Woodland Waters, Mernda Revised Development Plan Report

Central Equity
June 2004

Woodland Waters Development Plan– (Amended)

The Woodland Waters Development Plan was approved by the City of Whittlesea on 23 November 2004, and amended on 16 September 2014 in accordance with Clause 43.04 Schedule 5 of the Whittlesea Planning Scheme.

16/09/2014 .....

Signature of the Responsible Authority

EARTH TECH

Contents

1 Introduction

1.1 Function of Development Plan

A Development Plan (DP) is a report and plan that provides a general outline of the way land is intended to be developed.

The DP designates proposed housing areas and other main land uses, collector and arterial street layouts and the location of community facilities, for a comprehensively planned development of land.

The DP forms the framework for more detailed planning at the subdivision and permit application stages. The detail may vary or 'fine-tune' the DP provided it does not change its general intent (except to the satisfaction of the Responsible Authority).

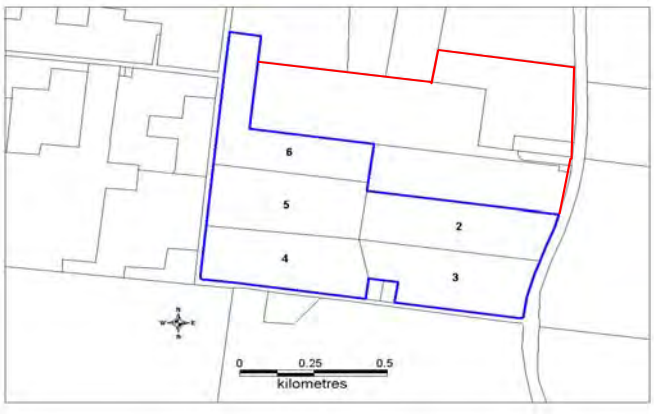
Objectives for the development of the land and guidelines relating to the provision of infrastructure, facilities, services and other matters may form important parts of the DP.

Earth Tech on behalf of Central Equity, the intending developer of the subject land, has prepared this DP report and accompanying Plan.

1.2 Area covered by Development Plan

The area covered by this Development Plan includes the parcels of land owned by Central Equity, described below in Section 3.1 and two parcels to the north known as the 'Metricon land' and 'Kokorous land'. The Metricon land consists of two separate titles described as Lot 1 PS 134588 Volume 09434 Folio 732 and Lot 1 PS 336646A Volume 10225 Folio 774.

The land to north of the 'Metricon' and 'Kokorous' sites known as the 'Elderslie' land is not included in this Development Plan.



2. Vision

The vision for the land is to develop an economically and environmentally sustainable community that provides a high standard of amenity for future residents.

The Vision will be developed with the following aims as its guiding principles:

- To provide a 'walkable' and 'permeable' urban form;
- To provide a range of lot sizes and densities to provide a range of housing options;
- To provide energy efficient housing appropriate to local conditions;
- To create a new residential community that can integrate with proposed surrounding communities and their facilities.
- To create an environmentally sustainable design that minimises non-renewable energy use and enhances environmental assets;
- To provide opportunities for a range of innovative dwellings that respond to site opportunities such as solar orientation, relationship to open space and that contribute to a safe living environment;
- To provide quality, safe and visually appealing areas of public open space;
- To create attractive streetscapes to enhance the quality, safety and appearance of the neighbourhood and its character;
- To ensure connectivity of vehicle, pedestrian and bicycle movements within the site and to key local destinations;
- To ensure the design of the local road network minimises vehicle speed and encourages increased pedestrian and bicycle movements;
- To ensure connectivity to and from community and recreation facilities within the Development Plan area;
- To enable access to public transport services and facilities in the area;
- To ensure all new development is provided with appropriate infrastructure services (water supply, sewerage, power, gas, communications & drainage);

- To minimise the effects of storm water run-off and utilise water sensitive urban design techniques where possible to manage water flows and quality.

3. Site Analysis & Background

3.1 Site Analysis

The subject land, owned by Central Equity, is located approximately 1 km southwest of the Mernda township and 1km west of the Plenty River. The land lies between Plenty Road, Hunters Road and Cravens Road and comprises five separate allotments, marked lots 2, 3, 4, 5, and 6 on the map opposite. Lots 2 and 3 access Plenty Road, while Lots 4, 5 and 6 are located off Cravens Road. Quarry Hills is located immediately to the south west of the subject land.

This development plan report relates to the five parcels of land located identified above. Central Equity has purchased all five parcels. Title descriptions are included below and copies of the Titles are included in Attachment A.

	Address	Description	Volume	Folio	Area (ha)
2	1295 Plenty Road	Lot 2 LP 134588	9434	733	12.01
3	1275 Plenty Road	Lot 3 LP 134588	9434	734	12.01
4	90 Hunters Road	Lot 4 LP 134588	9434	735	12.00
5	115 Cravens Road	Lot 5 LP 134588	9434	736	12.00
6	95 Cravens Road	Lot 6 LP 134588	94505	707	12.00

The subject land comprises mostly slightly undulating terrain, which slopes gently to the east and rises to a steep conical hilltop located to the north of lot 6 and a substantial hill to the south of lot 4. A naturally occurring swamp and drainage line run across Lots 2 and 3, both of which have been extensively modified and a dam has been built on swampland to the southeast of Lot 3. A slightly elevated stony rise occurs toward the eastern boundary of the survey area adjacent to a house and outbuildings located on Lot 2. While parts the subject land have been extensively modified due to dam and drainage construction and landscaping, it also contains native

vegetation and remnant swampland. The land is predominantly used for horses and cattle grazing and contains pasture grasses and small amounts of native vegetation toward the southern boundary.

Mernda has a temperate climate with cold to mild winters and hot summers. Average annual rainfall is between 600 and 900mm, falling evenly throughout the year. Summer temperatures are warm to hot – averaging 24 to 27 degrees Celsius. Winter temperatures are cool, averaging 9 to 12 degrees Celsius, with the lowest winter minimums in July and August

The Mernda-South Morang area marks the convergence of a number of differing geologies, including Newer Volcanics, Marine Siltstone and Quaternary Alluvium. These are briefly described below:

Newer Volcanics

Mernda is near the eastern edge of the western volcanic plains region, an area consisting of basaltic lava flows that range in age from the middle Pliocene to Recent (Holocene). These flows are collectively known as the Newer Volcanics. The basalt plains are not uniformly flat but contain a number of features, notably stony rises, creeks and rivers and ephemeral lakes or soaks.

Stony Rises occur in a number of forms but generically comprise loosely consolidated rocks and boulders elevated above the surrounding plain. Ephemeral lakes and soaks occur at low points, often adjacent to the stony rises. In many areas, these temporary water sources have been accentuated and developed into dams for stock and irrigation.

Soil development on the volcanic plains is generally poor, and screes of basaltic stone and larger basalt floaters lie close to the surface. At the same time, both the elevated stony rises and the margins of the lakes and soaks are known to be generally sensitive for Aboriginal archaeological material, having provided either resources or vantage points.

Marine Siltstone

The local hills and ridges consist of Silurian aged marine siltstone and thin-bedded sandstones. Collectively this is known as the Dargile Formation and underlies the foothills and ranges to the north and east of Mernda, the latter marking the commencement of the eastern uplands.

Quaternary Alluvium

Deposits of alluvium occur along the banks of local creeks and rivers and across the Plenty River floodplain. This alluvium consists of gravels, sands and silts. It is likely that the local alluvial deposits have become more extensive since European

settlement with the clearing of native vegetation and the increased erosion of topsoils.

Geology of the survey area

According to the local geological maps, the survey area contains elements of the Quaternary alluvium and the marine siltstone geological features. The land sloping toward the western section of the survey area is predominantly made up of medium to thin bedded marine siltstone while the remainder of the survey area consists largely of Quaternary alluvium deposits. A small pocket of Newer Volcanics basalt can be found in the north eastern section of the area.

3.1.1 Conservation

The subject land contains an extensive area of remnant native vegetation at the southern end of the site abutting Hunters Lane. This vegetation consists predominantly of River Redgums (*E. camadulensis*) and is a mixture of mature trees and saplings. The area is broadly described as plains grassy woodland. However with the environment of this vegetation has been substantially altered by the removal of the understorey, the introduction of exotic grasses and grazing of the area. The area is identified as a key conservation area in the MSP and the strategy employed in this development plan is to undertake a management and revegetation programme as part of the Net Gain offsets that will be required for vegetation removal elsewhere on the subject site.

Nevertheless this area provides an opportunity to reinstate the plains grassy woodland environment ad provide an area for passive recreation and open space. The juxtaposition of the existing dam and wetland with this area of remnant vegetation provides an opportunity to create an extensive and varied network of open space and recreational facilities for the residents of this development and the surrounding area.

3.1.2 Access and Circulation

Access and circulation are largely determined by the expiating road network. The land parcels on the site currently have access to Plenty Road, Hunters Lane and Cravens Road.

Plenty Road, which is a declared main road, forms the principal road connection through the north eastern areas of Melbourne through the Plenty Corridor to Whittlesea. In the vicinity of the site the road is contained within a 20.1 metre road reserve and currently has an undivided 8-metre wide road pavement providing a single traffic lane in each

direction and sealed shoulders. Widening has been undertaken at some intersections to provide separate turning lanes, while roundabouts have been constructed at McDonalds Road / Gorge Road in South Morang and at Bridge Inn Road in Mernda. Traffic volumes identified for the road indicated 9800 vehicles per day (April 97), which is typical for 3 lane (2 lanes plus turning lane) sub arterial routes.

The Mernda Transport Strategy foresees significant increases in traffic volumes on Plenty Road as a result of development in the site and therefore foreshadows that the road south of Bridge Inn Road will ultimately require duplication to provide two 8.0 metre carriageways within a 40-metre road reservation.

Cravens Road and Hunters Lane are local streets that currently serve abutting rural developments. Each road is constructed within a 15-metre reservation and has a gravel pavement. Existing traffic volumes on Cravens Road and Hunters Lane are estimated to be less than 500 vehicles per day. It is anticipated that ultimately Cravens Road at least will be upgraded to sub arterial or collector street status and as such will comprise an 8 to 10.5-metre carriageway within a 20 metre road reservation, in accordance with the Strategy Plan for the area. Development of Woodland Waterswill result in some lots fronting Cravens Road.

Hunters Lane comprises an unsealed surface, within a 15 metre road reservation. The western section of Hunters Lane is a relatively steep road, is cut through the surrounding hillside and contains extensive areas of roadside vegetation. The road engineering challenges and environmental impact of upgrading Hunters Lane would be substantial. The Development Plan provides for three points of access to facilitate north south movements through the development.

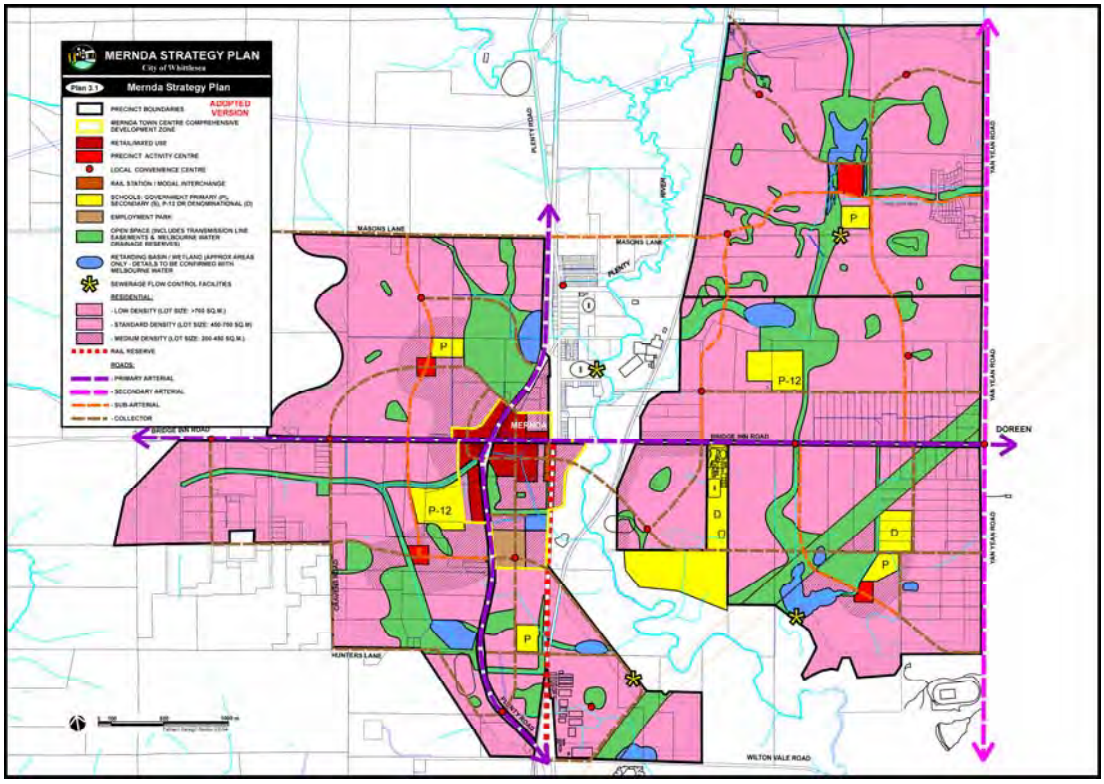
3.1.3 Easements and Encumbrances

A drainage easement encumbers part of Lot 3 (Volume 8434 Folio 734, Lot 3 LP 134588). The easement is in favour of the small property fronting Hunters Lane at the south west cornet of Lot 3. The consent of the owner of this land will be required to remove this drainage easement.

