

# **ATTACHMENT TO AGENDA ITEM**

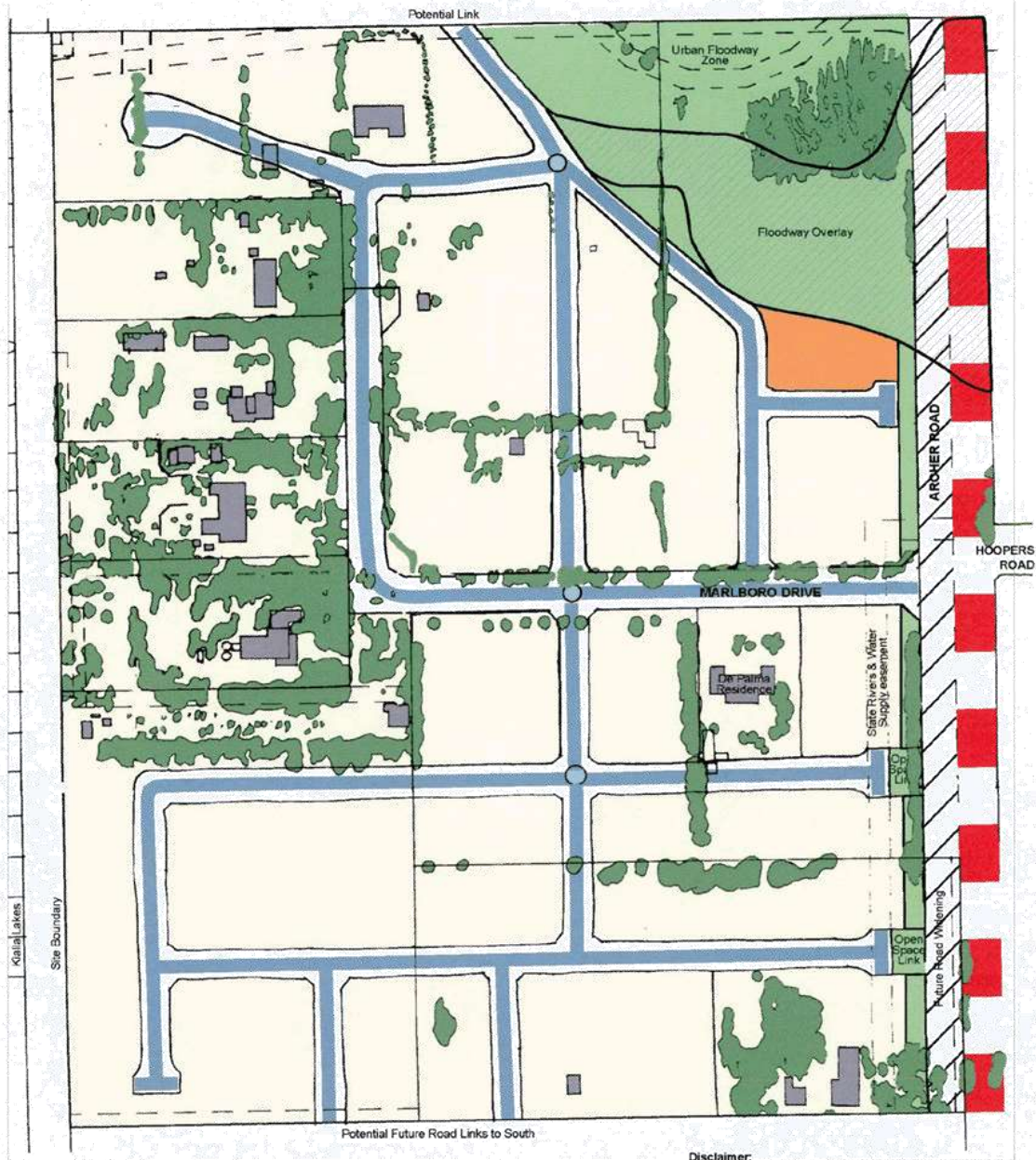
**Ordinary Meeting**

**15 October 2019**

**Agenda Item 10.2      Planning Permit Application 2018-264 - Two lot  
subdivision at 560 Archer Road, Kialla**

**Attachment 1            Marlboro Drive Concept Plan ..... 494**

**Attachment 2            Marlboro Drive Concept Plan Planning Report ..... 495**



- Legend**
- Medium Density Residential
  - Standard Residential
  - Public Open Space
  - Urban Floodway Zone
  - Floodway Overlay
  - Existing Buildings
  - Viewlines

**Disclaimer:**  
 This plan was produced without reference to consultant studies or a detailed level and features survey. Existing vegetation requires assessment for retention value. This plan is yet to be subject to discussions with Council and residents.

