3 gives an example of town houses overlooking a small park. The remnant vegetation and landform features in Mernda will present opportunities for varied design treatments, adding diversity and interest to residential areas.
- Lower density residential development is recommended for areas with significant landscape or environmental values. It is also appropriate as a buffer treatment to non-urban land on the edge of the MSP area. Figure 3.4 illustrates the design treatment that will be applied to low density development along Yan Yean Road. Figure 3.5 shows how a boulevard road can enable residential frontage to the Plenty Gorge Parklands.

Figure 3.1 Transition between residential densities should occur midblock to ensure streetscape consistency
Source: DTSBI Qld Govt. (1996)

Figure 3.2 Versatile residential design to facilitate future intensification when Mernda Town Centre is established and public transport services are operational

Figure 3.3 Medium density housing overlooking a small park. This design technique can be applied to protect Red Gums without an associated reduction in lot yield.

Figure 3.4 Low density residential development with internal access and buffer planting to road. His treatment will be applied along Yan Yean Road.

Figure 3.5 How a boulevard road can enable residential frontage to the Plenty Gorge Parklands.
3.1.3 Employment

- A substantial tract of land in the Mernda Town Centre has been designated as an “employment park”. The Comprehensive Development Zone will be applied to this land to enable a range of employment-generating land-uses that are compatible with nearby residential and commercial development. Additional local employment will be created in the precinct activity centres. Home business opportunities should be promoted through versatile housing design as shown in Figure 3.6

3.1.4 Visually Sensitive Design Areas

- The visually sensitive design areas identified on the Precinct Plans (Plans 3.2 – 3.7) require specific design treatments to protect landscape values, appropriate siting of buildings, suitable landscaping and screening, and the use of Colours and materials that are reflective of the natural surrounds. Views from surrounding rural properties should also be protected. It is particularly important that red gums are retained in these locations. These issues should be addressed in the Housing Design Guidelines that are prepared as a requirement of the Design & Development Overlay planning scheme controls.

- Large buildings and structures in exposed areas should feature modulated and articulated façade treatments to reduce overall bulk and mass. Architecture should reflect rural themes and a horizontal scale should be emphasised. Figure 3.7 shows design treatments that can minimise the impact of development in visually sensitive locations.

3.1.5 Water Sensitive Urban Design

- Water Sensitive Urban Design (WSUD) should be incorporated into the design of all new developments. Residential lots can be integrated with the environment in a way

![Figure 3.5 Low density residential development with frontage to parkland. This treatment is appropriate where there are low density buffers to the Plenty Gorge Parklands.](image1)

![Figure 3.6 Home businesses can be incorporated into mixed-use areas around the Mernda Town Centre. Source: DTSB Qld Govt. (1996)](image2)

![Figure 3.7 The visual intrusiveness of built structure on prominent hill-tops can be mitigated through attention to design.](image3)
### Table 3.1 – Precinct Land Budgets

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<td>adjusted unencumbered open Space as a % of Gross developable area (to be used for open Space equalisation Scheme) 9.6%</td>
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Opportunity for residential frontage to the Plenty River Corridor using a Boulevard Road alignment. Refer to Figure 3.5.

Hilltop area to be retained as open space to preserve visual amenity, protect existing vegetation and to provide habitat link to Brennan's Forest.

The Highland Farm to be retained and adapted for public use within open space.

Refer to Figure 3.7 For design requirements within visually sensitive areas.

Hilltop areas to be included in open space to enhance visual amenity and protect remnant vegetation. Farm buildings with local character value to be preserved for possible community uses. Stables to be incorporated into thematic development.

Cypress windbreak to be retained in local open space network and Laurimar trail system.

Visual connection to vegetated hilltop is enhanced by extending open space along the ridge. Exotic gardens surrounding hilltop farms to be preserved.

Thematic entrance treatment that responds to local rural character. To feature locally sourced materials and indigenous vegetation.

Low density residential interface with rural land uses on the eastern side of Yan Yean Road. Lots to be accessed internally with buffer planting along Yan Yean Road. Refer to Figure 3.4.

Remnant indigenous vegetation and mature exotic trees protected in open space.

Note: The plan presents the expected land-use and design patterns for Precinct 1 at the time of publication. Precinct 1 is affected by an existing Local Structure Plan and Outline Development Plan, which remain in operation. This Precinct Plan is provided for information purposes only.

Low density residential interface with Plenty River evolutions. Refer to Figure 3.8.

Remnant River Red Gum should be protected through appropriate subdivision design. Trees may be incorporated into large lots, roadside nature strips or pocket parks. Refer to Figure 3.15 for design requirements in environmentally sensitive areas.

Linear open space alongside drainage reserves permits walkers and cyclists to move freely between precincts. Major activity nodes are integrated with the open space network.

Precinct activity centre comprising retail, business/commercial and community uses to be integrated with school site and open space and supported by medium-density housing.
Note:
The land-use and design concepts provided on this plan should be read in conjunction with the key objectives and strategic responses detailed in the Mernda Strategy Plan document. Refinement of Precinct Plans may occur in the preparation of detailed development plans.

Linear open space link allows walkers and cyclists to move freely between precincts. Major north/south viewing corridor is preserved by open space and school site.

Significant Yellow Gum to be protected in open space or road reservation.

Ancient River Red Gum of State Significance to be incorporated in small park or reservation.

Low density residential to achieve a gradual transition from rural to urban near the edges of the development area. Treatment to be mirrored on the south side of Bridge Inn Road.
**Precinct 3 Plan**

**Key conservation area.** Trees not included in open space should be protected through sensitive residential design. Refer to Figure 3.15 for possible design solutions.

**High amenity gateway treatment at the northern entrance to the Mernda growth area.** Design should be responsive to local environmental and rural character.

**Open Space connection to Grassy Red Gum Woodland north of Masons Lane.**

**Key conservation area protected in passive open space.**

**Regional recreational node.** Accessible and close to Mernda town centre. Will contain high-grade football/cricket ovals, soccer fields, tennis courts, bowling greens, and sites for an aquatic centre and multi-purpose stadium. Strategically integrated with medium density housing areas and passive open space.