Caveat AC170236A applies to Lot 2, Caveat AC170278L applies to Lot 3, Caveat AC170249T applies to Lot 5 and Caveat AC170294N applies to Lot 6. These caveats are in the name of Waterberg Pty Ltd and were lodged on the 2nd of July, 2003.

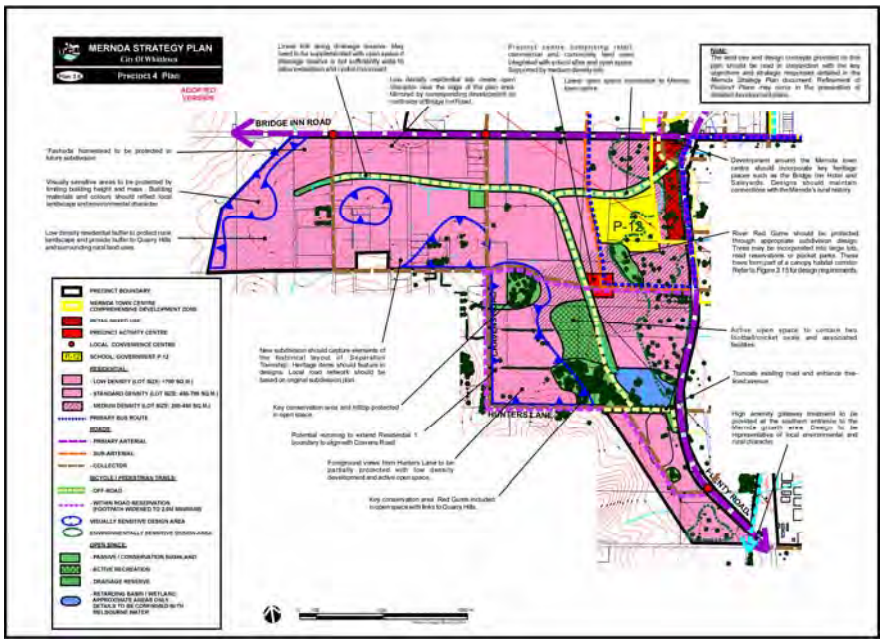
3.2 Precinct 4 Plan

Mernda Strategy Plan – Adopted Version



The MSP is broken into six (6) precincts and form the basis of individual Precinct Plans. Wood land Waters is located within Precinct 4.

Precinct 4 Plan – Adopted Version



Precinct 4 includes:

- Part of the Mernda Town Centre on the northern east part of the precinct;
- Predominantly residential land use:
- A precinct activity centre and P-12 school site;
- A linear link along a drainage reserve;
- Key conservation areas;
- Active open space to contain two football/cricket ovals and associated facilities; and
- Low density residential lots along the urban/rural interface with Cravens Road and Hunters Lane.

3.3 Supporting Reports

3.3.1 Tree Assessment and Preservation Advice

TreeLogic Pty Ltd on behalf of Central Equity from September to November, 2003 undertook an arboricultural assessment of the land. The full report is available in Attachment E.

This detailed report individually assessed 858 trees on the site and a further 392 trees were generally assessed. Individually assessed trees were tagged and given a unique number. Only trees with a diameter of at least 150mm at 1500mm above the ground were assessed. The report omitted a large number of young trees that appear to be Red Gum regrowth, mostly on lot 3. For all the trees individually assessed the report considered the following:

- Age;
- Health;
- Structure;
- Form; and
- Retention value.

The possible retention and management of trees in the landscape relies on more substantial criteria than simply perceived visual benefits, although the latter is certainly considered. Issues such as tree health, structure and stability are fundamental and primary considerations in the process of identifying trees that could be retained in the longer term. These attributes are assessed using risk management concepts as a platform and they assist with determining the retention value of individual trees.

The report discusses in detail the relative attributes and merits of the dominant eucalypt species found on the subject land, *E. camadulensis* or the River Redgum. In particular the report examines the species' characteristic of shedding large limbs without warning or a sign of defect.

From this perspective the arborist's report attempts reach a compromise between retention of significant and appropriate in what will be an urban area

This study, found that 65% of the trees examined had a low retention value. 56% of the trees were in poor health and a further 16% had a poor structure. The report goes on to identify trees that fall into the following categories.

- Trees to be retained
- Trees that could be retained
- Trees that should be retained only with an exclusion zone; and
- Trees that should be removed

These recommendations are displayed in more detail in the plan contained in Attachment F. The location of all trees and the canopy are displayed on the Development Plan, which is consistent with the Principles of the Mernda Strategy Plan.

The arborist identified 858 trees and generally assessed a further 392. In effect the site contains over 1,250 trees. Of this total 799 were identified as indigenous, 438 as Australian native and 14 exotic. The implementation of the Woodland Waters Development Plan will result in 1,162 indigenous and native trees or 93% being retained.

The recommendations made in the arborist's report will be included in the detailed plan of subdivision. The broad approach has been adopted in the development plan where retained trees, mostly redgums will be retained in public spaces such as open space and road reserves

3.3.2 Flora and Fauna Assessment

A flora and fauna assessment of the land was undertaken by Ecology Australia on behalf of Central Equity from September to December, 2003. A copy of the full report is available in Attachment C.

The key flora issues are:

- The majority of the Study Area is cleared and grazed;
- Remnants of the Ecological Vegetation Class (EVC) Plains Grassy Woodland are found in the south of the Study Area, and consist of Red Gums (*Eucalyptus camaldulensis*) over a largely exotic understorey;

- There is also a small remnant of Stony Knoll Shrubland to the south west (lot 4). This remnant is adjacent to the Plains Grassy Woodland and the Red Gums form a contiguous canopy between the two EVCs, grading into Manna Gum (*Eucalyptus viminalis*) in the Stony Knoll Shrubland. The understorey has a high proportion of weed species.
- The site has a poor quality rating (Rating 5) due to the low diversity of indigenous species (31% of total flora species), long history of grazing and a high abundance of weed species;
- No National or State significant species and no EPBC- or FFG-listed flora species were recorded for the study area.

In terms of the fauna the assessment concluded that the study area contains low quality wildlife habitat. No critical or important habitat for threatened species exists on site. Three habitat types were identified:

- Exotic Pasture/Open Grassy
- Artificial Water Body
- Woodland remnants

Overall Woodland Waters has limited environmental value because of extensive clearing and grazing of the properties and the introduction of exotic species. No significant species or habitats were found on the site.

The majority of threatened species recorded for the study area are considered to have a low likelihood of regular occurrence at the site. This is largely due to the lack of indigenous vegetation and grazing impacts in the study area. Specific habitat requirements for many of the threatened species listed above are either absent from the study area or poorly represented. Those species only listed as migratory or marine over-fly under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 were not included because the majority of these species are not threatened and the study area does not represent limiting or critical habitat.

3.3.2.1 Net Gain Assessment

Background

The proposed subdivision is required to meet recent State Government policies and legislation designed to promote environmental sustainability. Central to this has been the development of a State Conservation Strategy entitled *Victoria's Biodiversity – Directions for Management* (State of Victoria 1997). This Strategy, developed as the implementation strategy for the *Flora and Fauna Guarantee Act* (1988), has been augmented by the recently published

Victoria's Native Vegetation Management – a Framework for Action (DSE 2002c) (hereafter referred to as the *Framework*).

The *Framework* outlines an accounting system for monitoring the State's biodiversity 'assets'. This system is often referred to as 'Net Gain', and involves the use of a quality-by-quantity value to measure the condition and extent of flora and fauna habitat across the State. It has been developed by vegetation scientists and planners within the Department of Sustainability and Environment (DSE), in conjunction with tertiary and private sector botanists. In general, the quantity and quality of any given unit of native vegetation is evaluated according to the ecological condition of the vegetation, the landscape context in which it occurs, and the size of the remnant under consideration. The derived value is termed a 'habitat-hectare' (Ha). Obviously, the intention is that there will be a *net gain* over time in the State's habitat-hectare estate.

Net Gain is the desired outcome for flora and fauna habitat where overall gains are greater than overall losses. It comprises three main components:

- a reduction in losses in the extent of native vegetation,
- a reduction in the loss of quality of existing native vegetation by reducing the impact of threatening processes, and
- the achievement of gains in quality and extent of native vegetation through improved management of remnant vegetation and high quality revegetation.

Fundamental to biodiversity management is the principle that remnant vegetation is of greater ecological value and inherently more important than that established through revegetation or landscaping. Therefore, emphasis is given to protecting and enhancing existing remnants, rather than attempting to establish vegetation through landscaping or basic revegetation. It is important to note that the habitat-hectare concept only applies to indigenous vegetation, and/or revegetation programs based on relevant Ecological Vegetation Class benchmarks. Amenity landscaping does not fall within the ambit of the *Framework*.

The 'value', in habitat-hectares, of a particular site can thus be determined in a relatively objective manner. Where vegetation clearance is proposed, the impact to the site can be calculated by subtracting the habitat-hectares to be cleared from the initial value of the site. In a similar manner, the value of offset activity can be estimated by predicting increases in value that are likely to be incurred through various management activities.

The conservation significance of a site is defined by combining the vegetation quality score with the bioregional conservation

status of the relevant Ecological Vegetation Class (EVC). The required mitigation effort is then graded against the conservation status of the site. The appropriate responses are summarised in Appendix 4 of the Framework. The net outcome should be a gain of at least twice the calculated impact for vegetation of very high conservation significance, grading down towards an outcome at least equal to the calculated impact for vegetation of medium and low conservation significance.

Mature trees

Mitigation for the loss of medium and large old trees as part of permitted clearing is determined according to conservation significance. The response involves securing other large old trees for biodiversity conservation and the recruitment (through natural regeneration, supplementary planting, or revegetation) of new trees. The offset strategy is stratified between 'large' and 'medium' trees (defined against EVC Benchmarks), the conservation significance of the remnant, land area, and old-tree density.

Revegetation

The value of treated vegetation (i.e. vegetation subject to supplementary planting, revegetation, weed control etc.) is predicted to improve within a ten-year time frame. The predicted value assumes that the improvements are thereafter sustainable and that plantings reach maturity. It does not account for potential long-term values such as the development of tree hollows.

The relevant EVC Revegetation Benchmark should guide supplementary planting. Most of the plants will consist of trees, shrubs, and common, easily propagated ground flora. A three to five-year program is recommended to counter seasonal difficulties, allow for natural attrition, and to produce a more varied age-class range and a mosaic of densities of established plants. This approach must be integral with an environmental weed control program.

Offset habitat hectares achieved through revegetation works are limited to 10% where the impact will be to sites of Very High Conservation Significance, grading to 100% for sites of Low Conservation Significance.

DSE is developing EVC 'benchmarks' that provide structural and floristic standards and are used as a basis to score habitat quality for each EVC at each site. These benchmarks also form a basis upon which to develop revegetation plans.

Calculating Net Gain Requirements

The results presented in the following sections are preliminary and depend on the number of scattered mature Red Gums to be removed and amount of vegetation (if any) to be removed of the Plains Grassy Woodland remnant identified in the Study

Area. Further calculations can be made as part of further work when these numbers and areas have been confirmed with a plan of subdivision.

Vegetation condition assessment was limited to the Plains Grassy Woodland remnant in the south of the Study area and numbers correspond to quadrat numbers identified in the full report. The Vegetation Condition ranged from 0.30 (south of waterbody), to 0.37 in the Plains Grassy Woodland remnant.

For an EVC of Endangered Status and with a Vegetation Condition Score less than 0.4, the Conservation Significance is 'High' and the Conservation Multiplier is 1.5 (DSE 2002c). Therefore, the Net Gain calculations, depending on amount of remnant lost, would be as follows (where **X** represents an unknown at present):

EVC: Plains Grassy Woodland

Conservation Status in Bioregion: Endangered

Site Quality: 0.30 + 0.33 + 0.37 = average of 0.33

Conservation significance High

Net Gain Outcome At least 1.5x the loss in habitat hectares

Loss = 0.33 quality x area removed ha = **X** habitat hectares (hh)

Net outcome required = 1.5 x hh loss = **X** hh

For an EVC with high conservation significance, the net outcome would comprise 25% revegetation and 75% management of a similar quality EVC in the same bioregion. Net Gain requirements can be firmed after the loss (if any) is known, and would involve discussions with DSE and council.

Loss of mature trees

The offset for loss of mature trees will depend on the species, number and size. The definition of large and medium mature trees was based on the values in the EVC draft benchmark. On this basis trees with a diameter at breast height of 80 cm or more were classified as Large trees; trees with a diameter at breast of 60-80 cm were classified as Medium trees.

The rates of protection and replacement of large and medium old trees applying to remnants of High Conservation Significance are as follows (offset criteria taken from the Framework (DSE 2002b):

The study area is defined as a 'remnant patch of native vegetation with High Conservation Significance, containing large old trees'. Therefore for each large old tree removed as part of permitted clearing, 4 other large old trees are to be protected and 20 new trees are to be recruited. For each medium old tree removed as part of permitted clearing 2 other medium old trees are to be protected and 10 new trees are to be recruited.

Under a 'tree only' assessment, the land is classified as a parcel of land greater than 4 ha with less than 8 scattered old trees / hectare. The regional Native Vegetation Plan would specify the recruitment rates.

Achieving Net Gain

Revegetation and maintenance prescriptions can be drawn from the species lists and the Plains Grassy Woodland Benchmark data.