**Marlboro Drive, Kialla**

Client: A & L De Palma Date: November 2004  
 Drawing No: 130811-001 Revision: C

N  
 Scale: 1:2000 @ A3

Coomes Consulting Group Pty Ltd  
 24 Albert Road, PO Box 305, South Melbourne, VIC 3205. T: 61 3 9923 7808 F: 61 3 9923 7029  
 44 Webb and Street, PO Box 926, Shepparton, VIC 3632. T: 61 3 5631 4444 F: 61 3 5631 4445

Engineering, Surveying, Planning, Urban Design, Landscape Architecture  
 Sustainability and Environment, Agribusiness, Project Management



Marlboro Drive Concept Plan

**Figure 3-4 Marlboro Drive Concept Plan**

GREATER SHEPPARTON PLANNING SCHEME AMENDMENT C57  
 PANEL REPORT: JUNE, 2005

Coomes Consulting Group Pty Ltd ABN 14 874 072 735 ACN 050 029 635  
144 Welsford Street PO Box 926 Shepparton Victoria 3632 Australia  
T 61 3 5831 4448 F 61 3 5831 4449  
consult@coomes.com.au coomes.com.au

coomes consulting

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agribusiness Project Management

**Marlboro Drive, Kialla**  
Concept Plan  
Planning Report

December 2004  
Prepared by Coomes Consulting Group

Coomes Consulting Group Pty Ltd ABN 14 874 072 735 ACN 050 029 635  
 144 Welsford Street PO Box 926 Shepparton Victoria 3632 Australia  
 T 61 3 5831 4448 F 61 3 5831 4449  
 consult@coomes.com.au coomes.com.au

coomes consulting

## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Overview	1
1.2	Concept Plan	1
<b>2</b>	<b>Planning Context</b>	<b>2</b>
2.1	State Planning Policies	2
2.2	Municipal Strategic Statement and Local Planning Policies	2
<b>3</b>	<b>Site Context and Analysis</b>	<b>3</b>
3.1	Site Description	3
3.2	Land Use	3
3.3	Site Context	4
3.4	Neighbourhood Context	4
3.5	Landform	5
3.6	Access	5
3.7	Zoning and Encumbrances	5
<b>4</b>	<b>Opportunities and Constraints</b>	<b>6</b>
4.1	Opportunities	6
4.2	Constraints	6
<b>5</b>	<b>The Concept Plan</b>	<b>7</b>
5.1	The Vision	7
5.2	Urban Design Objectives	7
<b>6</b>	<b>Housing</b>	<b>9</b>
<b>7</b>	<b>Landscape Design</b>	<b>10</b>
7.1	Existing Landscape Values	10
7.2	Vision	10
7.3	Design Objectives	10
7.4	Street Trees	11
<b>8</b>	<b>Open Space</b>	<b>12</b>

Knowledge Creativity Performance  
 Engineering Surveying Planning Urban Design Landscape Architecture  
 Sustainability and Environment Agribusiness Project Management

Coomes Consulting Group Pty Ltd ABN 14 874 072 735 ACN 050 029 635  
 144 Welsford Street PO Box 926 Shepparton Victoria 3632 Australia  
 T 61 3 5831 4448 F 61 3 5831 4449  
 consult@coomes.com.au coomes.com.au

coomes consulting

<b>9</b>	<b>Management of the Environment</b>	<b>13</b>
9.1	Ecological Values	13
9.2	Archaeological Values	13
9.3	Arboricultural Values	13
9.4	Soil Contamination	13
<b>10</b>	<b>Interface with agricultural land uses</b>	<b>14</b>
<b>11</b>	<b>Traffic and Transport</b>	<b>15</b>
11.1	Objective	15
11.2	Traffic generation	15
11.3	Internal Roads	15
11.4	External roads	16
<b>12</b>	<b>Physical Infrastructure</b>	<b>17</b>
12.1	Water	17
12.2	Sewer	17
12.3	Drainage	17
12.4	Electricity	17
12.5	Gas Supply & Telecommunications	17
<b>13</b>	<b>Development Contribution Assessment</b>	<b>18</b>
<b>14</b>	<b>Development Staging</b>	<b>19</b>

Knowledge Creativity Performance  
 Engineering Surveying Planning Urban Design Landscape Architecture  
 Sustainability and Environment Agribusiness Project Management

#### List of Figures

Site Location Plan  
 Site Photographs  
 Site Analysis Plan  
 Marlboro Drive Concept Plan  
 Concept Drainage Plan

---

**1 Introduction**

This Planning Report and Concept Plan are prepared in support of the rezoning of the Marlboro Drive area to Residential 1 Zone, and to provide a framework for the future development of the area.