**Historic bluestone house “Preston Hall” to be retained and incorporated into active recreation precinct.**

**Heritage places such as Griff’s farm house and St Joseph’s Church to be protected within medium density housing area.**

**Development in proximity to the Mernda town centre to contain higher residential densities to support retail and community land uses and public transport.** Key heritage elements such as the Mechanics Institute should be incorporated into designs to maintain connections with the area’s rural history.

**Sites for retail and business/commercial land uses requiring arterial road frontage.**

**Low density residential interface to provide a visual transition to surrounding rural land.** These lots should have external access as shown in Figure 3.4.

**Low density residential buffer along Masons Lane to achieve subtle transition from rural to urban.**

**Precinct activity centre comprising retail, business/commercial and community land uses integrated with school sites and open space and supported by medium-density lots.**

**Low density residential lots to create an open character near the edge of the plan area.** Minimised by corresponding development on the south side of Bridge Inn Road.
Mayfield Farm heritage area is to be protected as a cultural focal point within the Mernda town centre.

Berry Lane is to be preserved and reestablished as a pedestrian/bicycle link between Plenty Road and the Thomas Mill and Bluestone Flame in the Plenty Gorge Parklands.

Designated site for possible railway station and modal interchange. The design of the town centre will be supportive of this transport node.

Mernda town centre - approximately 50 hectares in area (including land in Precinct 5A). At full development the centre could support up to 27,500 m² (GFA) of retail and 77,450 m² (GFA) of business/commercial. Land has also been set aside for possible one-off uses such as a tertiary education campus. Refer to detailed development plan.

Low density interface to Plenty Gorge Parklands. Boulevard Road to allow residential frontage and long distance views into the park. Refer to Figure 3.5.

Yan Yean Pipe Track reservation to provide possible bicycle trail link between Yan Yean Reservoir and established urban areas. Local streets should allow residential frontage on at least one side of the reservation.

Bicycle/Pedestrian Trail to link in with the proposed trail system in the Plenty Gorge Parklands.

Informal play area to meet local active recreation needs.

Low density interface with Plenty Gorge Parklands.

Low density interface to nationally significant Marang Wetlands on the south side of Wilton Vale Road.

Refer to Figure 3.22 for design treatments on land adjacent to transmission line easements.

Note: The land-use and design concepts provided on this plan should be read in conjunction with the key objectives and strategic responses detailed in the Mernda Strategic Plan document. Refinement of Precinct Plans may occur in the preparation of detailed development plans.
3.2 The Transportation System

Key Objective:
To put in place an efficient, equitable and environmentally sustainable transportation system that reduces car dependence, encourages walking and cycling for local trips, and supports local economic activity.

Strategic Actions:

3.2.1 The Road Network

- The MSP area will be served by an integrated road network comprising:
  - Primary Arterial Roads
  - Secondary Arterial Roads
  - Sub Arterial Roads
  - Collector Roads
  - Local Streets and Laneways

- Plan 3.8 – Road and Public Transport System shows the proposed network of arterial and major collector roads. A description of each road type is given in Table 3.2 and typical cross sections are provided in Figure 3.8. Table 4.1 gives further information on road infrastructure requirements.

- The road network should be designed to integrate transport and land-use. Land-use that generates a high number of vehicle trips, such as employment nodes, should be located on roads that can efficiently carry these.

- Traffic loads. Land-use such as schools and community facilities, which attract significant numbers of pedestrians and cyclists, should be situated to be accessible by these transport modes.

  a) Arterial and Collector Roads

- Arterial and collector roads will form the skeleton of the Mernda growth area. They should have the following characteristics:
  - provide the most convenient routes for long-distance travel to external destinations and other arterial roads such as the Metropolitan Ring Road
  - have direct development frontage through the use of service lanes
  - be integrated with lower-order roads in the network
  - provide access to activity centres without becoming barriers to pedestrian movement and social activity
  - incorporate water sensitive urban design treatments

b) Local Streets and Laneways

- The local street and laneway system will be designed as part of the Development Plan process. These streets should have the following characteristics:
  - connect residential precincts and activity centres
  - be based on a modified-grid layout that is responsive to landform
  - allow development to front streets and open space
  - not attract large volumes of traffic destined for arterial roads
  - offer multiple routes to internal destinations in order to evenly distribute traffic and provide better environments for cyclists and pedestrians
  - incorporate water sensitive urban design treatments

Refer to Figure 3.9
3.2.2 Streetscape Themes

- All roads should be designed to make a positive contribution to the urban landscape. The arterial and collector roads in Mernda should appear as parkways that link key destinations. Road reservations should accommodate mature canopy trees and plantings should extend into adjoining developments.

- Local streets should have planting themes that are appropriate to the prevailing site conditions. For example, streets near key conservation areas, as identified on the Precinct Plans, should be planted with indigenous species. All local streets should appear to be an extension of the open space system. They should be thought of as public spaces that play a wider role than merely enabling traffic movement. Existing trees should be protected in road reservations wherever possible.

- Streetscapes should be designed to meet stormwater management requirements as well as vehicular and pedestrian needs. This may involve reduced lot frontal widths, the use of roads for stormwater storage or diversion, and the landscaping that complements WSUD principles.

3.2.3 Walking

- Walking should be encouraged by concentrating attractions in highly accessible activity centres. Attention to urban design and the treatment of roads as "public spaces" will make walking an attractive transport option.

Footpaths should generally be provided on both sides of all streets and roads. Where development occurs on only one side of the street, or where traffic volumes are particularly low (<100 vpd), a footpath on one side of the street may be appropriate. On these roads a grass swale may be provided on the other side of the road. Footpaths should generally be 1.5 metres wide and at least 2 metres wide near schools and activity centres. The design of footpaths should have regard for the needs of disabled and elderly people. Consistent construction materials and adequate lighting should be provided.

- Pedestrian routes should have surveillance from buildings and roads wherever possible. Pathways through car spaces and other unsupervised spaces should be avoided.

- Walking for recreation and health purposes will be encouraged through the provision of off-road trails throughout the open space network. These are shown on Plan 3.9

- Bicycle and Pedestrian Trail Network.

3.2.4 Cycling

- Arterial roads must be designed to provide safe conditions for both commuter and recreational cyclists. On Plenty Road, Bridge Inn Road, the E6, and YanYean Road a dedicated off-pavement cycle land should be provided. On sub-arterial and collector roads carrying in excess of 3,000 vehicles per day, marked on-pavement cycle lanes with widened car parking spaces should be provided. Details about cycle lanes on various road types is provided in Table 3.2.