The arborist's report (Section 4.4) identifies a number of existing native trees that are unsuitable for retention as part of the development of the subject land. In addition, some removal of existing native vegetation will be essential to enable the development of this part of the Plenty Valley growth area. However endemic native vegetation removal will be kept to a minimum.

Given that some native vegetation is both appropriate and unavoidable as part of the development of the site, it is Central Equity's intention is to achieve the required Net Gain offsets by revegetation and maintenance of the grassy woodland open space area located at the southern end of subject land

3.3.3 Traffic Engineering Assessment

Grogan Richards Pty Ltd on behalf of Central Equity undertook a traffic engineering assessment of the proposed development plan. The full report is available in Attachment D.

Strategic Transport Issues

Access to the site will be provided directly via Plenty Road and Cravens Road. In addition to access to the existing infrastructure the development site will include local connections to the development areas to the north and connections to Hunters Lane. It is anticipated that many of these connections will ultimately lead to major intersections with Plenty Road. In the interim scenario, prior to the duplication of Plenty Road, traffic volumes on Plenty Road will be relatively low and therefore the traffic consultants recommend a Type C intersection to accommodate right and left turn movements into and out of the site.

Functional layouts have been prepared by Grogan Richards and are attached to this report.

Ultimately traffic volumes on Plenty Road are anticipated to significantly increase requiring the duplication of this road. Therefore in the ultimate scenario it is recommended that direct access into the development from Plenty Road will need to be via a left in left out intersection. Right turns into and out of the site from Plenty Road will be accommodated via developments to the north and south at signalised intersections identified under the Mernda Strategy Plan.

Treatment and Design Issues

It is anticipated that the development of the Woodland Waters will generate in the vicinity of 5,500 vehicle trips per day, which will have the following breakup

	Daily Vehicle Movements		
	Internal to Mernda	***External***	***Total***
Residential	1980	3370	5350
Wetlands	180	20	200
Total	2160	3390	5550

The internal traffic movement is expected to be:

- Town Centre and North, via Plenty Road 1,940 vpd
- North via Cravens Road 110 vpd
- South via Plenty Road 110 vpd

The external traffic movement is expected to be:

- Plenty Road North 340 vpd
- Plenty Road South 2,220 vpd
- Cravens Road North 850 vpd

Based on these calculations the following daily vehicle movements are anticipated as a consequence of the development of Woodland Waters:

	Daily Vehicle Movements		
	Internal to Mernda	***External***	***Total***
Plenty Road North	1940	340	2280
Plenty Road South	110	2200	2310
Cravens Road North	110	850	960
Totals	2160	3390	5550

Conclusions

Based on these results the general hierarchy throughout the subdivision has been nominated as indicated in the revised Traffic Engineering Assessment dated June 2004.

Colour Code	Anticipated Daily Traffic Volumes From Subdivision (vpd)	Road Classification and Function	Road Reserve	Recommended Carriageway Widths	Minimum Recommended Footway / Cycleway Provision	Typical Daily Capacity (vpd)
Green[1]	4400	Trunk Collector[1]	20.5 – 24 m	Divided 1 x 4m Single 8m	1.5 m footway on one side 2 m shared path on other	4000 – 6000
Blue	950 - 3000	Collector	17 – 20 m	8m	1.5 m footpath on both sides	2000 – 4000
Orange	300 - 2000	Higher Order Access Streets	15 to 18 m	5.5 m or 7.5 m	1.5 m footpath on one side only	1000 – 2000
Clear	> 300	Access Places and Lanes	Up to 16 m	<7.5 m	Shared carriageway	300

[1] *Interim scenario, in the final scenario traffic volumes will reduce considerably and road will function as a collector street*

In summary the proposed subdivision of Woodland Waters, Mernda will: -

- Generate approximately 6,400 vehicle movements per day
- Provide primary access to the arterial road network at Plenty Road and via Cravens Road
- Include a single direct access to the Plenty Road, which will be constructed as a Type C intersection in the interim scenario and down graded to a left in left out when Plenty Road is duplicated.
- Require a trunk collector road to cater for interim traffic to Plenty Road, however in the final scenario traffic volumes will reduce to collector street status.

3.3.4 Archaeological Investigation

TerraCulture Pty Ltd on behalf of Central Equity undertook an archaeological assessment of the land in September, 2003. The full report is available in Attachment G.

There was no Aboriginal archaeological material found during the survey of the properties. This is consistent with the review of the location and previous works undertaken in the area. Previous cultural heritage assessments and registered sites had indicated that the potential for Aboriginal archaeological sites was only moderate. The report recommended further subsurface testing of some specific locations. This subsurface testing has been undertaken and recommends that no further investigation is required.

The survey of the properties did find a historic archaeological feature in the form of a dry stone wall on a stony rise at the eastern end of lot 2. However this site was regarded as being of low significance because of its poor condition, local significance only and the common representativeness of this type of structure. The report concludes that consent to disturb will not be required to remove this wall.

4. Explanation of The Plan

The Development Plan is contained in Attachment J.

4.1 Permeability and connectivity

The importance of an efficient and connected transport system is recognised in the MSP and MSS. The transport network has been guided by the following objectives and principles:

- The road network is designed on a modified grid pattern;
- Streetscape design and landscape design elements will be common throughout the subdivision;
- Roads have been placed / designed to allow most lots to front onto adjacent roads and areas of open space. Some lots will side on, though, as a general principle, none will back onto roads or open space;
- Off-road access, bike paths and walkways will primarily be facilitated by the easement land. This land allows the provision of a shared pathway separate to the road network. Further pedestrian linkages are provided by local park networks;
- It is envisaged a demand will exist for cyclists / pedestrians using the open space network along the drainage reserve to access the grassy woodland open space and wetland areas

4.1.1 Road Network

Plan 5.8 of the MSP identifies Plenty Road as the primary arterial road with Cravens Road and Hunters Lane filling potentially collector road functions. Major pedestrian links are proposed along the drainage reserve and a sub arterial access to the precinct center, off Plenty Road.

In response to this framework the DP provides access off Plenty Road just north of the current intersection with Hunters Lane. Initially this intersection will be a Type C, but will eventually be come left in –left out only with the completion of the development. The DP then provides an internal network of two east west collector roads and two north south collectors off this main entry road.

Only one point of access to Plenty Road is proposed. There will be two access points to Cravens Road and three access points to Hunters Lane. No lots will have direct access to Plenty Road.

The access streets throughout the site provide a refined grid pattern. The street pattern at the eastern end of the site

deviates slightly from this to incorporate remnant Red Gums. The street pattern in the south west corner of the site has been designed to capture long sight lines. The road network will be designed generally in accordance with the MSP, Figure 5.8b.

The access street network generally comprises 16 metre wide road reserves and is designed to:

- accommodate pedestrians, cyclists and vehicles;
- provide for on-street parking; and
- control vehicle speed by street length, on-street parking intensity and variation in width and alignment.

Access Lanes

In a number of locations it is desirable and proposed to provide housing forms with garages accessed from the rear of lots and consequently access lanes. The provision of access lanes creates the opportunity for streets with streetscapes that are attractive and free of garage doors and driveway crossovers, and for dwellings to front onto areas of open space. This form of streetscape has the potential also for a higher level of passive surveillance due to the increased density and number of dwellings fronting each length of street.

All access lanes comprise 8m road reserves with a 6m pavement and a landscaped strip along each side.

4.1.2 Public Transport

There is currently no direct public transport to the DP area, although there are some bus routes operating in the Mernda area.

Within the MSP area there is an assumption that a heavy rail connection will be made from the South Morang station and that bus routes will follow arterial and collector roads.

Central Equity will work with the City of Whittlesea and the Public Transport Division, Department of Infrastructure to encourage the establishment of bus routes thorough the development and the surrounding area. One strategy that will assist in the achievement of this goal is the staging of development to provide an adequate catchment and encourage the use of public transport early in the life of the development.

4.1.3 Bicycle and Pedestrian Linkages

Provision for cycling is a key component of the overall movement network, and it is essential to cater for both the commuter and recreational cyclist who have different cycling needs mainly related to the directness of the route.

Traditional road widths will be adopted for local streets, thus ensuring the road network is able to cater for on road bicycle

use. This will provide for good bicycle and pedestrian connectivity using the local street network to the central spine of the drainage reserve and then separated connectivity to the open space areas. The grid based road network will also enhance bicycle movements by increasing directness, and through spreading traffic volumes to enhance the suitability of local streets for cyclists.

Paths for recreational cyclists are primarily provided within the drainage easement land and the wetland area.

4.2 Open space and site assets

The provision of open space within the site has been guided by the MSP and the Whittlesea Planning Scheme. Public open space is provided as per the following table:

Public Open Space	Area
Wetland*	2.94ha
Drainage Reserve*	1.67ha
Wetland open space	1.47ha
Grassy Woodland Open Space	8.13ha
Active Open Space	6.49ha
Local Parks	0.46ha
Linear Links	0.84
Total	**22ha**

* These areas are encumbered open space

The MSP identifies the drainage reserve and the retarding basin (i.e. wetland) as encumbered open space. It is anticipated that Melbourne Water will assume management of these areas as they form part of the Mernda Drainage scheme and eventually the municipality will manage the remaining open space areas.

The 22ha of open space, in the various forms identified above, represents 36.6% of the total area of Woodland Waters. Of this percentage, 7.7% is encumbered and the remaining 28.9% is unencumbered. An examination of the MSP show that the majority of the major open space areas for Precinct 4 are, in fact, located within Woodland Waters.

Local parks will incorporate remnant River Red Gums that are to be retained and these parks will be further landscaped. Local parks include off-road pedestrian linkages and added amenity for surrounding medium density lots.

The MSP requires the inclusion of an area of active open space in the general vicinity of Woodland Waters and adjoining land as part of the proposed neighbourhood activity center. This area of active open space includes two full size ovals and associated facilities. These ovals have been located adjacent to the woodlands to provide a direct association between the areas of active and passive open space. They have been slightly offset and their configuration allows for surplus areas to be developed for other purposes. This arrangement is proposed because it:

- provides a direct link to the linear open space associated with the drainage reserve and the bicycle path;
- provides better access for pedestrians, cyclists and motorists;
- provides improved connectivity to the activity center and other surrounding land uses, including the woodlands;
- located on the east west arterial road as detailed in the MSP and the proposed north south collector proposed on the Woodland Waters Development Plan
- improves access to this open space for other parts of precinct 4;
- enables a larger number of lots to have a frontage to the open space providing improved amenity and greater passive supervision of the area; and

The MSP states that building facades should front open space or streets and that it should be accessible to all potential user groups. The active open space has road abuttal directly to the west and south. The abuttal of the north south road to the east of the drainage reserve continues to enhance the open view lines into this open space.

By having the active open space abut the drainage reserve the MSP objective of linking open space by a system of pedestrian and bicycle trails is also achieved.

4.3 Interface issues and treatment

The MSP includes a low-density interface with the non-urban areas on the west side of Cravens Road and south of Hunters Lane. The plan provides for low-density lots along these interfaces. The DP provides for lots with a minimum lot size of 700m² along these two road frontages.

4.4 Retention of trees

Whittlesea's local planning policy seeks to protect remnant River Redgums. As previously noted, a large number of such trees exist on the site. Treelogic's assessment of each tree (included as Attachment E) provides a detailed assessment and recommendation for each of the significant remnant trees.

The basis for this recommendation is on the basis of health and structural deficiencies of each tree. The report does note, however, that the trees may be retained if fenced exclusion zones were established both beneath and near the trees, and to undertake intensive and ongoing management programs aimed at improving the growing environment near the trees.

The trees are recognised as being integral to the area's local identity, adding visual interest to the area and having associated environmental benefits. As such, it is proposed to retain as much of the indigenous vegetation that can be accommodated through the development of the land. Of the 1,250 trees identified by the arborist 1,162 or 93% will be retained. A total of 858 trees were individually tagged and an estimated 392, mostly natives, were generally assessed. This latter group are predominantly located in windrow plantings around the perimeter of lot 5. These trees and the associated understorey have been integrated into the proposed street layout, which results in a higher retention of the existing vegetation within the urban outcome. A large area of regrowth in the south west corner of the grassy woodland open space is also to be retained. However none of these trees were individually tagged or included in the number of trees generally assessed.

The report also notes that exclusion zones are likely to be required for a number of trees. To this end, this matter requires further discussion with Council.

The majority of trees to be retained will be located in areas of public open space or public ownership such as road reserves. It is intended to appropriately landscape areas around the trees to improve their surrounding growing environment, with opportunities also available for areas for River Redgum regeneration.

4.5 Energy efficiency and solar orientation

The modified grid road network ensures good energy efficiency to all lots. Lots created under the approved DP will comply with the principles of ResCode.

Careful consideration has been given to ensuring lots have maximum solar access to the north. Medium density areas are generally located on the north or west side of local roads to ensure maximum solar access.

4.6 Concept Plan

The general urban design objectives for the site is as follows:

- To provide a 'walkable' and 'permeable' urban form;
- To provide a range of lot sizes and densities to provide a range of housing options;
- To provide energy efficient housing appropriate to local conditions.
- To create a new residential community that can integrate with proposed surrounding communities and their facilities.

- To create an environmentally sustainable design that minimises non-renewable energy use and enhances environmental assets.
- To provide opportunities for a range of innovative dwellings that respond to site opportunities such as solar orientation, relationship to open space and that contribute to a safe living environment.
- To provide quality, safe and visually appealing areas of public open space.
- To create attractive streetscapes to enhance the quality, safety and appearance of the neighbourhood and its character.
- To ensure connectivity of vehicle, pedestrian and bicycle movements within the site and to key local destinations.
- To ensure the design of the local road network minimises vehicle speed and encourages increased pedestrian and bicycle movements.
- To ensure connectivity with adjoining community and recreation facilities.
- To enable access to public transport services and facilities in the area.
- To ensure all new development is provided with appropriate infrastructure services (water supply, sewerage, power, gas, communications &drainage).
- To minimise the effects of storm water run-off and utilise water sensitive urban design techniques where possible to manage water flows and quality.