This Report presents the planning framework for the Marlboro Drive Concept Plan, and outlines the requirements for the preparation of a development plan for all or part of the land forming part of the Concept Plan area.

**1.1 Overview**

The site comprises an area of approximately 26 hectares and is made up of nine individual allotments. It is located 5.5 kilometres to the south of Shepparton Central Activity District, and immediately south and east of the developing residential neighbourhood of Kialla Lakes (refer Site Location Plan).

For the purposes of this report, the nine allotments for the Marlboro Drive Concept Plan are referred to as “the site”. The Greater Shepparton Planning Scheme includes the site within an area identified for long term residential potential.

**1.2 Concept Plan**

The Concept Plan prepared for the Marlboro Drive area provides an overall plan for the residential development of the area. The Concept Plan has had regard to the principles and objectives of the applicable planning provisions and policy, and the site’s opportunities and constraints. In this manner the planning process seeks to ensure the co-ordinated development of this land over time.

The Concept Plan is referred to in the schedule to the Development Plan Overlay, and as such will inform the more detailed development plans which are required to be prepared prior to subdivision approvals.

Detailed assessments of the site’s ecological, archaeological, arboricultural, environmental values and the like are required to support the development plan prepared for each portion of the land as it becomes available for residential development.

The Concept Plan addresses:

- description of principles for subdivision design and urban character
- the layout of the development of the land including roads, areas of public open space and density of housing allotments.
- landscape master plan, including design philosophy and street tree species
- vehicular and pedestrian access to and movement within the site
- discussion of the application of development levies and contributions
- summary of the infrastructure services and the general manner in which they are to be provided

**2 Planning Context**

The Greater Shepparton Planning Scheme contains State and local planning policies which provide a framework for the strategic direction for growth areas in the municipality. Together with the Municipal Strategic Statement within the planning scheme, these policies have a significant influence on the development of the subject site.

The applicable policies are listed below, and information contained within this Report demonstrates how the proposed planning scheme amendment, development plan and subdivision achieves their objectives and intended outcomes.

**2.1 State Planning Policies***Settlement*

- Clause 14.01 – Planning for urban settlement

*Environment*

- Clause 15.01 – Protection of catchments, waterways and groundwater
- Clause 15.02 – Floodplain management
- Clause 15.06 – Soil contamination
- Clause 15.09 – Conservation of native flora and fauna
- Clause 15.10 – Open space
- Clause 15.11 – Heritage
- Clause 15.12 – Energy efficiency

*Housing*

- Clause 16.01 – Residential development for single dwellings
- Clause 16.02 – Medium density housing

*Economic Development*

- Clause 17.05 – Agriculture

*Infrastructure*

- Clause 18.01 – Declared highways, railways and tramways
- Clause 18.02 – Car parking and public transport access to development
- Clause 18.03 – Bicycle transport
- Clause 18.09 – Water supply, sewerage and drainage
- Clause 18.10 – Waste management
- Clause 18.11 – High pressure pipelines
- Clause 18.12 – Developer contributions to infrastructure

*Particular uses and development*

- Clause 19.01 – Subdivision

**2.2 Municipal Strategic Statement and Local Planning Policies**

- Clause 21.04 – Looking ahead
- Clause 21.05 – Strategic directions
- Clause 22.03 – Natural resource management
- Clause 22.04 – Goulburn Valley Highway environs
- Clause 22.06 – Streetscape, landscaping and urban design
- Clause 22.07 – Building lines

**3 Site Context and Analysis**

**3.1 Site Description**

The site comprises nine separate titles which together total approximately 26 hectares in area, and is situated 5.5 kilometres south of the Shepparton town centre (refer Site Locality Plan). Marlboro Drive, which provides access to all but one of the allotments, extends west from Archer Road.

The site is generally bound by Archer Road to the east, areas for which a development plan has been approved for standard residential development forming part of Kialla Lakes to the north and west and rural residential development to the south.