- The local streets should be designed to provide low-speed, on-pavement cycle routes that can be used as an alternative to arterial or collector roads.

- Widened dual-use footpaths (minimum width of 2 metres) that cater for cyclists and pedestrians should be provided on key routes near activity centres and schools. Where sub-arterial or collector roads form an important link in the cycle trail system, widened footpaths will also be required. These roads are identified on Plan 3.9.

- Cycle storage facilities should be provided at public transport nodes to encourage multipurpose trips.

3.2.5 Public Transport

- The extension of a heavy rail service to Mernda is central to the overall transport strategy. It is envisaged that the Epping line will be extended initially to South Morang and ultimately to a transport interchange in the Mernda Town Centre. Parking space should be provided near the station to encouraging park-and-ride commuting from the wider catchment.

- The timely introduction of rail-based public transport should be promoted by ensuring that development in the Mernda Town Centre is physically supportive of these services. Built form around transport nodes should have the following characteristics:
- higher than average residential densities
- a diversity of land-uses to generate activity over a 24-hour period
- convenience and safety for public transport users

Bus routes should follow arterial and collector roads and link key destinations such as activity centres, schools and the regional recreation reserve in Precinct 3. An indicative bus route is shown on Plan 3.8 – Roads and Public Transport.

- The option of providing a fixed-route express bus or light-rail service along Plenty Road and Bridge Inn Road should be preserved by providing a central reservation in the road cross-section.
Figure 3.8(b) Typical cross sections for Sub-Arterial, Collector and Local Roads

SECONDARY ARTERIAL ROAD - YAN YEAN ROAD
20 m Road Reserve
2 Lane Undivided Carriageway with central turning lane at intersections
Off-pavement Bicycle Lanes

SUB ARTERIAL ROAD (Greater than 3000 Vehicles per Day)
20 m Road Reserve
2 Lane Undivided Carriageway
On Road Bicycle Lane

COLLECTOR ROAD (Less than 3000 Vehicles per Day)
20 m Road Reserve
2 Lane Undivided Carriageway
On-road Bicycle Lane

LOCAL ROAD - ACCESS STREET
15.5 m Road Reserve
2 Lane Undivided Carriageway
<table>
<thead>
<tr>
<th>Road Type</th>
<th>Function / Characteristics</th>
<th>Target Speed Max (km/h)</th>
<th>Indicative ultimate VPD</th>
<th>Ultimate Road Geometry</th>
<th>Works Required under Mernda DCP</th>
<th>Public Transport</th>
<th>Cycle Lanes</th>
<th>Provision Trigger (No. Occupied Lanes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Arterial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plenty Road</td>
<td>Form the regional grid of traffic routes and will serve regional, local and commercial transport.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• South of Bridge Inn Road</td>
<td>to be fronted by service roads wherever possible.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• North of Bridge Inn Road</td>
<td>intersections limited – signal controlled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridge Inn Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• E6 to Sp Boundary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Sp Boundary to Plenty rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Plenty to Juan Jean rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E6 Roadway</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bridge Inn to Findon Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>43,000</td>
<td>40m</td>
<td>2 x 10.5m carriageways</td>
<td>duplicate existing road to provide</td>
<td>Light rail or express bus lane in central median.</td>
<td>dedicated off-pavement cycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>two lanes in each direction</td>
<td>Light rail or express bus lane in central median.</td>
<td>dedicated off-pavement cycle</td>
</tr>
<tr>
<td>Secondary Arterial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Van Year Road</td>
<td>Single lane in each direction with sufficient width to accommodate bicycle lanes, direct vehicle access from adjoining property limited</td>
<td>17,500</td>
<td>20m</td>
<td>1 x 10.5m carriageway</td>
<td>intersection treatments and climbing</td>
<td>Light rail</td>
<td>dedicated off-pavement cycle</td>
<td>3,000 (east of Plenty road)</td>
</tr>
<tr>
<td>• Arthurs Creek to Bridge Inn Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bridge Inn rd to Sp Boundary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collector Roads</td>
<td>predominantly residential frontage. Provide major connections between neighbourhoods and activity centres.</td>
<td>&gt;5,000</td>
<td>20m</td>
<td>1 x 10.5m carriageway</td>
<td>full construction</td>
<td>Bus on road</td>
<td>on-pavement with widened kerbside</td>
<td>as required</td>
</tr>
<tr>
<td></td>
<td>typically 2-lane divided with widened kerbside for cyclists. Should offer convenient access to arterial roads.</td>
<td>&lt;5,000</td>
<td>20m</td>
<td>1 x 8.0m carriageway</td>
<td>full construction</td>
<td>Bus on road</td>
<td>on-pavement with widened kerbside</td>
<td>as required</td>
</tr>
<tr>
<td>Local Streets</td>
<td>Local environment is dominant. High amenity streetscapes should promote pedestrian and social activity. Safe for cyclists. Street trees provide shade and visual interest. All streets should have development or open space frontage.</td>
<td>3,000</td>
<td>15.5m</td>
<td>1 x 7.5m carriageway</td>
<td>full construction</td>
<td>nil</td>
<td>on-pavement shared with vehicles</td>
<td>as required</td>
</tr>
</tbody>
</table>
3.3 Environmental Conservation

Key Objectives

To protect and enhance environmental values by applying the principles of ecologically sustainable design to the designation of open space and the construction of urban areas.

Strategic Actions

3.3.1 Native Vegetation and habitat Management

- The open space network has been configured to encompass most sites supporting significant patches of remnant vegetation. The design has been informed by the environmental assessment undertaken by TBLD (2000).

- Where remnant vegetation falls outside the designated open space network, it should be preserved through the use of tree-reservations, pocket parks, widened nature strips, or larger residential lots with appropriate building envelopes. The removal of native vegetation should only occur as an absolute last resort.

- All decisions relating to the protection and clearance of native vegetation must contribute to the “net gain” goals contained in Victoria’s Native Vegetation Management – A Framework for Action. The concept of Net Gain is defined as:

  Net Gain is the outcome for native vegetation and habitat where overall gains are greater than overall losses and where individual losses are avoided where possible. Losses and gains are determined by a combined quality-quantity measure and over a specified area and period of time. Gains may be either required offset sets for permitted clearing actions or as a result of landholder and government efforts that are not associated with clearing.