4.7 General consistency with the MSP

The DP has been designed to be consistent with the MSP and

- the key conservation area has been identified and protected;
- a retarding basin/wetland area is to be provided in the south east corner of the site;
- linear open space associated with the drainage reserve;
- low density development is proposed along the Cravens Road and Hunters Lane frontages
- active open space is provided adjacent to the precinct activity centre and linear open space;
- remnant river redgums will be protected through appropriate subdivision design;
- the street network provides safe and convenient access for vehicular, pedestrian and bicycle traffic;

- the local road layout has been designed to maximise long sight lines to the distant hills to the north from Hunters Lane; and
- the overall density of development is consistent with the MSP objectives.

The MSP adopts a target density of 8 lots/ha (net). The Woodland Waters DP provides for a density of around 10.3 lots/ha of gross developable area. Woodland Waters contains most of the open space for Precinct 4 and given this substantial area of open space, a higher density of development is appropriate because it is the consequence of a higher level of medium density development around the open space areas. This approach is consistent with the common planning practice of locating higher density development in close proximity to community facilities, including open space. Given an anticipated yield of around 571 lots, approximately 43% of the site will be developed for housing, with 36.6% attributed to open space and 20.4% attributed to roads.

4.8 Allotment Size and Dwelling Diversity

As noted previously the DP aims to provide for a range of lot sizes and therefore a range of housing types. The DP officially recognises three densities – 'medium' (less than 300m²), 'standard', and low (greater than 700m²).

The frontages of the 'medium' density lots will allow a mix of single and double storey dwellings, and a mix of 'front-loaded' and 'rear-loaded' garage designs. Where lot frontages are smaller, rear access lanes have been included to ensure garages do not visually dominate the streetscape. These dwellings are envisaged to largely be attached terraces. These medium density lots are located in proximity to open space areas and other community facilities

The lot density provided is around 11 lots per hectare (net). As discussed above there is a substantial area of open space contained within Woodland Waters. This provides an opportunity for a higher density of development to provide residents access to these open space areas, which are concentrated in proximity to these facilities.

The MSP recommended lower lot densities along Cravens Road and Hunters Lane. This was intended to provide some integration with the non-urban area and to protect views from the western end of Hunters Lane. To achieve this objective, low-density lots front Cravens Road and back onto Hunters Lane. Emphasis has been placed on providing a north south road layout, particularly from the western end of Hunters Lane, to maximise views to the distant hills to the north. The long sight lines are attractive and will add to the streetscape character and amenity of future residents. The view from Hunters Lane is identified in Plan 3.5 of the MSP as having a 'Rating A' Heritage Significance. These lots have a 700m² minimum area.

5. Land Budget

5.1 Open Space

The MSP acknowledges that the open space network is not evenly distributed across individual landholdings. As depicted on the Open Space Network Plan, much of the unencumbered open space provided in Precinct 4 is located within Woodland Waters.

Table 4 of the MSP outlines the land budgets for infrastructure charges for each of the Precincts. This table specifies an adjusted open space as a percentage of gross developable area of 10.9% for Precinct 4. This includes the mandatory 5% contribution. The provision of unencumbered open space in Woodland Waters is 28.9% of total area or 26.4% of gross developable area. An additional 15.5% of public open space is provided in excess of the 10.9% required by the MSP.

Adopted Mernda Strategy Plan (MSP) Open Space Areas

Type of Open Space	**MSP Areas**	**Area (m^2)**
Grassy Woodland	21/U1(26,684m2), 22/U1(46,168m2), Part 18/U1(2,100m2) & Part 20/U1(6,000m2)	80,952
Active Open Space	17/U2(22,794m2), balance 18/U1(20,706) & balance 20/U1(21,303m2)	64,803
Open Space Connector	17/U1 (5,103m^2)	5,193
Total MSP Open Space Areas		**150,948**

Woodland Waters Development Plan Open Space Areas

We are providing 81,300m^2 of open space for the grassy woodland and 64,900m^2 of active open space for the ovals. This equates to 146,200m^2 or 26.4% of gross developable area.

There is an additional 738,000m^2 of open space in Woodland Waters comprising 29,400m^2 of wetlands, 14,700m^2 of wetlands environs, 16,700m^2 of drainage reserve, 8,400m^2 of linear parks to retain the two stands of trees from Cravens Road and 4,600m^2 of local parks to retain trees.

DEVELOPMENT ANALYSIS			
Site Area	60.02	Ha	% G. D. Area
Encumbered Open Space	4.61	Ha	
Drainage reserve	1.67	Ha	
Wetland	2.94	Ha	
Gross Developable Area	55.41	Ha	
Active Open Space (Ovals)	6.49	Ha	11.7%
Grassy Woodland Open Space	*8.13*	Ha	14.7%
Balance of Open Space	*2.77*	Ha	5.0%
Net Developable Area	38.02	Ha	
Roads	12.23	Ha	22.1%
inc. Laneways and widenings for tree protection			
Net Residential Area	25.79	Ha	46.5%
Medium Density Area	7.61	Ha	29.5%
Standard Density Area	14.53	Ha	56.3%
Low Density Area	3.65	Ha	14.2%
Total Yield	571	Lots	
Average Lot Size	452	sqm	
Average Density (GDA)	10.30	dwellings/ha	

As referred above this equates to an additional provision of 15.5% open space that is to be refunded by Whittlesea Council and is intended to be attributed to Developer Contributions.

6. Implementation of The Plan

6.1 Development Contributions

Developer contributions are detailed in Table 5.7(b) of the Mernda Strategy Plan. The charges are associated with

- Roads;
- Public transport;
- Unencumbered open space (including the mandatory 5%);
- Community and indoor recreation facilities;
- Outdoor active recreation;
- Community development; and off road pedestrian and cycle trails

For precinct 4 the total cost amounts to a total of $29,840,599 or $11,966 per dwelling (assuming 8 lots/ha) or $95,735 per ha of developable land. These amounts are expressed in 2001 dollars and will be indexed against the Melbourne CPI. These infrastructure charges are payable at the time of subdivision (or stages) prior to the issue of a Statement of Compliance. Works carried out by a developer in excess of a liability can be credited against other leviable projects. This is to be negotiated with the Council.

The local policy dealing with developer contributions specifies the following:

- *The basis for calculating development contributions will be the same for all residential development. The needs generated by and the types of items expected for infill development or rural residential development are likely to be different however from traditional suburban development. The particular needs and expectations will be the subject of each development plan.*
- *Apportionment of costs for required items of infrastructure will be calculated across an identified planning unit with some specified exceptions.*
- *Regard will be given to the viability of the project and the potential impacts on housing affordability.*
- *Development contributions are seen as one funding source. Council will recognise its own responsibility in contributing to effective servicing of communities.*

- *Priority should be given to items, which are required to provide basic services and amenity at the local level.*
- *Contributions should mainly be made for capital items.*
- *Items expected to be provided by developers as a matter of course will not be included as development contributions.*
- *Contributions will be levied for both development infrastructure and community infrastructure. Council's preferred method of funding community infrastructure will be via negotiated agreement with developers.*
- *The costs should be fairly apportioned between developments, landowners, new and existing development in relation to the degree to which each is assessed as contributing to the need for each item of infrastructure.*
- *Land value calculations should be based on the type of development or use for which land is suitable and the potential for such use or development to be realised.*
- *Contributions be indexed annually as at 30 June by the Melbourne CPI. The method of payment may be provided by direct provision or cash contribution by agreement with Council.*
- *Generally, thresholds rather than dates will be used as triggers for required infrastructure.*
- *All transactions will be clearly accounted for in Council's records.*
- *Direct provision of infrastructure should comply with Council requirements and specifications, and be provided in a manner and at a time most appropriate to the needs of the community. This is to be determined by Council in consultation with the developer and the local community.*

In May, 2003, pursuant to Section 46M(1) of the Planning and Environment Act, the Minister released a Ministerial Direction to direct Planning Authorities in relation to the preparation and content of development contributions plans. In addition a $450 per dwelling cap for community infrastructure was introduced in Section 46L(1) of the Planning and Environment Act.

As a consequence the Panel made the following recommendations in relation to the developer contributions detailed in the Mernda Strategy Plan:

- *The plan should refer to the recently released Ministerial Direction under Section 46M of the Act, and to categorize all projects as being for*

the provision of development or community infrastructure.

- *All references to an equivalent dwelling charge should be substituted for a 'developable hectare' charge.*
- *Provision should be made for the indexation of engineering and construction project costs assumptions. These should be upwardly varied as provided for in the latest edition from time to time of 'Rawlinsons Australian Construction Handbook'.*
- *Provision should be made for the indexation of land cost assumptions.*
- *Professional valuation advice should be sought on the derivation of an appropriate index. The index and the means of applying it should be made clear in the adopted plan.*
- *Separate and clear advice should be provided in the plan to explain how and through what valuation process private land would be acquired using the DCP fund.*
- *Capitalised maintenance components of road projects costs should be removed.*

The panel also recommended that adoption of the developer contributions plan should not await the outcome of discussions on a heavy rail link. The panel also recommended that the developer contributions plan have a life of 10 years.

With the exception of the recommendation dealing with the rail corridor, the Planning Authority has accepted the Panel's recommendations.

The following table outlines the development contributions for Woodland Waters as required by the MSP.

6.1.2 Development Contributions Attributable to Woodland Waters

The methodology used to calculate development contributions attributable to Woodland Waters is detailed in Attachment P. Based on the MSP for Precinct 4 the total charge per hectare of gross developable area is $95,735.00. At a GDA of 55.41 this equates to $5,304,676.35 for Woodland Waters.

The amount of reimbursable items (land and works in kind) total $6,038,360 which leaves an amount of $733,684 to be reimbursed by Whittlesea Council.

6.2 Landscape Masterplan- Proposed Landscape Treatments

6.2.1 Site characteristics

As identified in the site analysis, a mixture of landscape types characterise the subject land. The majority of the area comprises cleared and grazed land, on which residential development is proposed. To the south of the site, abutting Hunters Lane is an extensive area of remnant vegetation classed as 'plains grass woodland', consisting of Red Gums (*Eucalyptus camaldulensis*). Although this area has been subject to grazing, removal of the understorey and the introduction of exotic grasses, it has been identified as a key conservation area in the Mernda Strategy Plan. A third area comprises an artificially created dam and wetland. The proximity of these wetlands to the remnant Red Gums has created an opportunity to link the two areas to create a network of open space. A small remnant adjacent to the Red Gums is identified as 'Stony Knoll Shrubland', with Manna Gums (*Eucalyptus viminalis*). The proposed development plan aims to protect and enhance these trees through the design of larger lot sizes in this section of the site. Finer detail will be provided in future plans.

6.2.2 Design philosophy

Central to the overall landscape philosophy is the aim to protect and enhance the existing vegetation and character of the site. This is guided by the City of Whittlesea's local planning policy, which seeks to protect remnant vegetation within the municipality. It also aims to satisfy the Net Gain requirements of the site's flora and fauna. Trees and other healthy vegetation to be preserved on the site will be adequately protected from damage using approved methods for the duration of construction works.

The proposed landscape design objectives, subject to Council approval are:

- To preserve the local character inherent in the remnant vegetation zones and enhance these existing stands through management strategies such as restricting stock grazing, eradication of rabbits, revegetation of understorey planting, control of woody weeds and retention of fallen timber by prohibiting firewood collection;
- The predominant use in the main boulevards of a range of reliable native species suitable for basalt-clay soils. The aim of this is to create a habitat for native birds and enhance the local character;

- The use of a range of reliable exotic trees for some smaller streets and courts to maximise solar access;
- To design with a sensitivity to the site's topography, such as highlighting views with formal avenue planting in streets and swathes of planting along contours in open spaces where appropriate;
- To use materials and recommend ongoing management practices that are environmentally and financially sustainable and will be sympathetic with the indigenous character of the area;
- To provide a balanced dispersal of open space throughout the development that will offer a range of recreational environments that are of high quality design, are attractive, functional, safe and accessible to people of all abilities;
- To provide an accessible network of open space linkages containing multi-use trails and footpaths.

6.2.3 Proposed treatments

6.2.3.1 Landscape entries - Cravens Road and Plenty Road

The design will aim to provide a distinctive entrance to the new development. There will be a strong emphasis on native plant material to set a theme that will continue throughout the main road and open space network. Structural elements, such as walls, fencing and paving will reflect the character of the district through the use of natural materials. These will be designed to be vandal-proof and financially sustainable for future maintenance.

6.2.3.2 Street Trees

Street trees play a major role in contributing to the character and amenity of a neighbourhood. At maturity, they form a living architectural element that is vital to the creation of sightlines, framing significant views and providing contrast to the surrounding built elements. They provide seasonal interest, shade, habitat for birds and fauna and extend the character of the existing indigenous vegetation into the urban fabric.

Species will be carefully selected from a range of trees known to be reliable forms, drought-resistant, wind resistant and suited to basalt-clay soils. Whittlesea's *List of Indigenous Plants found in the City of Whittlesea (2004)* has provided the framework from which selection of trees may be made. City of Whittlesea Parks and Gardens has provided recommendations for appropriate planting over the site; *List of Street Trees for Consideration for Growth Areas in Whittlesea*

(2004). It should be noted that power and all other services will be installed underground.