Four of the allotments are 1 hectare in size and these are located alongside the western boundary of the Marlboro Drive area. The remaining five properties vary in size from 3.7 hectares to 5.5 hectares. Three of these share a boundary with Archer Road.

The site includes the following properties:

- 2 Marlboro Drive, Kialla	Lot 6 LP127594	3.7 hectares
- 3 Marlboro Drive, Kialla	Lot 5 LP127594	4.5 hectares
- 4 Marlboro Drive, Kialla	Lot 4 LP127594	1.0 hectare
- 5 Marlboro Drive, Kialla	Lot 3 LP127594	1.0 hectare
- 6 Marlboro Drive, Kialla	Lot 2 LP127594	1.0 hectare
- 7 Marlboro Drive, Kialla	Lot 1 LP127594	1.0 hectare
- 8 Marlboro Drive, Kialla	Lot 8 LP127594	5.0 hectares
- 10 Marlboro Drive, Kialla	Lot 7 LP127594	5.5 hectares
- 560 Archer Road, Kialla	Lot 6 LP112600	4.0 hectares

**3.2 Land Use**

The subject properties would have been formerly used for agriculture, including cropping, orcharding and dairying. More recently the properties have been developed for residential purposes. Some of the larger allotments may have some hobby rural uses such as agistment of cattle or planting a small vineyard (refer Site Photographs).

The allotments generally contain a dwelling and associated outbuildings. The smaller allotments have landscaped front and back gardens. The larger properties are generally cleared, save for some trees around the dwellings and/or along boundary fencing.

In regard to infrastructure, irrigation channels traverse the site, with the water supply coming from the open channel located alongside the western boundary.

Knowledge Creativity Performance  
 Engineering Surveying Planning Urban Design Landscape Architecture  
 Sustainability and Environment Agribusiness Project Management



**3.3 Site Context**

Located immediately east and south of the Kialla Lakes Estate, the Marlboro Drive area is situated at the interface between urban development to the north and west, and rural living land uses to the east and south. The developing stages of Kialla Lakes are transforming the character of the area to a more established residential precinct, and the pocket of land forming the subject site fits neatly into this establishing residential setting. The development of this area is consistent with Council's strategic vision for residential growth areas in and around Shepparton.

It is acknowledged that the rural land uses provide an important function by defining the rural-urban interface and contributing to Shepparton's identity as a provincial city located in Victoria's agricultural heartland. Furthermore, the adjoining rural living land to the south and east provides pleasant views of a 'countryside' landscapes for people who reside in the nearby growth areas.

**3.4 Neighbourhood Context**

In regard to services and facilities, the site and adjoining neighbourhoods have ready access to the following (refer Site Location Plan):

*Commercial /Business Facilities*

- Local shopping centre, cnr Archer/Stanley Sts 2.5 kilometres north
- Shepparton Central Activity Centre 5.5 kilometres north east
- Neighbourhood shop, cnr Archer St/Benalla Rd 5.0 kilometres north east
- Shepparton Market Place, Benalla Road 5.0 kilometres north east

*Education*

- Wilmot Road Primary School 3.0 kilometres north
- St Mel's Catholic Primary School 4.0 kilometres north
- McGuire College Secondary College 3.0 kilometres north
- Goulburn Ovens TAFE 5.5 kilometre north
- Melb Uni Campus, Graham Street 7.5 kilometres north

*Health*

- Goulburn Valley Base Hospital 7.0 kilometres north
- Infant Welfare Centre, Dorset Court 3.0 kilometres north

*Transport*

- Shepparton Transit Bus Routes No. 1 & 5 1.5 kilometres north & east
- Shepparton Train/Bus Station 5.0 kilometres north
- Goulburn Valley Highway 1.5 kilometres west
- Midland Highway 3.0 kilometres north
- Shepparton Aerodrome 1.0 kilometres west

**Marlboro Drive, Kialla**  
Concept Plan Report

coomes consulting

*Recreation*

- Kialla Park 1.5 kilometres west
- Shepparton Shared Pathways Network 1.5 kilometres north
- Ross Edwards Reserve 1.5 kilometres north
- VE Vibert Reserve 3.0 kilometre north
- Victoria Park Lake 3.5 kilometres north east
- Aquamoves Lakeside Rec Centre 3.5 kilometres north east

*Natural Environment*

- Broken River 1.5 kilometres north

**3.5 Landform**

The land is generally flat with a gentle fall to the north east where a shallow depression is located. It is this area which is currently subject to the Urban Floodway Zone and Floodway Overlay as per the Greater Shepparton Planning Scheme.