- To achieve Net Gain outcomes in Mernda, it is required that Development Plans include:
  - An appropriate assessment of any potential impacts on native vegetation and management options that avoid clearing
  - Consideration of clearing in the context of sustainable land-use change
  - Complete explanation of any losses associated with clearing are mitigated by commensurate gains through appropriate offsets

- Development Plans must follow a three-step approach to native vegetation management and Net Gain:
  - To avoid adverse impacts, particularly through vegetation clearance
  - If impacts cannot be avoided, to minimise impacts through appropriate consideration in planning processes and expert input to project design or management
  - Identify appropriate off-set options

3.3.2 Areas Requiring Environmental Protection

- Plan 3.10 – Areas Requiring Environmental Protection identifies the sites within the MSP area that have environmental significance. These have been categorised as either: Key Conservation, Link Conservation or Vegetation Protection areas. Where Development Plans affect these areas, consideration must be given to the recommendations of the report prepared by TBLD (2000).

- Key Conservation areas will need to be treated carefully due to their high ecological and landscape value. Where a Development Plan affects a Key Conservation area, the plan should address issues such as:
  - weed and vermin control, revegetation and exclusionary fencing
  - buffer planting treatments on adjoining residential land
  - the use of indigenous street trees
  - habitat improvement treatments

- Where a site of environmental significance falls outside the designated open space system, adjoining development must be sensitive to underlying environmental values. These sites have been nominated as “environmentally sensitive design areas” on the Precinct Plans (Plans 3.2 – 3.7). In these locations, the retention of all remnant vegetation is a high priority. Urban design should allow the environmentally sensitive design areas to be linked to the open space system by tree canopies. Figure 3.15 shows some possible design treatments that are applicable to environmentally sensitive design areas.

Source: W.A. Planning Commission, (1997)
3.4 Activity Centres

Key Objectives
To establish a series of diverse and pedestrian-friendly precinct activity centres that complement a mixed-use Mernda Town Centre of sub-regional status.

Strategic Actions
3.4.1 Activity Centre Hierarchy
- The MSP area will be supported by a three-tiered hierarchy of activity centres comprising: the Mernda Town Centre; precinct activity centres, and local convenience centres. Their distribution is shown on Plan 3.11 – Activity Centres.
- When fully developed the Mernda Town Centre is expected to have the following characteristics:
  - a footprint of approximately 50 hectares and contain around 30,000m2 of retail floorspace and up to 80,000m2 of other business/commercial floorspace
  - support medium/high density housing and community buildings in appropriate locations
  - excellent integration with the transportation system
  - a rail station and associated transport interchange
  - a compact form with pedestrian-friendly streets and public spaces
  - high architectural and urban design standards that generate local identity
  - attractive sites for anchor tenants
  - suitable sites for “highway sales” developments with arterial road frontage
  - promote local employment and economic development

Precinct activity centres should typically contain a small supermarket, a basic range of convenience shops, and a limited number of specialty shops.

- Local convenience centres should be distributed to service walkable residential catchments with a radius of approximately 600m. These centres should typically contain two or three shops providing basic goods and services. Other attractions such as telephone boxes, a bus stop, and post boxes should also be provided in these locations.

3.4.2 Employment and Economic Development
- The Mernda Town Centre will be a driver of economic activity. It should be capable of accommodating a substantial amount of non-retail commercial land use and a range of home business opportunities.
- The Mernda Town Centre is well-positioned to attract a significant “one-off” development such as a higher-education campus or research centre. This option should be preserved in the detailed design of the activity centre

3.4.3 Activity Centre Design
- Activity centres should be positioned on arterial or major collector roads to aid retail exposure and accessibility. Traditional activity centre design based on a “main street” is encouraged. Commercial buildings should be orientated towards pedestrian-friendly streets, plazas or open space. Facades should be varied and articulated to create visual interest and make streets and public spaces more engaging for pedestrians. Multi-level buildings that enable a vertical mixing of uses are encouraged. Figure 3.16 provides a set of images that describe urban environment envisaged for the Mernda Town Centre.

Figure 3.16 Images of the main street environment envisaged for the Mernda Town Centre
• The design of precinct activity centres should draw on local character elements to create a sense of place. These centres should become a point of difference between respective precincts.

• Activity centre design should seek to integrate the civic and commercial spheres. Public buildings should occupy prominent sites and be of high architectural quality. Refer to Figure 3.17.

• The setback of commercial buildings in activity centres should be minimal and they should not be fronted by expansive car parks. Where car parking needs cannot be met on-street, it should be provided at the rear of buildings as depicted in Figure 3.18.

• Highway-sales or bulky-goods retail development should be restricted to sites on Plenty Road and Bridge Inn Road within the limits of the Mernda Town Centre footprint.

• Water sensitive urban design (WSUD) treatments should be implemented throughout activity centres. Run-off from carparking and impervious areas can be diverted to swales and/or wetland areas. This run-off can be used for irrigating landscaped areas. Porous pavements should be used where possible and the collection of roof run-off considered for reuse. WSUD should also be integrated into landscaped areas within activity centres. Potable and groundwater resources should be augmented or replaced by recycled water where potable standards are not required.

Figure 3.17 Streets should frame views to community buildings, natural features and open space.
Source: Calthorpe (1993)

Figure 3.18 Car parks should be located at the rear of retail and commercial buildings in the Mernda Town Centre. Buildings should present strongly to the street.
Source: Calthorpe (1993)

Figure 3.19 Gently sloping grassed area in parking lot.
Source: Melbourne Water (1999)

Figure 3.20 On site detention for large sites
Source: Melbourne Water (1999)
3.5 Social Infrastructure & Community Development

Key Objectives
To facilitate the timely provision of a range of community and recreation facilities to meet the needs of local residents and promote community health and cohesion.