Tree planting in streets will be undertaken as follows:

- Advanced, healthy specimens at time of planting;
- Australian native and exotic species will be used, with a predominance of native species;
- Exotic species may be used in specific locations such as smaller courts, nodal points, or around significant features in open spaces;
- Best practice establishment and maintenance will be implemented.

The hierarchy of the road network will guide street tree planting. For example, along wider streets, a larger, single species will be selected to create a formal avenue, and emphasise a sightline or view. Smaller residential streets will be less formal and planted with smaller sized trees to create individual precincts. Refer to the suggested planting schedule for a complete list of trees, shrubs and ground covers proposed for this development.

6.2.3.3 Environments for children's play

Providing access to places that provide a rich source of sensory stimulation and encourage exploration of the environment vital to children's development is fundamental to the design of a residential area. Areas designated as playgrounds will provide equipment and structures in specified locations catering to a range of age groups. These items will be of high quality, functional and accessible to people of all abilities.

Locations for active recreation sites such as rebound walls will be identified in future detailed plans.

6.2.3.4 Wetlands and Grassy Woodland area

Integration of the grassy woodland area into the open space network will be closely guided by the arboriculture assessment undertaken on behalf of Central Equity. Refer to the full report in Attachment F.

As identified in the Site Analysis, the area provides an opportunity to reinstate some of the original flora and combined with the wetland area, become a network of open space for passive recreation and multi-use trails. It is proposed that the areas will undergo a rehabilitation program, guided by its recommendations.

It is proposed that shared pathways be constructed throughout both areas, with shelters and picnic areas constructed. Shared paths and boardwalks are proposed around the wetlands.

Additional planting around the water bodies will consist of a variety of indigenous shrubs, grasses and trees. As each stage of the estate is developed and as required by the planning permit, a landscape plan will be forwarded to Council for endorsement. Ongoing maintenance of the proposed landscape treatment will be considered of high importance and construction will be pending endorsement by the relevant Council officers.

6.2.3.5 Parks and Reserves

Garden beds

All garden beds will be mulched and densely planted with ground covers in order to suppress weed growth and reduce evaporation. Some garden beds will be constructed with a concrete mowing strip.

Grass

Feature areas will be turfed and irrigated. The remaining grass areas will be hydro seeded with a drought-resistant seed mix including tall fescue to minimise water requirements.

6.2.3.6 Street and Park Furniture

The facilities in the reserves may include picnic facilities, shade structures, tree, shrub and garden bed planting, partial irrigation, seating and multi-use trails.

6.2.3.7 Establishment and maintenance

A maintenance and establishment program will include fertilising, mowing, mulching, weeding, litter removal, staking, pruning and best practice horticultural standards as required to establish the proposed landscape prior to handover to Council at 12 months after completion.

6.3 Road Network and Cross Sections

6.3.1 Road Network

The road network in Woodland Waters is consistent with the Precinct 4 Plan and the plan below showing Council's preferred road alignment.

Roads have been aligned to maximise the retention of River Redgums, provide for high levels of connectivity within the development and to adjoining developments. They have also been aligned to maximise long sight lines to the ranges to the north and also to capture short view lines within the development to such features as the woodlands, active open space and the wetlands.

The two east west roads, from Cravens Road, have been provided to retain the stands of existing native vegetation and also provide view lines to the active open space to the west. The north south roads in the south west corner of the site

(between Cravens Road and Hunters Lane) will allow for long sight lines to the ranges to the north.

Plan showing Council's preferred road alignment

6.3.2 Cross Sections

Street cross sections will be designed in accordance with the Figure 5.8b of the Mernda Strategy Plan. Refer Attachment N.

Road types not covered by the Mernda Strategy Plan will be designed in accordance with Section 56 of the planning scheme.

6.4 Streetscapes

The proposed landscape treatments outlined earlier in this report, together with the site responsive urban design will provide pleasant and attractive streetscapes.

The retention of most of the existing vegetation, road frontage to public open space, the integration of housing within the woodlands and wetlands, a diverse range of lot sizes and frontages, the provision of rear lane access to the small lot product and the retention of long sight lines to the distant ranges will all contribute to an attractive neighbourhood character. This development will 'age' well as houses are constructed and private open spaces further contribute to the landscape.

6.5 Drainage – Water Sensitive Urban Design

Conventional drainage design will be utilised across the majority of the site. Treatment of storm water to remove phosphorous, nitrogen and suspended solids in accordance with best practices will be carried out within the Melbourne Water wetland.

Preliminary discussions have been held with Melbourne Water regarding the design and construction of the wetland. Preliminary design calculation indicate that the area set aside for the wetland is adequate to provide the drainage function required by Melbourne Water.

Further discussions have been held with respect to the inclusion of developed lots within the wetland/ floodway zone. The initial feedback from Melbourne Water has indicated that they may accept the proposal providing that:

- The operation of the drainage scheme is not adversely affected by the lots
- The levels of the lots meet the Melbourne Water guidelines for freeboard above 100 year flood levels

The construction cost of any works required to protect the lots from flood damage (retaining walls etc) is to be met by the developer.

6.6 Staging

Proposed Development Staging

Development is proposed to commence at Plenty Road in the north/east component of the land. Stages have confirmed in draft.

Development Approvals Process

Planning permits for subdivision and all other developments will be applied for as required. It is anticipated that a planning permit application will be sought for subdivision of Stage One, with a second planning permit application for subdivision of the balance.

6.7 Activity Centre Design

The Precinct 4 activity centre is located in land further to the north. The Precinct 4 plan shows this as comprising retail, commercia and community land uses integrated with school sites and open space. Medium density lots are encouraged in this location. The school site is shown as accommodating Prep to Year 12.

6.8 Community Facilities

As referred to above the Precinct 4 plan shows community facilities as being associated with the Precinct Activity Centre. These community facilities will also be located in association with the proposed P-12 school. This Development Plan also provides active open space in the form of two sporting ovals, with surplus land that could accommodate other facilities or uses.

6.9 Infrastructure Priorities

The site encompasses two pieces of infrastructure covered by the Developer Contributions Plan for Precinct 4:

- Active open space

  The MSP notes that the trigger for the construction of the two sporting fields within Precinct 4 is the 800th lot. The exact timing will require further negotiation with Council based on the pattern of development within the precinct.

- Grassy Woodland open space

  The MSP makes no mention of the timing for the take up of the Grassy Woodland Open Space. The timing of the setting aside of the area will be determined when staging of the works is finalised.

6.10 Construction of Cravens Road and Hunters Lane

Cravens Road and Hunters Lane will need to be upgraded from their current unsealed rural condition to collector road standard or better. The timing of the works will be dependant on the staging of adjoining subdivisions.

6.11 Open Space Master Planning and Development

Open space within the development can be placed into the following four broad categories; that is:

Areas for Formal and Informal Active Recreation where adequate space is available to meet the recreational needs of the local community; where sportsgrounds are located on generally flat, well drained land and substantially clear of vegetation; where community facilities and carparking can be accommodated; where visual surveillance and public access is successful and where landscape buffers are provided to adjoining residential areas.

Neighbourhood Parks and general Parkland servicing the needs of residents directly for passive recreational uses. These parks are intended to provide opportunities and facilities for passive and informal active recreation such as picnicking, 'kick-a-bout' areas, areas of play for children (ie playgrounds and hit-up walls), furniture and lighting. Linear trails are identified as 2.5m wide shared pathways. They are located to afford linkages to adjoining attractions and internal key locations. Windrows exist within the site and where practical have been preserved within the road reserve. In addition, existing single species of redgums have been retained within open space. These two vegetation types act as important wildlife corridors as well as providing strong visual appeal.

'Woodland Conservation Zone' in the south of the site is an extensive area of remnant vegetation classed as 'plains grass woodland', consisting of Red Gums (it has been identified as a key conservation area in the Mernda Strategy Plan). Planting will be entirely indigenous providing a special opportunity to attract local wildlife and offer a living environmental 'classroom'. Paths will wind between the trees and seating and picnic tables will be unobtrusive.

The final open space category comprises an artificially created wetland. The proximity of these wetlands to the remnant Red Gums creates an opportunity to link the two areas to expand the network of open space. The wetlands can contribute to treatment of runoff within the estate and offer a particular

environment for birdlife and a chance to reveal and celebrate water in a residential context.

6.12 Net Gain

One of the issues the Panel raised was the need for flexibility in the provision of open space areas focused on remnant vegetation. The panel said:

> *In the context of the significance of the redgum grassy woodlands EVC, and the likely land demanding nature of any meaningful offsets for existing habitat loss, the Panel predicts that significant flexibility will be needed to deliver net gain opportunities. A key resource provided by the Strategy Plan in this regard is the undertaking that a plan wide quantity of unencumbered public open space will be delivered, within which, amongst other objectives, the obligation to provide native vegetation net gain can be met and opportunities to undertake offset measures can be provided.*

The Woodland Waters Development Plan adopts this approach. The Woodland Waters Development Plan proposes to meet the net gain requirements by the revegetation and maintenance of the remnant grassy woodland area. There is substantial scope to provide net gain offsets, envisaged by the Panel, through a number of improvements, in particular to the understorey. As a result, this area will provide for substantially different recreation opportunities compared to other open space areas and will have a greater emphasis on the conservation of this remnant grassy woodland EVC.

9 Conclusion

Extensive consultation with Council officers has been undertaken in the preparation of this Development Plan. In response to these negotiations the Plan has been modified to:

- Co-locate the active open space with the woodlands;
- Increase the area of the active open space to 6.49ha from 2.07ha (within the Woodland Waters site);
- Realign the internal road layout to maximize the views to the distant ranges from Hunters Lane;
- Alter the collector road layout in accordance with direction from Council officers;
- Realign the road alignment to provide appropriate connections with the adjoining land to the north in consultation with the owner and consultants for that land;
- Reduce the number of allotments integrated with the wetlands;
- Revise the lot layout to increase tree retention, particularly in the north east corner of the site, towards Plenty Road. An additional 20 trees have been retained; and
- Revise the layout of those lots integrated with the Woodland.

The Woodland Waters DP provides for a mix of densities and allows an appropriate portion to be developed for medium density purposes, capitalising on the site's proximity to the extensive areas of open space, precinct centre and town centre.

The entrance to the estate will be highlighted by a landmark wetland area, which reflects one aspect of the extensive and varied open space network available to residents.

Over 26% of the site area will be used as open space (unencumbered) and a large number of remnant river redgums will be incorporated into the design. Whilst some native vegetation will be removed, it will be replaced and supplemented with new indigenous plantings. In all 93% of the existing trees will be retained.

The road network is designed to facilitate ease of access by vehicles, pedestrians and bicycles and provide site permeability to access the recreational and commercial facilities available in the precinct.

Streetscape and landscape design elements will be common within the development.

Through its development contributions the development will facilitate the provision of physical and social infrastructure in the area.

The submitted DP and supporting documentation is consistent with the principles of the MSP and meets the requirements of Development Plan Overlay. A subdivision proposal in accordance with the submitted Development Plan will result in a sound residential development, which meets Council's expectations and the principles of ResCode.

Attachment A - Title Details

Attachment B – State and Local Planning Policy Framework

State Planning Policy Framework

The purpose of State policy in planning schemes is to inform planning authorities and responsible authorities of those aspects of State level planning policy which they are to take into account and give effect to' in planning and administering their respective areas. It is the State Government's expectation that planning and responsible authorities will endeavour to integrate the range of policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development.

Planning, under the Planning and Environment Act 1987, is to encompass and integrate relevant environmental, social and economic factors. It is directed towards the interests of sustainable development for the benefit of present and future generations, on the basis of relevant policy and legislation. Planning authorities and responsible authorities are responsible for the effective planning and management of land use and development in their districts for the broad interests of the community, through the preparation of strategic plans, statutory plans, development and conservation plan, development contribution plans, and other relevant plans to achieve the objectives of the Act.

The State Planning Policy Framework (SPPF) provides a context for spatial planning and decision making. It is made up of general statements of principles for land use and development planning. Planning and Responsible Authorities are required to take account of the SPPF when making decisions. The relevant principles outlined for settlement in the SPPF are:

> *Planning is to anticipate and respond to the needs of existing and future communities through provision of zoned and serviced land for housing, employment, recreation and open space, commercial and community facilities and infrastructure. Planning is to recognise the need for, and as far as practicable contribute towards:*
>
> - *Health and safety.*
> - *Diversity of choice.*
> - *Adaptation in response to changing technology.*
> - *Economic viability.*

- *A high standard of urban design and amenity.*
- *Energy efficiency.*
- *Prevention of pollution to land, water and air.*
- *Protection of environmentally sensitive areas and natural resources.*
- *Accessibility.*
- *Land use and transport integration.*

Part of the general implementation for Settlement (Clause 14) includes the following:

> *Planning authorities should plan to accommodate projected population growth over at least a 10 year period, taking account of opportunities for redevelopment and intensification of existing urban areas as well as the limits of land capability and natural hazards, environmental quality and the costs of providing infrastructure.*
>
> *In planning for urban growth, planning authorities should encourage consolidation of existing urban areas while respecting neighbourhood character. Planning authorities should encourage higher density and mixed-use development near public transport routes.*
>
> *Planning authorities should facilitate the orderly development of developing urban areas through the preparation of structure plans. The plans should take into account the strategic and physical context of the location, provide for the development of sustainable and livable urban areas in an integrated manner, facilitate the development of walkable neighbourhoods and facilitate the logical and efficient provision of infrastructure.*
>
> *Structure plans may consist of a hierarchy of plans that provide the broad planning framework for an area as well as the more detailed planning requirements for neighbourhoods and precincts within an area. Planning authorities should facilitate the preparation of a hierarchy of plans appropriate for the development of an area.*
>
> *Responsible authorities should use any relevant structure plan in considering applications for subdivision.*

The SPPF places an obligation on the planning authority to facilitate the orderly development of urban areas through the development of structure plans which are based on the maintenance of around ten years supply of developable land.