**3.6 Access**

Vehicular access to all but one property, being 560 Archer Road within the area is currently available from Marlboro Drive. Marlboro Drive is a two way local road extending west from Archer Road for 350 metres before turning north and terminating at the entrance to 8 Marlboro Drive.

Archer Road is a two lane sealed road providing access between Shepparton and Shepparton - Euroa Road. It is a collector road and there are plans for the future widening of this road, with a reservation adjacent to the eastern boundary of the subject site.

**3.7 Zoning and Encumbrances**

The properties are included in the following zones and overlays:

- Rural Zone
- Urban Floodway Zone
- Land Subject to Inundation Overlay
- Development Plan Overlay – Schedule 1

A request is made to the Greater Shepparton City Council to amend the planning scheme so that the land currently within the Rural Zone is rezoned to Residential 1 Zone. In addition it is proposed to include the site in a new schedule to the Development Plan Overlay.

There are a number of easements extending across the site, most of which are for irrigation purposes. It is likely that these easements will become redundant as properties are developed for residential purposes.

Archer Road is within the Road Zone - Category 2.

---

## 4 Opportunities and Constraints

The subject site has been identified within the Greater Shepparton MSS for long term residential development, and presents an ideal opportunity for such development. The primary opportunities and constraints for the development of the site are:

### 4.1 Opportunities

- Kialla Lakes Estate to the north and west of the site is to be a fully serviced conventional residential development. The opportunity exists to provide consistency in adjoining land uses in an area identified for residential growth.
- An opportunity exists for vehicular and/or pedestrian linkages to be provided between Kialla Lakes and Marlboro Drive through a road connection to the north west and/or openings at the end of courts.
- Proximity to Archer Road provides high quality vehicular access to the Shepparton business/activity centre as well as to the arterial road network, including the Goulburn Valley Highway.
- While located within proximity to the Shepparton aerodrome, the flight paths and approaches will not interfere with the potential residential development of this site.
- Investment has been made in the construction of the local road network, including Kialla Lakes Drive and Marlboro Drive, and these can be improved to service the new development.
- Historic settlement of the subject site has resulted in alteration to the natural environment, including removal of vegetation. The site is therefore not considered as possessing significant environmental or ecological value.
- The site provides viewlines towards a local riverine environment.
- The site is relatively flat and therefore minimal cut and fill is required prior to development.
- Public transport services to Shepparton central area along Archer Road.

### 4.2 Constraints

- The current zone (Rural Zone) restricts intensification of land use for residential purposes.
- Flooding issues towards the north eastern corner of the site.
- The multiple land ownerships within the subject site, and the associated intentions and/or timeframes for future development.
- Scattering of existing trees across the site requires a different design response to those trees located in stands.
- Lack of integrated planning between the site and Kialla Lakes, especially along the northern and western interfaces of the subject site.
- An open irrigation channel along the western boundary of the site may create amenity concerns and requires sensitive urban design treatment.

---

## 5 The Concept Plan

### 5.1 The Vision

In developing a vision for the Marlboro Drive development, the opportunities and constraints presented by the site and the directives of the Greater Shepparton Planning Scheme provided valuable reference.

The Concept Plan has sought to identify the site's key features from which a sense of place and community can be developed. The topography associated with the site, the location adjacent the developing neighbourhoods of Kialla Lakes and the nearby floodplain are some of the key features that provide the site with its character. The vision is for these elements to be retained where practical and enhanced to create a development characterised by picturesque views, integration with the surrounding residential development (albeit visual) and a 'village green' area of public open space (refer Concept Plan).

The plan incorporates the following elements:

- urban design concept and structure plan for the subject site,
- internal road layout with details relating to road function and point of connection to Archer Road via Marlboro Drive,
- suggested locations for medium density housing
- new service infrastructure requirements,
- areas of public and community open space.

In particular, the Concept Plan responds to the opportunities and constraints identified in the remainder of this report.