Strategic Actions
3.5.1 Social Infrastructure Needs & Design Requirements
- A summary of the key community and recreation facilities needed to support development in Mernda is provided in Table 3.3.
- Social infrastructure will be distributed across the planning precincts in Mernda to meet local needs and ensure accessibility for all. The proposed location of key facilities in each precinct is shown in Plan 3.12 – Social Infrastructure.
- Higher-order community facilities such as a branch library, performing arts centre and outreach centre, will be situated in the Mernda Town Centre to maximise accessibility. This centre should become the focus of community life.
- Higher-order recreation facilities including an aquatic centre, multi-purpose stadium, high-grade playing fields, tennis courts, and bowling greens will be concentrated in the regional recreation reserve in Precinct 3. This location is appropriate because it is accessible to all precincts, has synergies with the Mernda Town Centre, and has environmental values that are compatible with this land use.
- Local sporting fields and associated facilities will be located in the designated active open space areas of each precinct. These are shown in Plan 3.12. These sites are centrally located and integrated with precinct activity centres and school sites.

3.5.2 Community Development
- The siting and design of social infrastructure should facilitate service co-location and integration.
- Community buildings should be architecturally significant and occupy prominent sites within activity centres, providing opportunities for informal gatherings and public events.
- School sites have been designated in accordance with the requirements of the Department of Education and Training. These are shown Plan 3.12. Schools should be highly accessible and integrated with open space, activity centres and the transportation system.
- The siting and design of social infrastructure should facilitate service co-location and integration.
- Community buildings should be architecturally significant and occupy prominent sites within activity centres, providing opportunities for informal gatherings and public events.
- School sites have been designated in accordance with the requirements of the Department of Education and Training. These are shown Plan 3.12. Schools should be highly accessible and integrated with open space, activity centres and the transportation system.

- A community development worker(s) should be appointed to undertake tasks such as:
  - facilitating communication between the community, developers and Council
  - establishing community networks and cooperation
  - involving local residents in identifying, and responding to, community needs
  - ensuring that isolated residents are able to participate in community activities
  - increasing awareness of community issues and the importance of mutual support and self-help
  - monitoring community programs to ensure that effective methods of consultation are maintained

- A community plan should be prepared for each precinct in the MSP area. This will assist new communities to form the networks and support structure necessary to build social capital.
<table>
<thead>
<tr>
<th>Facility</th>
<th>Precinct</th>
<th>Elements</th>
<th>Description</th>
<th>Trigger for Provision (Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Activity Centre</td>
<td>1</td>
<td>- pre-school</td>
<td>Local facility providing children’s services and meeting space for precinct 1 residents. To be located in precinct 1 activity centre.</td>
<td>2000 (precinct 1)</td>
</tr>
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<td></td>
<td></td>
<td>- mch</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- meeting space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community House</td>
<td>1</td>
<td>- meeting space</td>
<td>Local facility shared between Laurens and local residents for first 5 years after construction. reverts to council facility for community uses after year 5.</td>
<td>construction to commence in 2001/02.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- consulting room</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(msclf)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Gallery space</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- cafe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Primary School</td>
<td>1</td>
<td>- School buildings and</td>
<td>meets primary education needs</td>
<td>to be determined by dept. of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbourhood Centre</td>
<td>2a</td>
<td>- neighbourhood house</td>
<td>facility with local and regional compo-nets. caterers for the children services, meeting space and community support needs of precinct 2a residents as well as meeting the adult education needs of the wider mernda community. to be located close to school and local convenience centre.</td>
<td>700 (precinct 2a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- melf centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- meeting space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dedicated Youth Facility</td>
<td>2a</td>
<td>- activities room</td>
<td>regional facility to cater for the specific program needs (recreational, cultural, educational, personal support) of young people in the mernda area. to be located close to school and local convenience centre.</td>
<td>700 (in precinct 2a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- amenities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Primary School</td>
<td>2a</td>
<td>- School buildings and</td>
<td>meets primary education needs of local residents.</td>
<td>to be determined by dept. of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Secondary School</td>
<td>2a</td>
<td>- School buildings and</td>
<td>meets secondary education needs of local residents.</td>
<td>to be determined by dept. of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Activity Centre</td>
<td>2B</td>
<td>- pre school</td>
<td>Local facility to cater for the childrens services, community support and meeting space needs of precinct 2B residents. to be located in precinct 2B activity centre.</td>
<td>700 (in precinct 2B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- melf centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- meeting space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childcare Centre</td>
<td>2B</td>
<td>- to be provided by</td>
<td>Land for future childcare centre to be pro-vided in precinct 2B activity centre. Facility to be constructed by private sector or other provider.</td>
<td>700 (in precinct 2B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>private sec tor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Primary School</td>
<td>2B</td>
<td>- School buildings and</td>
<td>meets primary education needs of local residents.</td>
<td>to be determined by dept. of education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>grounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Activity Centre</td>
<td>3</td>
<td>- pre-school</td>
<td>Local and regional facility. Local compo-nets (pre-school, meeting and consulting rooms) will serve precinct 3 residents. the regional component (adaSS/fod services centre) will provide day programs and food services for full aged and disabled residents of mernda. to be located in precinct 3 activity centre.</td>
<td>700 (in precinct 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- meeting space</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- adult day activity Service</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>- Support (adaSS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Food Service centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- consulting rooms for visiting services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.3 – Key Social Infrastructure Requirements