Metro Strategy – Melbourne 2030

Melbourne 2030 is a plan for the growth and development of the metropolitan area. It is the State government's 30-year plan for Melbourne that is articulated through a set of principles and key directions, which are supported by implementation plans. The Strategy was released in October 2002 for public comment. The government's response to the public comments has been recently released. With some minor alterations to the urban growth boundary (UGB), this review reaffirms the direction of Melbourne 2030.

Elements of most of the key directions are relevant to the current proposal, however the core policy is dealt with in Direction 2 *Better Management of Urban Growth*.

This Direction establishes the following four policies:

- *Establish an urban growth boundary to set clear limits to metropolitan Melbourne's outward development*
- *Concentrate urban expansion into growth areas that are served by high-capacity public transport*
- *Manage the sequence of development in growth areas so that services are available from early in the life of new communities*
- *Protect the green wedges of metropolitan Melbourne from inappropriate development*

The addition of the UGB is intended to direct growth to areas best able to be supplied with appropriate infrastructure and services. The initial location of the interim UGB was based on existing urban zonings.

However the UGB as applied to Mernda West appears to have been an error in the drafting of the zoning of the land where the western extent of the Residential 1 Zone is located some 100 metres west of Cravens Road. This leaves a strip of land approximately 100 metres wide between the Residential 1 Zone and Cravens Road that is zoned Environmental Rural. This issue was dealt with at the panel hearing and on the 24th of November 2003, Amendment C63 was gazetted which relocated the UGB to the centre of Cravens Road.

The Direction concentrates urban expansion into growth areas. The main requirements for development in the growth areas, outlined in the policy, are:

- *specifying that structure plans, including those that have been prepared but not exhibited before the release of* Melbourne 2030*, should aim to achieve increases in average housing density (within the structure plan area) significantly higher than 10 dwellings per hectare, for example, 15 dwellings per hectare – these should provide a range of housing*

types, with the highest densities located in or close to activity centres and the Principal Public Transport Network

- *planning for timely and adequate provision of public transport and other local and regional infrastructure, in line with a preferred sequence of land release*
- *providing for significant amounts of local employment opportunities*
- *creating a widespread network of mixed-use activity centres and developing an urban form based on the Neighbourhood Principles*
- *inside the urban growth boundary, restricting low-density rural residential development that would compromise future development at higher densities*
- *retaining the unique characteristics of established areas incorporated into new communities so as to protect and manage natural resources and areas of heritage, cultural and environmental significance*
- *designing well-planned, easy-to-maintain and safe streets and neighbourhoods that reduce opportunities for crime, improve perceptions of safety and increase levels of community participation.*

Melbourne 2030 also promotes a more efficient and sustainable pattern of settlement at the metropolitan level. The policy requires that the conversion of land on the fringe to urban use must be done in a way that contributes to the overall directions of a sustainable and compact city. The remainder of the Direction focuses on the protection of the green wedges.

Implementation Plan 2 – Growth Areas

The growth areas implementation plan offers the following description:

> *Growth areas are areas on the fringe of metropolitan Melbourne that have been designated for urban use. They are on and around major regional transport corridors. Already prominent in planning for metropolitan Melbourne and already accommodating many tens of thousands of people, they will be extended to house and serve new communities of the future.*

The implementation plan lists the following broad aims for the growth areas:

- *direct development to growth areas that can be provided with public transport and other local and regional infrastructure in coordination with the preferred sequence of land release and development*

- *reduce the overall proportion of new dwellings in greenfield sites from the current figure of 38 per cent to 22 per cent by 2030*
- *maintain 15 years supply of broad hectare land zoned for residential purposes in growth areas, to limit upward pressure on prices*
- *establish a five-year cycle for development sequencing in growth areas, up to a threshold of 15 years*
- *achieve a gradual but significant increase in housing densities in growth areas, from the current average of 10 dwellings per hectare to around 15 dwellings per hectare, with the highest densities located in or close to activity centres and the Principal Public Transport Network (PPTN)*
- *increase the choice of housing types provided, to meet the needs of all groups in the community*
- *create a network of mixed-use activity centres focused on the PPTN*
- *direct a substantial proportion of new development to activity centres that have good access to the PPTN*
- *increase the availability of sustainable forms of travel, with more use of public transport and more opportunities for walking and cycling*
- *develop an urban form based on the Neighbourhood Principles*
- *structure urban areas to provide interconnected neighbourhoods that are clustered to support Principal or Major Activity Centres*
- *introduce community safety design principles in order to reduce opportunities for crime, improve perceptions of safety and increase levels of community involvement*
- *provide opportunities for growth in local employment*
- *inside the UGB, restrict rural residential development that would compromise future development at higher densities*
- *protect and manage natural resources and areas of heritage, cultural and environmental significance, and achieve significant savings in energy and water consumption.*

The implementation plan then lists 4 actions to be undertaken in response to the key issues identified. These actions are:

- *develop a new Growth Area Plan for each growth area, or review existing Growth Area Plans*

- *improve liaison between the Government, local governments and key stakeholders*
- *manage urban development*
- *ensure statutory implementation of Growth Area Plans.*
- *The last three of these three actions are largely associated with implementing the Growth Area Plan. The first action related to the revision of the existing plans for the growth areas and in this respect Appendix 2 of the document identifies the specific issues to be addressed.*

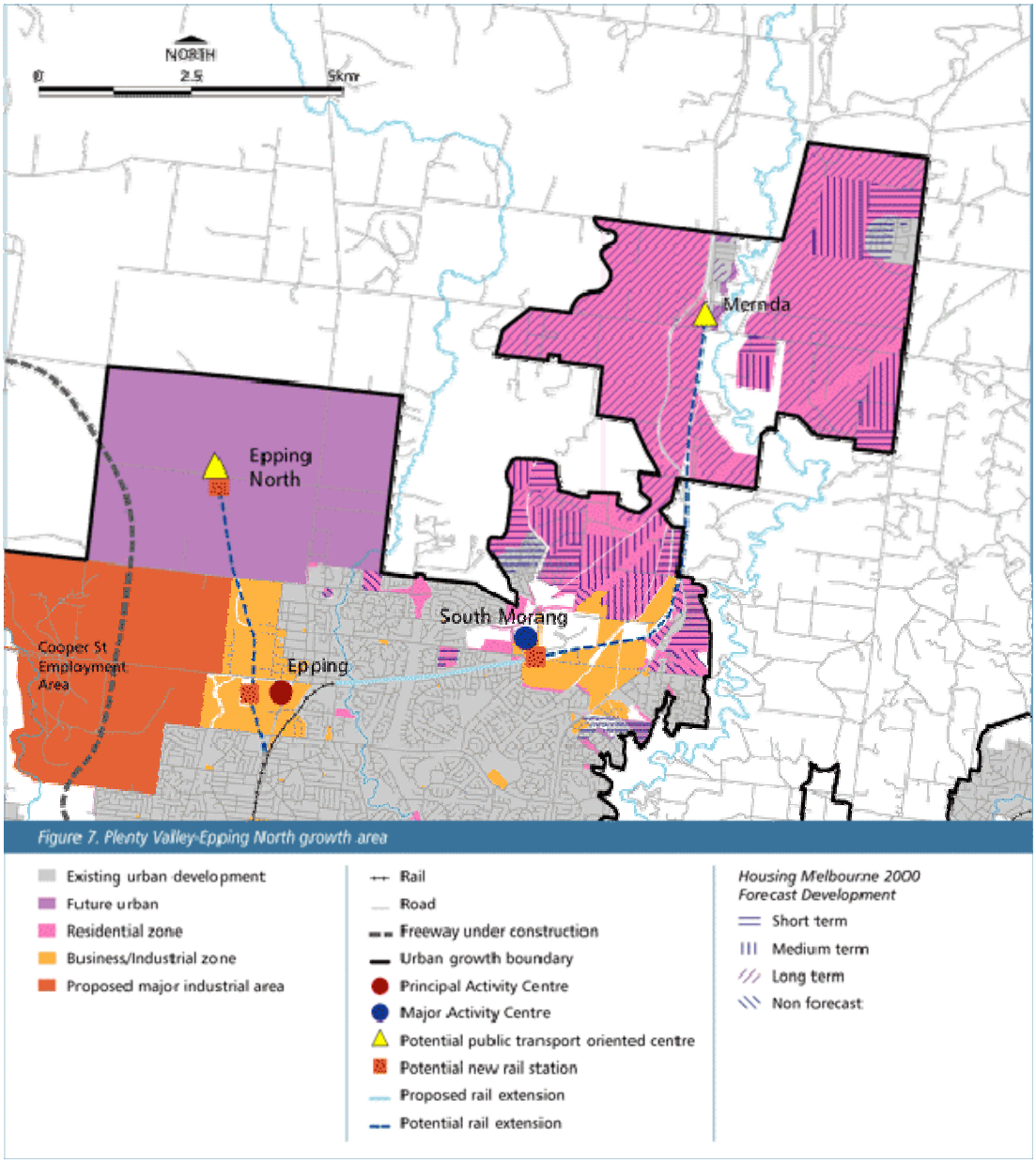


Figure 7. Plenty Valley-Epping North growth area

The Plenty Valley – Epping North section of this appendix does not list any issues but does recommend the following strategic actions:

- *The existing growth area plan for Plenty Valley will be reviewed, with a focus on development phasing, employment potential, public transport provision and opportunities for higher density residential development.*
- *Opportunities to further develop the employment node at Cooper Street Epping will be investigated.*
- *Preserve a public transport corridor from Lalor Station to Epping North.*
- *The opportunity to extend public transport to meet the existing rail corridor at Donnybrook will be considered in the longer term.*

Melbourne 2030 identifies the Plenty Valley as a major growth area in metropolitan Melbourne encourages the development of the valley. The strategy focuses on the staging of the development of the area to ensure adequate and appropriate infrastructure provision accompanies the development of the area. In addition, Melbourne 2030 also encourages higher density residential development.

Local Planning Policy Framework

Municipal Strategic Statement

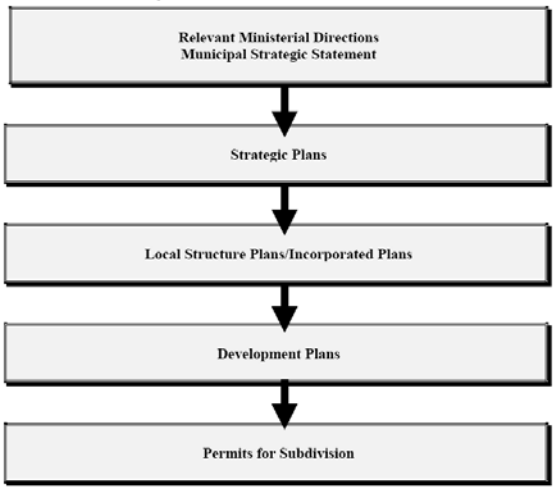
The Whittlesea Municipal Strategic Statement (MSS) contained in Clause 21 of the Scheme "*encapsulates significant planning policy directions for the municipality and in turn provides for the strategic basis for statutory land use controls"* (Clause 21.01).

The MSS describes the framework for growth area planning in Whittlesea, which follows on from Ministerial Directions and the MSS includes strategic plans, local structure plans/incorporated plans, development plans and permits for subdivision. The Growth Areas Framework (Clause 21.05) provides direction and a process (refer to diagram opposite) for the development of the Plenty Corridor. It states:

The Plenty Valley Strategic Plan had the basic function of identifying land suitable for all forms of future urban development. In addition to establishing suitability for urban development the Plenty Valley Strategic Plan also identified key transportation and land use relationships and advanced the concept of planning for long term employment growth in proximity to residential communities.

Clause 21.06-1 deals with the objectives, strategies and actions associated with the residential growth areas.

Figure 13 Whittlesea Growth Area Framework



The vision of Whittlesea for the Municipality is summarised in twelve key land use planning objectives and the Municipal Framework Plan. The key land use planning objective for Residential Growth Areas is *"to plan for a diverse series of residential communities that have a unique identity and sense of place, cater to all segments of the housing market and respect and incorporate local environmental and cultural features"* (Clause 21.06-1)

This strategy identifies the City of Whittlesea as the focus of population growth from the North East and North West of metropolitan Melbourne and states that the:

> *City of Whittlesea is well placed to accommodate this growth due to its proximity to the north-eastern region and greater Melbourne generally and a perceived affinity of residents of these areas to the landscape qualities of the Plenty Valley.*
>
> *These factors have in essence shaped the allocation of growth opportunities and will consolidate the future role of the City of Whittlesea within the local and metropolitan context.*
>
> *Growth will be channeled into designated areas according to a residential growth area framework plan which focuses on the Plenty Valley and which supports the prospect of urban growth within Epping North.*

Clause 21.06-1 summaries the development density, style of development, capacity and intended housing market for the Mernda/Doreen growth opportunity as follows:

- Range of development densities with a target density across the entire area of approximately 8 lots per hectare.
- Comprehensive, permeable lower density style of development which emphasises:
  - Subdivision design;
  - Interface with surrounding rural areas;
  - Retention of local features;
  - Provision of public transport and local services; and
  - Access to interconnected open space.
- Maximum capacity of approximately 30,000 persons
- Predominantly second and third home buyers however emphasis will be placed upon the provision of a range of allotment sizes and housing styles.