### 5.2 Urban Design Objectives

The objectives of the Concept Plan are as follows:

- to provide a traditional grid layout that maximises solar access to allotments as well as vehicular, pedestrian and visual permeability through the site;
- to provide a framework that respects land ownership, existing house locations and title boundaries, and allows for the incremental development of the area by individual property owners
- to provide the flexibility of retaining existing houses in larger allotments along the western boundary;
- to provide the possibility for future links to the south and north;
- to allow for the future widening of Archer Road;
- to utilise the existing floodway as public open space, and create a continued linear corridor of parkland and open space to the north, through to Kialla Lakes.
- to provide for the retention of existing vegetation in allotments where practical;
- to provide a treed interface and pedestrian links to Archers Road;
- to provide for medium density development around open space;

**Marlboro Drive, Kialla**  
Concept Plan Report

coomes consulting

- to provide a variety of lot sizes that respond to the surrounding character and features of the site;
- to maximise access to, and passive surveillance of open space (including the flood zones);
- to provide roundabouts at four way intersections to control vehicle speed and access;
- to provide flexibility for incorporating water sensitive urban design into road reserves in the form of swales and infiltration systems.

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agribusiness Project Management

---

**6 Housing**

Clause 16.01 of the Greater Shepparton Planning Scheme addresses housing, and includes the objective of:

*“to encourage subdivisions in locations with access to physical and community infrastructure and providing a range of lot sizes, a convenient and safe road network, appropriate pedestrian and cycle paths, sufficient useable public open space and low vulnerability to fire”.*

The Concept Plan responds positively to this objective in regard to the provision of diversity of lots sizes and housing type, and energy efficiency.

In response to the needs of a ‘diverse and changing population’, the Concept Plan provides the opportunity for housing diversity by identifying areas that are potentially suitable for medium density housing and by proposing a mix of lot sizes within the subdivision layout. Diversity of housing is considered essential to both cater for these various demands and to create ‘interest and identity’ within this new urban environment.

Apart from the new schedule to the Development Plan Overlay, which will provide the guidelines for future subdivision and development of the subject site, any future application for subdivision and residential development of any part of the site will be required to be assessed against the State and local planning policy Frameworks as well as Clause 56 of the Planning Scheme. These contain clear directions in relation to ensuring variety and choice in terms of lot size and dwelling type is achieved to suit a range of household types. The Marlboro Drive Concept Plan takes into account this direction.

The Concept Plan provides for the inclusion of a variety of lot sizes which should be reflected in development plans prepared for each land parcel. Medium density lots are concentrated around open space. The majority of lots are oriented in an east west and north south alignment to provide maximum passive solar access.

---

**7 Landscape Design****7.1 Existing Landscape Values**

The essence of Marlboro Drive's landscape character lies as much in its past natural and historical states as it does in its existing form. As with the surrounding area, the landscape is characterised by its use as grazing land for the past 150 years, which has resulted in the removal of the majority of remnant indigenous vegetation on site.

As the site topography is generally flat, the most significant existing landscape features are planted exotic and native windbreaks/shelterbelts along property boundaries.

**7.2 Vision**

Given the highly modified state of the subject site, proposed landscape themes will be strengthened by responding not only to current conditions but also by relating back to previous historical and ecological states. The emphasis of these states or layers will serve to enliven the existing landscape and contribute to the formation of an authentic sense of place. A key layer that will underlie the proposed landscape masterplan is the rural character of the site.

In terms of this character, dating back to 1848, the subject site has a history of sheep and cattle grazing and more recently small hobby farms and dairy cattle. Windbreak plantings, post & wire fencing and existing residences and sheds are markers of this history.

**7.3 Design Objectives**

The landscape design objectives to be achieved are:

- retain where practical and possible existing mature and regenerating Eucalypts and enhance the habitat values of the site through additional planting of indigenous species
- augment vegetation with revegetation and use of compatible species within reserves where appropriate
- retain and enhance existing windbreaks and groups of trees that have significant landscape value related to the agricultural history of the site
- utilise heritage marker trees at key locations to reference back to existing rural use and character
- select plant species for both aesthetic and environmental qualities, that are suited to the site conditions, provide seasonal colour, variety in form, and relate to the historical character of the site
- interconnect open space areas and pedestrian paths both internally and externally to create networks of passive and active recreational space.
- consolidate buffer plantings alongside Archer Road
- create a distinctive and engaging entry into the site by means of avenue planting along Marlboro Drive

**7.4 Street Trees**

Street trees will be selected to achieve consistency with nearby precincts identified within the Shepparton Street-tree Masterplan. These selected trees will be chosen for aesthetic and environmental characteristics and are suited to the site conditions and provide seasonal colour and variety in form. Furthermore, the street trees used will relate directly to the historical character of the site and emphasise the rural.