<table>
<thead>
<tr>
<th>Facility</th>
<th>Precinct</th>
<th>Elements</th>
<th>Description</th>
<th>Trigger for Provision (Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic and Fitness Centre</td>
<td>3</td>
<td>- 25m leisure pool</td>
<td>regional facility to cater for the health, fitness and sporting needs of the mernda, Whittlesea and northern South moran communities. Will provide opportunities for recreational swimming, and aquatic and fitness programs. to be located in recreation node in precinct 3.</td>
<td>4,700 (all precincts)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- learners and toddlers pool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- spa/sauna</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- gymnasium</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- aerobics floor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- offices, consulting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>rooms and amenities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-purpose Auditorium</td>
<td>3</td>
<td>- 6 courts</td>
<td>regional facility to cater for the indoor sporting needs of the mernda community. Will cater for basketball, netball, volleyball, badminton, indoor soccer and boxing martial arts, dance and similar activities. to be located in recreation node in precinct 3.</td>
<td>4,700 (all precincts)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- amenities and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>administration area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childcare Centre</td>
<td>3</td>
<td>- to be provided by</td>
<td>Land for future childcare centre to be pro-vided in precinct 3 activity centre. location. facility to be constructed by private sector or other provider.</td>
<td>at subdivision approval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>private sec tor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Activity Centre</td>
<td>4</td>
<td>- pre-school</td>
<td>Local facility to cater for the childrens services, community support and meeting space needs of precinct 4 residents. to be located in precinct 4 activity centre.</td>
<td>700 (in precinct 4)</td>
</tr>
<tr>
<td>Community Activity Centre</td>
<td>4</td>
<td>- mch centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Service Centre</td>
<td>5 (town centre)</td>
<td>- mch centre</td>
<td>facility with local and regional compo-nets. the space will serve the mernda community and provide spaces for artists to meet, work, exhibit and perform and for residents to participate in arts related activities. to be located in town centre.</td>
<td>5,000 (all precincts)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- community / performing arts facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- space for outreach services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civic Library</td>
<td>5 (town centre)</td>
<td>- typical library elements</td>
<td>regional facility to cater for the library needs of the mernda community. to occupy prominent location in the mernda town centre.</td>
<td>11,000 (all precincts)</td>
</tr>
<tr>
<td>Childcare Centre</td>
<td>5 (town centre)</td>
<td>- to be provided by</td>
<td>Land for childcare centre to be provided in town centre location. facility to be constructed by private sector or other provider.</td>
<td>at subdivision approval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>private sec tor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.6 Housing

Key Objective:

To provide a mix of lot sizes and housing forms to cater for a broad range of household types. The design of dwellings should be site-responsive, energy efficient, and contribute to local identity.

Strategic Actions:

3.6.1 Housing Density and Design

- Development Plans should facilitate housing diversity by offering a variety of lot sizes to cater for different household types. To promote housing diversity the areas considered appropriate for medium density housing have been identified on the Precinct Plans (3.2 – 3.7). Lot size variation can be used to protect remnant vegetation and create visual interest within a subdivision.

- Residential lots should have a “perimeter lot layout”, where public space is provided at the front and private space at the rear. This is illustrated in Figure 3.21.

- Housing design guidelines should be prepared by developers for all estates as required by the Design & Development Overlay. They should seek to achieve:
  
  o housing diversity
  o appropriate setbacks for dwellings and garages
  o architectural variation and originality
  o strong building presentation to streets
  o varied and articulated building facades
  o attractive fencing treatments and roofscapes

Appropriate buffer treatments should be applied where residential development adjoins a transmission line easement. Figure 3.22 illustrates how this can be achieved.

3.5.2 Energy Efficiency

- All dwellings must meet the 5-star energy efficiency rating as required by Melbourne 2030.

- Community buildings in Mernda should play an educative role in sustainable design techniques. They should showcase energy efficient technologies such as wind and solar power.

- Local streets should be aligned east-west and north-south wherever possible. North-south streets should be within 20° west and 30° east of true north. East-west streets should be within 30° south and 20° north of true east. Where streets are within the acceptable orientation range, rectangular shaped lots are appropriate. Refer to Figure 3.23.

- Where a local street is not in the optimal orientation range, the use of skewed lots is appropriate. The narrowest lots should be located on the north side of east-west streets. East-west lots should generally be the widest. Refer to Figure 3.24.
3.7 The Open Space Network

Key Objective:
To establish an integrated open space network that maintains ecological integrity and landscape character as well as offering a wide range of passive and active recreation opportunities for all user groups.

Strategic Actions:

3.7.1 Open Space Provision
- Open space is required for a range of environmental and recreational purposes. The broad open space types in the MSP area are:
  - Passive Recreation / Conservation Bushland
  - Active Recreation
  - Drainage Reserve (Encumbered Land)
  - Transmission Line Easement (Encumbered Land)
- Plan 3.13 – Open Space Network shows the configuration of the overall network and identifies the various open space types.

3.7.2 Access and Integration
- The open space network has been designed to provide habitat links between sites of environmental significance within, and external to, the MSP area.
- Open space should be fronted by building facades or streets – not rear fences. Figure 3.25 illustrates how this can be achieved in different residential contexts.
- Open space should be accessible to, and cater for the needs of, all possible user groups including elderly, disabled and young people.
- Parcels of open space will be linked by pedestrian / cycle trails as shown on Plan 3.9
  - Bicycle / Pedestrian Trail Network.

3.7.3 Management
- Management and maintenance programs for open space should be compatible with the protection of underlying ecological, cultural and landscape values. Regard should be had for the recommendations of the TBLO (2000) report.
- Landscaping of Melbourne Water pipetracks should be done in consultation with Melbourne Water.

3.7.4 Drainage Functions
- The open space network will have an important drainage function and has been designed to compliment Melbourne Water’s Drainage Scheme(s). It should be noted that the drainage reserves and retarding basins depicted in the MSP are provisional and may be altered following the finalisation and approval of the respective drainage schemes.
- The open space network should be designed to compliment the water sensitive urban design treatments that will be applied across Mernda. The drainage system should comprise natural-style watercourses and wetlands that contribute to efficient stormwater management and urban amenity. Melbourne Water should be engaged during the design process.

Figure 3.25 Design options for achieving residential frontage to open space.
3.8 Heritage & culture

Key Objective:
To protect Aboriginal and European heritage sites and to increase community understanding and awareness of this heritage through site-responsive urban design.

Strategic Actions:

3.8.1 Aboriginal Archaeological Sites

- A detailed archaeological assessment must be prepared prior to the finalisation of Development Plans for given land parcels. The report by Ellender (1994) and the information presented in Plan 3.14 – Archaeological Sensitivity should be used as base information for this exercise.

- Identified aboriginal heritage sites should be protected from development in open space or other reserves. The management of heritage sites and the expression of aboriginal culture in Mernda should occur in full consultation with the Wurundjeri Tribal Council and the Kulin National Heritage Organisation.

3.8.2 Heritage Buildings and Structures

- Heritage places with a A, B or C rating in the Whittlesea Heritage Study (1993) are protected by the Heritage Overlay in the Whittlesea Planning Scheme.

Heritage places should be used to reinforce local character and maintain a connection with the rural history of the locality. For example, the structure of the Separation Township subdivisional design in Precinct 3 should be retained to some degree when development occurs. The Precinct Plans (Plan 3.2 – 3.7) include notations on the required treatment of most heritage elements.