These objectives are to be achieved by support for the framework and strategic allocation of growth areas contained

within the Plenty Valley Strategic Plan. The actions intended to implement this support are:

- Implement the objectives of the Plenty Valley Strategic Plan and incorporate the plan into the Whittlesea Planning Scheme.
- Implement the objectives of the South Morang Local Structure Plan, Mernda Local Structure Plan Part 1 and the Whittlesea Township Local Structure Plan and incorporate these plans into the Whittlesea Planning Scheme.
- Implement a three-staged strategic planning framework for subdivision in Mernda/Doreen by applying the Incorporated Plan Overlay, Development Plan Overlay and permit requirements.
- Undertake a strategic planning process for Epping North in accordance with the Epping Bulge Position Statement prior to considering zoning land in the area for residential purposes.
- Undertake market and needs analysis as an integral component of the comprehensive forward planning process for future growth areas at Epping North and within the Plenty Valley.
- Ensure the retention of River Redgums in new subdivisions by implementing the 'Redgum Protection Policy' and applying it to all new subdivisions, which include development near any existing River Redgum.
- Oppose inappropriate interim subdivision of land in future growth areas.
- Emphasise the creation of local identity by adopting a variation to uniform density targets by implementing medium, average and low development densities at South Morang, Epping North and Mernda / Doreen respectively.
- Ensure diversity in lot size and building form is achieved and subdivision proposals are responsive to site characteristics by requiring that detailed site analysis procedures are adopted in accordance with Council's *Subdivision Design Requirements and Site Analysis Procedures Guidelines* for all new residential and industrial subdivisions in 'in-fill' locations and growth areas of South Morang, Mernda/Doreen and Epping.

Other relevant key land use planning objectives of the MSS are as follows:

- *"To effectively manage urban growth in a manner that maximises beneficial relationships between*

compatible land uses and which avoids inappropriate incursions into non-urban or environmentally sensitive areas." (Clause 21.06-2, Managing Urban Growth)

- *"To promote the establishment of increased diversity and quality in housing provision to meet the needs of existing and future residents of the City of Whittlesea in a manner which contributes positively to local character and sense of place."* (Clause 21.06-3, Housing Provision)
- *"To establish an efficient, interconnected (multi modal) transportation system which increases the level of accessibility and choice within and beyond the City of Whittlesea".* (Clause 21.06-6, Transport and Accessibility)
- *"To actively pursue resolution of key strategic items of physical infrastructure for unserviced growth areas and to plan for and identify means to fund the establishment and maintenance of social and physical infrastructure in a timely and efficient manner".* (Clause 21.06-7, Infrastructure Provision)
- *"To progressively upgrade the image and appearance of the City of Whittlesea focussing on retention of local environmental features, landscape qualities and urban and landscape design improvements."* (Clause 21.06-9, Image and Appearance)
- *"To identify, permanently preserve and promote opportunities for the enhancement of local environmental assets which are vital to the maintenance of ecological processes."* (Clause 21.06-10, Environmental Assets)
- *" To plan for the comprehensive leisure and recreation needs of existing and future residents and to support the establishment of tourism enterprises that are compatible with the local environment and pattern of land use."* (Clause 21.06-11, Leisure, recreation and Tourism)
- *"To increase the level of protection for and opportunities for incorporation of the City's European and Aboriginal heritage."* (Clause 21.06-12, Heritage and Culture)

Local Planning Policies

Open Space Policy

The Open Space Policy (Clause 22.01) of the Scheme relates to the provision of open space in the Municipality.

The objective of this Policy is *"to provide a framework to understand planning, provision, development and*

maintenance of an integrated open space system which meets the wide ranging needs of the community".

The policy basis for this clause is:

- *The protection and enhancement of natural and cultural features, including areas of flora and fauna significance, waterways and floodplains.*
- *Providing where applicable both local and regional linear open space linkages, walking and cycling trails.*
- *The aim of a balance between local, district and regional open space, consistent with the open space hierarchy outlined in the Open Space Strategy.*
- *Providing a balance between informal recreation and active sporting areas.*
- *Providing open space that is accessible to the community.*
- *The opportunity to link open space with community facilities and public services, for instance via trail networks and open space linkages.*
- *Opportunities for shared public and school use of sports grounds and open space.*
- *The adoption of a promotion role to increase the range of outdoor recreation opportunities to the community.*
- *The encouragement of a diverse range of recreation opportunities for different age groups.*
- *Provision for the safe use of open space through appropriate facility and urban design features which ensure a degree of security in the use of open space, and make open space attractive for use.*
- *Development of a planning and management approach that incorporates the conservation of historic places in areas of open space.*
- *The provision of open space along waterways with development fronting not backing onto open space.*
- *The need to ensure design of open space is responsive to the characteristics and conditions of the site.*
- *Strategies for management and enhancement of conservation open space areas.*
- *The need to ensure that all areas reserved for open space is on unencumbered land.*

The policy directions for the provision of open space and recreation and a comprehensive response to the objective and policy directions of this Policy are provided in Section 6 below.

Subdivision Design Policy

The Subdivision Design Policy (Clause 22.04) of the Scheme applies to subdivision for residential, rural residential, rural living, industrial and commercial development.

The objectives of this Policy include:

- *"To achieve appropriate site responsive subdivision design for the creation of new undeveloped allotments for residential, rural residential, rural living, industrial and commercial development.*
- *To define and evenly apply municipal planning objectives for subdivision design.*
- *To create a sense of place and community focus through subdivision design.*
- *To promote subdivision that ensures integration, lot size diversity, efficient open space provision, movement, and appropriate streetscape design.*
- *To define the need for and requirements for site analysis procedures."*

The basis for the policy is:

- *Diversity in lot sizes and types is encouraged in all new subdivisions.*
- *Features of cultural, heritage and natural significance are incorporated into subdivisions to create character, diversity and interest.*
- *New subdivisions are integrated with the surrounding environment and land use.*
- *Movement networks provide for a high degree of accessibility and connectivity.*
- *The City's natural and cultural features influence subdivision and streetscape design.*
- *Subdivision design is responsive to site characteristics and conditions.*
- *All new subdivisions that create undeveloped allotments for the purpose of residential, rural residential, rural living, industrial and commercial development satisfy the requirements of the 'Subdivision Design - Requirements and Site Analysis Procedures Guidelines'.*

Section 6 below provides a comprehensive explanation of the response to the objectives and policy directions of this Policy.

River Redgum Protection Policy

The River Redgum Protection policy (Clause 22.10) of the Scheme applies to the protection of River Red-gums located in urban and rural areas.

The objective of this Policy is *"to ensure that the development of urban and rural areas takes into account the presence, retention, enhancement and long term viability of River Red Gums in urban areas".*

- *The intrinsic value of River Red Gums be recognised in establishing character and identity in urban and rural areas.*
- *Any planning proposal for development on land which contains one or more remnant River Red Gums should be accompanied by a comprehensive site analysis and arborists report.*
- *Generally the majority of River Red Gums proposed for retention should be sited in public open space reserves and/or road reserves.*
- *Where a tree is to be located in a lot, the lot should be large enough to accommodate a suitable development envelope that does not disturb the tree or its root system.*
- *Where feasible, areas of significant River Red Gum regeneration should be protected in any development proposal.*
- *Generally only those trees independently assessed as presenting a danger to people and property should be removed.*
- *Trees identified for retention should be appropriately protected during the construction phase, and thereafter their health regularly monitored by an appropriate environmental consultant where located on public land.*
- *Any tree nominated on a development and/or subdivision plan for protection should be located within an appropriate tree protection zone. The protection zone must be large enough to ensure that the trunk and canopy remain intact and that the root system is not severely damaged or destroyed during the construction phase.*
- *Any planning permit for subdivision which contains a protected tree on a lot, should include a requirement that the protected tree, protection envelope,*

development envelope and any conditions relating thereto be nominated on the relevant title.

The trees on the site are mixture of mature River Red Gums Saplings and regrowth. Generally the trees are in good condition, although drought conditions and possums are causing health impacts in many instances. Section 6 below describes the response to the objective and policy directions of this Policy with respect to the trees on site.

Development Contributions Plan Policy

The Development Contributions Plan Policy (Clause 22.11) of the Scheme applies to new residential and non-residential subdivisions in the Municipality.

The objective of this Policy is *"to ensure the provision of basic infrastructure in a timely fashion to meet the needs generated by new development".*

The development contributions are discussed in Section 5 below and provide the response to the objective and policy directions of this Policy.

Zones and Overlays

Residential 1 Zone

The subject area and land located immediately north, on the eastern side of Plenty Road and partly to the south is zoned Residential 1 (R1Z). Amongst other things, the relevant purpose statements of this zone include:

- *"To provide for residential development at a range of densities with a variety of dwellings to meet the housing needs of all households;*
- *To encourage residential development that respects the neighbourhood character;*
- *In appropriate locations, to allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs".*

A planning permit is not required to use land for a dwelling (Clause 32.01-1) in a R1Z. A planning permit is required to subdivide land (Clause 32.01-2), to construct and extend one dwelling on a lot of less than 300sq.m. (Clause 32.01-3) and to construct and extend two or more dwellings on a lot (Clause 32.01-4).

The Woodland Waters DP is consistent with the purpose of the R1Z as it:

- facilitates the residential development of the subject land;

- provides a range of lot sizes to facilitate the construction of a variety of dwelling types;
- includes recreational uses to serve the needs of the local community.

Environmental Rural Zone

The zone affects a strip of land approximately 100 metres wide on the east side or Cravens Road and appears to be a drafting error that occurred when the new format planning scheme was introduced in 1996. The land on the south side of Hunters Lane is also zoned Environmental Rural.

The objectives of the ERZ are:

- *To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *To give effect to the environmental outcome specified in the schedule to this zone.*
- *To conserve and permanently maintain flora and fauna species, soil and water quality and areas of historic, archaeological and scientific interest and areas of natural scenic beauty or importance so that the viability of natural eco-systems and the natural and historic environment is enhanced.*
- *To encourage development and the use of the land which is in accordance with sound management and land capability practices, and which takes into account the environmental sensitivity and the bio-diversity of the locality.*
- *To ensure that subdivision promotes effective land management practices and infrastructure provision.*

These objectives are somewhat inconsistent with the designation of the land as a residential growth area. This error in the zoning was addressed in Amendment C30, which is discussed in section 3.5.1.

Vegetation Protection Overlay, Schedule 1

The Scheme includes the subject land and land located immediately north, south and on the eastern side of Plenty Road in Schedule 1 (Significant Vegetation – River Redgum Grassy Woodland) to the Vegetation Protection Overlay (VPO1).

The vegetation protection objectives to be achieved in VPO1 are as follows:

- *"To preserve and maintain significant vegetation and the character of the area;*

- *Maintain soil qualities and minimise the impacts of erosion;*
- *Preserve natural habitat for flora and fauna."*

A planning permit is generally required to remove, destroy or lop native vegetation in VPO1. A planning permit is not required to remove, destroy or lop vegetation that is not native vegetation.

The preparation of the Woodland Waters DP has involved an arboricultural and flora and fauna assessment of the subject land that considers all of the matters specified under the VPO1 (refer to Section 4 below). The environmental conservation objectives for the Woodland Waters DP to these objectives are outlined in Section 5 below and are consistent with the vegetation protection objectives of VPO1.

Incorporated Plan Overlay, Schedule 1

The Scheme includes the subject land and land located immediately north, south and on the western side of Plenty Road in Schedule 1 (Mernda Incorporated Plan) in the Incorporated Plan Overlay (IPO1).

The Incorporated Plan Overlay generally requires that an incorporated plan be incorporated into the Scheme before a planning permit is granted to use or subdivide land, construct a building or construct or carry out works. Once the applicable Incorporated Plan has been prepared and incorporated into the Scheme, any planning permit application that is generally in accordance with the incorporated plan is exempt from notice requirements, decision requirements, decision requirements and review rights (Clause 43.03-2). Any permit granted must also be generally in accordance with the Incorporated Plan (Clause 43.03-1).

Amendment C30 to the Whittlesea Planning Scheme proposes to incorporate the Mernda Strategy Plan (MSP) to Clause 81 of the Whittlesea Planning Scheme. The MSP is has been assessed by the Panel and most of the Panel's recommendations have been adopted by Council.

The intent of the early submission of this DP is for it to be considered concurrently with the adoption of the MSP.

Development Plan Overlay, Schedule 5

The Scheme includes the subject land and land located immediately north, south and on the western side of Plenty Road in Schedule 5 (Mernda Development Plan) in the Development Plan Overlay (DPO5).

The Development Plan Overlay requires that a DP be prepared to the satisfaction of the Responsible Authority generally before a planning permit is granted to use or subdivide land, construct a building or construct or carry out works (Clause 43.04-1). Once the DP has been prepared to

the satisfaction of the Responsible Authority, any planning permit application that is generally in accordance with the DP is exempt from notice requirements, decision requirements and review rights (Clause 43.04-2). Any permit granted must also be generally in accordance with the DP (Clause 43.04-1). The DP may be amended to the satisfaction of the Responsible Authority (Clause 43.04-3).