- *Corymbia maculata* (Spotted Gum) or similar large canopy native tree along Marlboro Drive
- *Gleditsia triacanthos* Shademaster (Honey Locust) or similar ornamental deciduous tree delineating the primary north-south axis;
- Street trees on local access streets will be hardy native species of a smaller scale to fit in with the hierarchy established by the larger trees above. It is recommended to include *Tristaniopsis laurina*, *Acacia implexa*, and *Hymenosporum flavum*
- Courts will include smaller scale deciduous ornamental species such as *Pyrus calleryana* 'Aristocrat' and *Prunus cerasifera* 'Vesuvius'.
- Transitioning into the Urban Floodway Zone, *Acacia melanoxylon* (Blackwood) and *Acacia implexa* (lightwood) will be used in combination with other native and indigenous species.
- The Archer Road tree reserves will comprise an avenue of *Eucalyptus polyanthemus* (Red Box) with windows or openings in areas where open space links connect with local streets.



---

**8 Open Space**

The open space of approximately 2.4 hectares will be located to the north east of the Concept Plan area, and will serve as a social, recreational and visual focus of the development. This open space will form part of a larger liner network of open space that generally accords with the Urban Floodway Zone, which connects through to the north. This location optimises accessibility for future residents via pedestrian and cycle linkages between Archer Street and Kialla Lakes. Surrounding allotments can be oriented towards the reserve and key roads have been aligned to create strong axial viewlines.

Elements and objectives to be considered for this space are:

- Cluster medium density housing around the open space
- Where allotments directly abut areas of public open space, the dwellings be required to face the open space and open pool type fencing be used along the common boundary
- Incorporate an open woodland area utilising Eucalyptus species such as Eucalyptus microcarpa (Grey Box)
- Provide an open grassed area for passive use and recreation.
- Consider earth mounding within and around the park
- Plant trees in linear bands reminiscent of windbreaks to define spaces and create distinct edges
- Utilise and integrate multi-functional elements (eg. artwork & play opportunities)
- Provide seating and or picnic / BBQ areas

---

## 9 Management of the Environment

### 9.1 Ecological Values

A development plan prepared for any part or all of site must take into account the ecological features and values as the site. These features and values should be identified through an ecological assessment of the applicable land undertaken by a suitably qualified person.

Such an assessment should have regard to the provisions of *Victoria's Native Vegetation Management – A Framework for Action* (Department of Natural Resources and Environment, 2002).

The design of the residential development as proposed in the development plan should respond appropriate to any features and/or values identified through the ecological assessment.

### 9.2 Archaeological Values

A development plan prepared for any part or all of site must take into account the archaeological features and values as the site. These features and values should be identified through an archaeological assessment of the applicable land undertaken by a suitably qualified person.

Such an assessment should be undertaken for both Aboriginal and European cultural and heritage features and values.

The design of the residential development as proposed in the development plan should respond appropriate to any features and/or values identified through the archaeological assessment.

### 9.3 Arboricultural Values

A development plan prepared for any part or all of site must take into account the arboricultural values as the site. These values should be identified through an arboricultural assessment of the applicable land undertaken by a suitably qualified person.

The design of the residential development as proposed in the development plan should respond appropriate to any values identified through the arboricultural assessment.

### 9.4 Soil Contamination

A development plan prepared for any part or all of site must take into account the findings of a preliminary site investigation into the likelihood of the soil being contaminated. Such an investigation should be in accordance with *Australian Standard 4482.1, 1997 – Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and Semi-volatile Compounds*.

**10 Interface with agricultural land uses**

Given the zoning of the land to the south of the Marlboro Drive area, the situation may arise where there may be rural uses within (and adjacent to) the subject site. It is therefore necessary to manage the interface and off-site impacts of rural and urban uses in an appropriate manner.

Although conflicts between residential uses and rural uses may occur, given the changing nature and character of this area, it is considered less likely that such situations will arise.

Generally, the main conflicts that may occur between the residential uses and primary production include:

- spray drift from chemicals used in production
- noise from machinery, farm operations and animals
- dust from farm operations
- odours from farm waste and so on.

There are a number of management techniques that the Council could adopt in regard to the urban/rural interface. One approach is to include a buffer between agricultural activities that may cause nuisance and adjoining residential development.

This buffer distance may be varied depending on the agricultural use, the environmental and topographic features of land separating the residential development from the agricultural land use. Appropriate tree planting in the buffer should also be encouraged. Such a buffer should comprise various species with a variety of leaf shapes and heights, and located in a manner that provides for airflow through the buffer, but limits the drift of sprays.