3.9 Servicing & Drainage

Key Objective:
To effectively and efficiently implement the servicing and drainage strategies that have been prepared by Yarra Valley Water and Melbourne Water respectively.

Strategic Actions:

3.9.1 Sewerage and water

- The servicing (sewerage and water supply) of all development in the MSP area (sewerage and water supply) must be in accordance with the strategies prepared by Yarra Valley Water. Yarra Valley Water reserves the right to make changes to their servicing strategies as and when required to suit progressive changes to water and sewer management principles and meet staging and timing requirements of developers in the area.

3.9.2 Drainage

- All drainage works must comply with the Mernda, Donnien and Laurimar Drainage Schemes as appropriate. The drainage reserves and retarding basins generally proposed by these schemes are shown in Plan 3.13. Any departures from the approved drainage schemes will need to be negotiated with council and Melbourne Water.

- All property titles created for development should be protected from flooding from a 1-in-100 year storm event. Vehicular and/or pedestrian access ways should be designed to meet the safety criteria as outlined in the Melbourne Water’s Guidelines for Development in Overland Flow Paths.

- The principles of Water Sensitive Urban Design (WSUD) should be applied in a coordinated manner across all precincts in the MSP area. This should occur in collaboration with Melbourne Water with the aim of limiting the quantity, and improving the quality, of stormwater entering waterways by limiting impervious surface areas, capturing run-off, and allowing biofiltration to occur.

- The natural alignment of watercourses should be retained except in where it can be demonstrated that tangible improvement to urban form can be achieved without comprising natural systems.

- The drainage system should return stormwater to the groundwater system close to the site where it is captured. Alterations to groundwater depth and water balance should be limited – particularly on sites supporting River Red Gums.

- The drainage system must be designed so that there are no increased risks to public safety and property. Flows downstream from a development site should not exceed pre-development levels unless approval is granted by Melbourne Water.
4.0 STAKEHOLDER & SERVICE INTERGRATION

Achievement of the Key Objectives for the Mernda growth area will require cooperation and coordination between various stakeholders and service providers. The MSP documents will ensure that all stakeholders have quality information about the urban development that will occur over the next 15-20 years.

4.1 Infrastructure Requirements

The Mernda Strategy Plan was informed by several background studies that established infrastructure needs based on the anticipated population size and demographic profile. A full explanation of this work is provided in the Mernda Strategy Plan - Reference Document.

A summary of key infrastructure needs is provided in Table 4.1 below. It should be recognised that this list is not necessarily exhaustive and will be influenced by actual development patterns and community profiles.

Some of the infrastructure items will be provided by Council, with funds collected through the Mernda Strategy Plan - Development Contributions Plan, and others will be provided by state government agencies and/or the private sector.

d) Schools

The Department of Education & Training have provided input on primary and secondary schools sites in the Mernda growth area. The Department will be responsible for acquiring the designated sites as development proceeds.

4.2 Relevant Authorities

a) Servicing – Water and Sewer

Yarra Valley Water is the authority responsible for the design and implementation of the water supply and sewerage strategies for the Mernda growth area. This will be done in cooperation with Council and private sector developers.

b) Drainage

Melbourne Water is the authority responsible for major drainage and stormwater management infrastructure in the Mernda growth area. This will be controlled by the Mernda, Doreen and Laurimar Drainage Schemes. Council will ultimately assume responsibility for some local drainage infrastructure.

c) Environment

The Department of Sustainability & Environment and Parks Victoria will play an important role in environmental management in both the designated growth area and the adjoining Plenty Gorge Parklands. This role will involve the implementation of Victoria’s Native Vegetation Management – A Framework for Action.

d) Schools

The Department of Education & Training have provided input on primary and secondary schools sites in the Mernda growth area. The Department will be responsible for acquiring the designated sites as development proceeds.

Table 4.1 – Summary of infrastructure requirements to service new development in Mernda

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Facility</th>
<th>Elements</th>
<th>Location</th>
<th>Provision Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>community activity centre</td>
<td>preschool mclt</td>
<td>Within Laurimar precinct activity centre</td>
<td>council / development contributions</td>
</tr>
<tr>
<td>1</td>
<td>neighbourhood House</td>
<td>meeting Space</td>
<td>(interim mclt) Gallery Space cafe</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Government primary School</td>
<td>School building and grounds</td>
<td>near precinct activity centre. integrated with open space.</td>
<td>State Government. department of education and training</td>
</tr>
<tr>
<td>2a</td>
<td>community activity centre</td>
<td>Living &amp; Learning centre</td>
<td>central location within precinct 2a. integrated with precinct activity centre and open space.</td>
<td>council / development contributions</td>
</tr>
<tr>
<td>2a</td>
<td>dedicated youth facility</td>
<td>activities room amenities area</td>
<td>central location within precinct 2a. integrated with school sites and open space.</td>
<td>council / development contributions</td>
</tr>
<tr>
<td>2a</td>
<td>Government primary School</td>
<td>School building and grounds</td>
<td>near precinct activity centre. integrated with open space.</td>
<td>State Government. department of education and training</td>
</tr>
<tr>
<td>2a</td>
<td>Government Secondary School</td>
<td>School buildings and grounds</td>
<td>central location within precinct 2a. integrated with school sites and open space.</td>
<td>State Government. department of education and training</td>
</tr>
<tr>
<td>2B</td>
<td>community activity centre</td>
<td>preschool mclt meeting Space</td>
<td>Within precinct activity centre. integrated with school site and open space.</td>
<td>council / development contributions</td>
</tr>
<tr>
<td>2B</td>
<td>childcare centre</td>
<td>Land and building</td>
<td>Within precinct 2B activity centre. integrated with school site and open space.</td>
<td>private sector. Land to be provided through development</td>
</tr>
<tr>
<td>2B</td>
<td>Government primary School</td>
<td>School building and grounds</td>
<td>central location within precinct 2B. integrated with school site and open space.</td>
<td>State Government. department of education and training</td>
</tr>
<tr>
<td>3</td>
<td>community activity centre</td>
<td>preschool meeting space</td>
<td>Within precinct 3 activity centre. close to school site and open space.</td>
<td>council / development contributions</td>
</tr>
<tr>
<td>3</td>
<td>with adaSS &amp; Race</td>
<td>Race facility</td>
<td>adaSS food Services consulting room for Visiting Services</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.1 – Summary of Infrastructure requirements to service new development in Mernda