DPO5 states that 10 elements must be shown on the DP. These elements are:

- *Application of the principles of the relevant incorporated plan;*
- *Co-ordination of different land ownerships;*
- *Local road network;*
- *Subdivision design, including lot densities;*
- *A range of dwelling types including flats, units, terraced and semi-detached houses;*
- *Topographic details;*
- *Location of pedestrian and bicycle access through residential areas;*
- *Location and layout of non residential uses, including activity centres;*
- *A conceptual level landscape plan including the location and retention of existing vegetation;*
- *Identification of significant environmental and cultural features and measures to preserve and enhance these features.*

Heritage Overlay, Schedule 16 and 18

The Heritage Overlay affects two sites adjacent to the subject land. These are

- HO 16 - Mayfield School and Residence 1325 Plenty Road, Mernda – Bluestone residence, timber school house, mature trees
- HO18 - Mayfield Presbyterian Church 1345 Plenty Road, Mernda – Bluestone church, mature trees, stables

Amongst other things, the relevant heritage protection objectives to be achieved under the Heritage Overlay are as follows:

- *"To conserve and enhance heritage places of natural or cultural significance;*
- *To conserve and enhance those elements which contribute to the significance of heritage places.*

- *To ensure that development does not adversely affect the significance of heritage places;*
- *To conserve specifically intended heritage places by allowing a use that would otherwise be prohibited if this will demonstrably assist with the conservation of the significance of the heritage place."*

A planning permit is required to subdivide the land, demolish or remove a building, construct a building and construct or carry out works. However, these two sites are not located within the Woodland Waters properties.

In addition, the preparation of the Woodland Waters DP has involved a Cultural Heritage Assessment of the subject land that considers all of the matters under the provisions of the Heritage Overlay.

Amendment C30 to the Whittlesea Planning Scheme proposes to add HO65 to the Scheme. However this site is also outside Woodland Waters.

Mernda Strategy Plan

The Mernda Strategy Plan (MSP) is designed to set the strategic direction, and provide broad level planning control, over the development of land in the Mernda/Doreen component of the Plenty Valley growth corridor. The MSP is designed to show the intended pattern of use and development in the Strategy Plan area to appropriately service the future community and to ensure that development of the area is well designed and will integrate well with the surrounding region. The MSP provides for:

- A variety of housing types and densities including a range of small and medium size lots for single and two person households, and appropriately located larger lots suitable for dwellings for family occupation.
- Opportunity to maximise population densities and accessibility to public transport systems.
- A hierarchy of shopping, service facilities and other employment nodes to meet the needs of residents.
- A range of appropriately located and adequate public and privately financed community services.
- The proposed uses for each zone.
- The pattern and location of a road and pedestrian system based on a safe and practical hierarchy of roads and footpaths to schools, local shopping and community facilities.

- Adequate access to the existing or proposed routes of an integrated public transport system.
- The location of regional and local public open space networks, which demonstrate that provision, can be made for a wide range of recreational opportunities for residents in the region.
- Preservation and enhancement of the associated environmental and cultural values.
- The staging of development of the area to take account of the effective provision of physical and social services having regard to the Government's infrastructure program and the forecast demand for residential land.

The MSP is broken into six (6) precincts and form the basis of individual Precinct Plans. Woodland Waters is located within Precinct 4.

Precinct 4 includes:

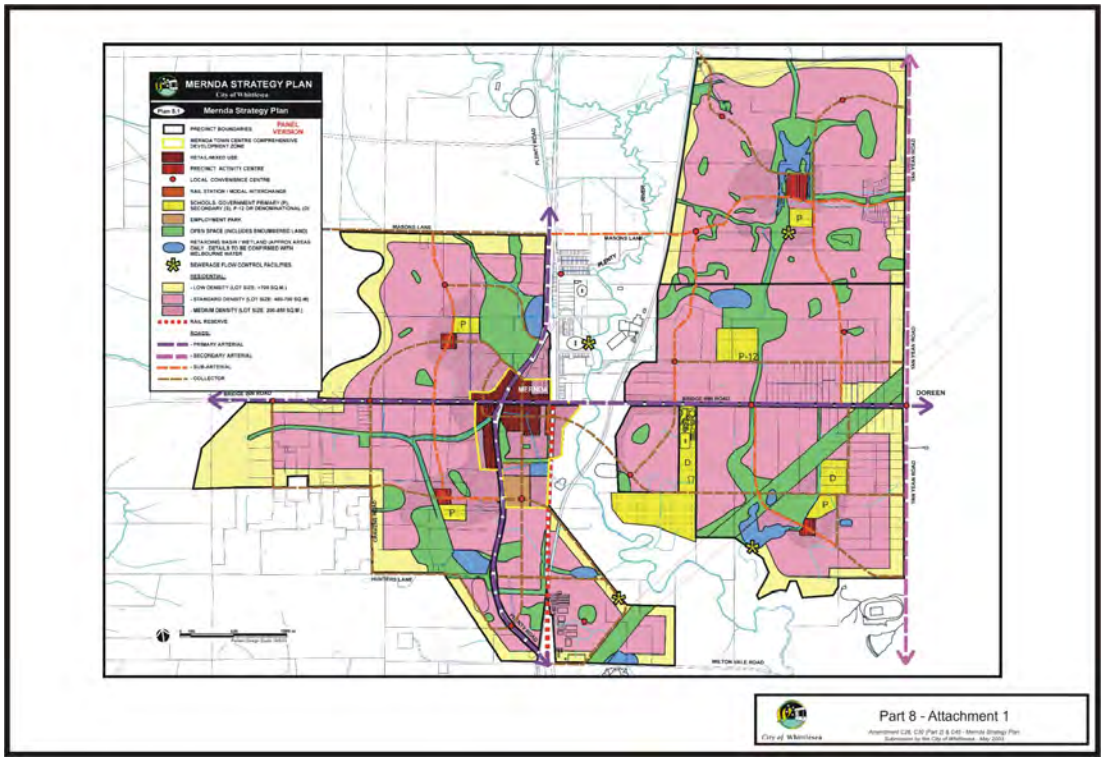
- Part of the Mernda Town Centre on the northern east part of the precinct;
- Predominantly residential land use; and
- A precinct activity centre and school (to be relocated closer to the Town Centre).

At the Panel Hearing into amendments C30 and C45, Council tabled a revised MSP plan. This plan included the following modifications relevant to Woodland Waters:

- Relocation of the precinct activity centre to abut the school;
- Expansion of the area recommended for medium density development;
- An increase in the open space area in the southern part of the precinct;
- The inclusion of a retarding basin in the south east of the precinct;

An extensive planning assessment of the Precinct 4 – Woodland Waters DP against the exhibited MSP document, the panel version MSP diagram and the contents of Council's submission to the Panel in relation to the MSP will be provided in Section 4.

The revised strategy plan, presented to the panel, is shown below.



3.5.1 Amendment C30

Amendment C30 provides for the incorporation of the MSP into the Whittlesea Planning Scheme. In support of the Mernda Strategy Plan, Amendment C30 proposes to rezone the area identified as the Mernda Town Centre to a Comprehensive Development Zone. Further zoning and overlay changes are proposed to rationalise some of the boundaries of the Strategic Plan area and include Bridge Inn Road within a Road Zone Category 2.

The relevant changes to the Planning Scheme Overlays affecting Woodland Waters include:

- Rezoning the strip of land on the eastern side of Cravens Road from an Environmental Rural Zone to a Residential 1 Zone and the application of a Vegetation Protection Overlay Schedule, a Development Plan Schedule 5, an Incorporated Plan Overlay Schedule 1 and a Significant Landscape Overlay to this land;
- Application of a Heritage Overlay Schedule 65 to part of the land on the east end of the site, fronting Plenty Road. This site is outside Woodland Waters; and
- Introduction of the Design and Development Overlay, Schedule 4 (DDO4) to the site.

Amendment C30 also includes alterations to the Municipal Strategic Statement.

The design objectives to be achieved in the DDO4 control are as follows:

- *"To implement the overall objectives of the Mernda Strategy Plan through subdivision stage specific design elements;*
- *To recognise, protect and enhance the special character of the broader Plenty Valley cultural landscape.*
- *To encourage environmentally sound and energy efficient development."*

Under the DDO4, a planning permit is generally required for buildings and works, with the exception of residential outbuildings meeting five listed requirements.

Under the DDO4 Control, prior to the issue of a planning permit for the construction of a building or the carrying out of works on individual allotments contained within the subdivision stage plans, a *'Design and Development Plan'* must be approved by the Responsible Authority.

At the hearings, the Department of Education and Training made a submission which recommended that the primary school in Precinct 4 be co-located with a proposed government secondary college in close proximity to the Town Centre, forming a Prep – Year 12 facility while an additional primary school be located in Precinct 5 between Plenty River and Rail Reserve. This recommendation was adopted by the Panel and by the Planning Authority

The Panel has completed its report on Amendment C30 and submitted it to the Minister and the Planning Authority. The Planning Authority has considered the panel's report and adopted all of the recommendations with the exception of recommendations 17 and 23, which deal with the issue of residential densities. The Panel recommended adoption of the standard 15 lots/ha proposed in Melbourne 2030. The Planning Authority reiterated its commitment to a density around 8 lots/ha, which based on infrastructure constraints. The Amendment is now with the Minister.

The intent of the early submission of this DP is for it to be considered concurrently with the above-mentioned amendments to the Scheme and the adoption of the MSP.

3.5.2 Amendment C45

Amendment C45 to the Whittlesea Planning Scheme proposes an extension to the Comprehensive Development Zone to the Mernda Town Centre and to incorporate a Comprehensive Development Plan to Clause 81 of the Whittlesea Planning Scheme.

The area affected by the CDZ1 rezoning is located well away from Woodland Waters. An assessment against the area

specific requirements and guidelines outlined in the Mernda Town Centre Comprehensive Development Plan is generally not relevant to the Precinct 4 – Woodland Waters DP.

Similar to Amendment C30, Amendment C45 has been reported on by the Panel and has been adopted by the Planning Authority. The Amendment is now with the Minister.

Attachment C - Zoning, Overlays and Planning Scheme Controls

Attachment D- Flora and Fauna Assessment & Net Gain Assessment

Attachment E - Traffic Assessment

Attachment F - Arboricultural Assessment

Attachment G - Map of Arborist Recommendations

Attachment H - Archaeological and Cultural Heritage Assessment

Attachment I - Site Analysis

Attachment J - Development Plan

DEVELOPMENT ANALYSIS
Site Area
Encumbered Open Space 4.16 Ha
Gross Developable Area
Active Open Space (Ovals) 6.5 Ha
Grassy Woodland Open Space
Balance of Open Space 1.29 Ha
Net Developable Area
Roads 14.00 Ha
Net Residential Area 25.30 Ha
Allotment Analysis
% Total Lots
Total Yield
PLEASE NOTE: This plan is indicative only and is subject to further detailed design and Council approvals. It has been prepared based on the panel version of the Mernda Strategy Plan and current Melbourne Water Drainage Scheme. Boundaries shown are subject to confirmation by title and survey.
LEGEND
Development Boundary
Collector Road
Access Streets
Activity Centre
Pedestrian Links
Standard Allotments
Terrace Allotments
Semi-Detached Townhouses
Cottage Allotments
Low Density Allotments
Open Space
Wetland
Drainage Reserve
Sedimentation Ponds
Active Open Space
Grassy Woodland Open Space
Existing Signifcant Trees
Existing Trees to be removed
REGENT STREET
CRAVENS ROAD
HUNTERS LANE
PLENTY ROAD
STAGE 13
STAGE 12
STAGE 5
STAGE 4
STAGE 3
STAGE 2
STAGE 6
STAGE 7
STAGE 8
7A
8A
STAGE 9
STAGE 10
STAGE 1
STAGE 11
Collector road connection as per the Mernda Strategy Plan
Low density housing to interface with Cravens Road
Future Activity Centre
Treated slow points to aide tree retention & add amenity to streetscape
Vehicle and pedestrian connection to future development
Existing trees to be retained within linear corridor
Existing trees to be retained within Open Space and Linear Links
Enhancement of drainage corridor & sedimentation ponds in accordance with the Melbourne Water Drainage Scheme requirements
Retention of windrows in central median
Medium Density Housing to frame open space and add to housing choice
Vehicle and pedestrian connection to future development
Active Open Space
Sedimentation Pond
Existing trees to be retained within linear corridor
Existing significant trees to be retained & protected within widened reserves
Low density housing to interface with Cravens Road
Grassy Woodland Open Space
Floodway
Future Development
Landscaped entry
Proposed Medium Density Site
Varied interface treatments to Plenty Road
Wetland Habitat Island
Low density housing to interface with Hunters Lane protecting heritage view lines
Tree protection & retention to be in accordance with guidelines in the Mernda Strategy Plan and subject to further detailed refinements with Council and Authorities
Grassy Woodland Open Space
Wetlands in accordance with Melbourne Water Drainage Scheme requirements
Vehicle connection through to Hunters Lane and future development to the south
Hunters Lane closure and pedestrian/ cycle link to eastern development and parkland by others
Floodway in accordance with Melbourne Water Drainage Scheme requirements
woodland waters
CENTRAL EQUITY LAND
Scale 1:1500m @ A3
0 15 30 45m
ref 102108
date 13 Dec 2007
rev I
drawn APB
checked TW
please note
This plan is conceptual only and subject to further refinements
For accurate detail a computed plan will be necessary
planning & urban design
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t +61 3 9869 0800
abn 59 124 206 819
Development Plan
urban
consulting group

Attachment K – Landscape Master Plan

Attachment L - Melbourne Water Drainage Requirements

Attachment M – Functional layouts for Plenty Road intersecton

Attachment N – Road Cross Sections

Attachment O– Design Guidelines

Attachment P – Development Contributions Methodology