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Facility</th>
<th>Elements</th>
<th>Location</th>
<th>Provision Responsibility</th>
</tr>
</thead>
</table>
| 3        | aquatic and fitness centre | • 25m leisure pool  
• Leavers and toddlers pool  
• Spa / sauna  
• Gymnasium  
• aerobics floor  
• offices, consulting room and amenities area | Within regional recreation area in precinct 3. Integrated with mernda town centre and open space network. | Land to be provided through development contributions. Facility to be provided by public or private sector. |
| 3        | multi purpose stadium | • 6 courts  
• Amenities and administration area. | Within regional recreation area in precinct 3. Integrated with mernda town centre and open space network. | Land to be provided through development contributions. Facility to be provided by public or private sector. |
| 3        | child care centre | • Land and building | Within precinct 3 activity centre | Private sector. Land to be provided through development contributions. |
| 4        | Government primary School | • School buildings and grounds | Near precinct activity centre. Integrated with open space. | State Government. department of education and training |
| 4        | community activity centre | • preschool  
• mlci  
• meeting Space | Within precinct 4 activity centre. close to school site and open space. | council / development contributions |
| 5        | community Services centre | • mlci  
• community and performing arts centre  
• Space for outreach | prominent location within mernda town centre | council / development contributions |
| 5        | Branch Library | • typical library elements | prominent location within mernda town centre | Land to be provided by council / development contributions. Facility to be provided by public sector source. |
| 5        | child care centre | • Land and building | accessible site within mernda town centre | private sector. Land to be provided through development contributions. |
| 5        | Government primary School | • Land and building | Accessible location. Integrated with open space. | State Government. department of education and training |
| 5        | integrated Health centre | • not determined | accessible site within mernda town centre | public or private sector |
| as required | public Housing | close to activity centres and public transport | Victorian department of Human Services. |
| as required | community Housing | close to activity centres and public transport | Victorian department of Human Services. |
| as required | emergency Services (fire, ambulance & | accessible locations with arterial road frontage. | State government |

B Outdoor Active Recreation

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Facility</th>
<th>Locational Requirements</th>
<th>Provision Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Football/Cricket Oval (x2)</td>
<td>Central location in precinct 1. close to open space and primary school</td>
<td>council / development contributions</td>
</tr>
</tbody>
</table>
| 1A       | Soccer Fields (x2)  
Miscellaneous Active Open Space | Central to precinct 2a. integrated with school site and passive open space. | council / development contributions |
| 1B       | Soccer Fields (x2) | In central location close to school and precinct activity centre | council / development contributions |
| 3        | Football/Cricket Oval (x2)  
Soccer Fields (x2)  
Tennis Courts (x7)  
Bowling Greens (x4) | All facilities to be located in regional recreation area in precinct 3 with linkages to plenty rd and mernda town centre. | council / development contributions |
| 4        | Football/Cricket Ovals (x2) | Central located in precinct 4. Integrated with activity centre, school site and open space. | council / development contributions |
| 5        | Informal Active Recreation Area | Located in south-east portion of precinct 5 | council / development contributions |

C Transport

<table>
<thead>
<tr>
<th>Description</th>
<th>Works Required</th>
<th>Provision responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plenty Road</td>
<td>to be upgraded and duplicated north of South Morang</td>
<td>State Govt. (Vicroads) &amp; council</td>
</tr>
<tr>
<td>Bridge Inn Road</td>
<td>to be upgraded and duplicated between the e6 roadway and yan year road</td>
<td>State Govt. (Vicroads) &amp; council</td>
</tr>
<tr>
<td>E6 Roadway</td>
<td>to be constructed between the Western ring road and Bridge inn road</td>
<td>State Govt. (Vicroads) &amp; council</td>
</tr>
<tr>
<td>Yan Yeon Road</td>
<td>to be upgraded to function as a secondary arterial road</td>
<td>State Govt. (Vicroads) &amp; council</td>
</tr>
<tr>
<td>Masons Road</td>
<td>to be extended across plenty river to connect to Laurimar town centre</td>
<td>Council</td>
</tr>
<tr>
<td>Local Streets &amp; collector Roads internal to MSP area</td>
<td>full design and construction including roads on the boundary of the MSP area</td>
<td>Private Developers</td>
</tr>
<tr>
<td>Public Transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy Rail</td>
<td>extension of service from Epping to South Morang and eventually to Mernda town centre</td>
<td>State Government</td>
</tr>
<tr>
<td>Bus Services</td>
<td>Progressive introduction of bus services to link precinct activity centres with the Mernda town centre and the regional transportation system.</td>
<td>Public and private sector</td>
</tr>
</tbody>
</table>
5.0 FUNDING THE PLAN

The timely provision of infrastructure, both development and social, is fundamental to the creation of sustainable new communities. Development on the scale proposed by the Mernda Strategy Plan requires a massive investment in a multitude of infrastructure projects. Some of this infrastructure will not be required until development is advanced and the resultant communities are established. This will be funded by a combination of public and private sector sources when demand arises and provision is economically viable.

Other infrastructure, such as roads, open space, and basic community facilities, will be required soon after development commences. In its capacity as planning authority, a key role of Council is to ensure that essential infrastructure is rolled-out as development proceeds. To achieve this, Council will use provisions of the Planning and Environment Act (1987) to collect development contributions from developers and residents in the Mernda growth area.

Under the Mernda Strategy Plan – Development Contributions Plan (DCP), Council will collect cash and/or work-in-kind contributions for 60 infrastructure projects with total value of over $131 million. The need for this infrastructure was established in the background studies that informed the preparation of the MSP. The infrastructure projects included in the DCP all have the following characteristics: they will be used by a broad cross-section of the community; and, they are essential to the health and well-being of the community.

The Development Contributions Plan uses the planning precincts described in Section 3 for the purposes of apportioning infrastructure costs. The main catchment area (precincts) each infrastructure item have been determined to apportion costs broadly in accordance with a user-pays model.

The MSP - Development Contributions Plan is an incorporated document within the Whittlesea Planning Scheme and is enforced through the Development Contributions Plan Overlay and associated schedule.
6.0 REFERENCES