Where appropriate, the staging of subdivision should reflect adjoining agricultural uses and the need to maintain the buffer for as long as the adjoining agricultural use is operational.

**11 Traffic and Transport**

**11.1 Objective**

Within residential developments the road network should facilitate the movement of traffic, public transport, pedestrians and cyclists in an efficient and safe manner. The design of the road hierarchy and the transport network within the Marlboro Drive area and beyond is recognised as an important aspect of the liveability of the development as it directly impacts on accessibility to services and movement efficiency.

The existing Marlboro Drive sealed road will be upgraded to collector road status as land is developed and traffic volumes increase.

**11.2 Traffic generation**

The development of the Marlboro Drive Concept Plan area is estimated to create approximately 255 new residential lots. Using trip rates of 10 vehicle trips per day per lot, as have been adopted for residential estates in regional areas, this equates to an additional 2,550 vehicles per day (vpd) onto the road network. It is estimated that currently there is approximately 90 vehicle trips per day along Marlboro Drive from the existing 9 residences.

General destinations for traffic from the site will be to the north and south. Initially it is expected that the primary traffic flows to and from the development would be to the north via Archer Street.

**11.3 Internal Roads**

Marlboro Drive would be required to be widened from 6.1metre sealed width to 6.9 metre with kerb and channel.

This collector road will be designed to collect traffic from the access streets and can accommodate up to 3,000 vehicles per day. It will have 1.5metre wide footpaths on both sides of the street.

The local roads throughout Marlboro Drive development will be based on the anticipated level of traffic, location and function of the road.

The typical cross section for local roads include a 5.5metre pavement providing parking on one side of the carriageway only while allowing the passage of a lane of traffic. These roads are generally less than 100 metres in length and will on the whole cater for traffic volumes up to 1,000 vpd. In these roads, a 1.5metre wide footpath will be provided on one side.

The local roads will be designed to ensure that safety is not compromised. Intersection spacing or the distance between traffic management devices is approximately 200 metres to assist in keeping speeds down and aiding safety.

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agribusiness Project Management

**Marlboro Drive, Kialla**  
Concept Plan Report

coomes consulting

**11.4 External roads**

Marlboro Drive currently connects with Archer Road.

With the extra traffic expected to be generated from within the development, a type C right turn lane will be required into the development, as the ultimate treatment, to accommodate the necessary turning movements.

The existing sealed pavement along Archer Road is not wide enough to accommodate such turning movements and with limited room to the east side, all necessary road widening works are to be included onto the west side of Archer Road.

The appropriate road widening and taper is required to be constructed for approximately 150m to the north of the intersection of Marlboro Drive and Archer Road, and for 96m to the south for an 80km/hr speed zone.

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agribusiness Project Management

**Marlboro Drive, Kialla**  
Concept Plan Report

coomes consulting

---

## 12 Physical Infrastructure

### 12.1 Water

The existing site is not serviced by Goulburn Valley Water's existing water infrastructure. A main would need to be constructed from the Kialla Lakes Drive/Archer Road intersection to the site.

### 12.2 Sewer

The existing site is not serviced by Goulburn Valley Water's existing gravity sewer system. The site can be serviced by the construction of approximately 1.0km of branch sewer south of Mokoan Avenue near Adams Road.

An additional sewer pump station will need to be constructed to service the site due to the flat terrain.

### 12.3 Drainage

The site appears to be generally flat, with a slight fall north towards a depression that is the upstream part of the Amaroo Lake.

Council has advised that stormwater flows will need to be retarded to pre-developed rates, prior to discharge into Amaroo Lake. Stormwater will also incorporate Water Sensitive Urban Design in the form of a wetland to improve water quality to acceptable standards prior to discharging into Amaroo Lake (refer Concept Drainage Plan).

### 12.4 Electricity

Electricity is available to the development from Archer Road. An existing overhead power line, that traverses Marlboro Drive will be progressively undergrounded as part of the development process.

### 12.5 Gas Supply & Telecommunications

Telstra will provide telecommunications. Specialist companies may provide other services such as cable and internet access.

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agrubusiness Project Management

**13 Development Contribution Assessment**

Clause 18.12 of the Greater Shepparton Planning Scheme applies to Developer Contributions to Infrastructure. The objective of this clause is:

*“To provide for partial funding of physical and community infrastructure by use of development contributions”.*

Development contributions are:

- monetary contributions
- works in kind, and in some cases
- land dedication

toward the provision of additional physical and/or community infrastructure required as a result of an increased demand placed on these facilities through new development.

In regard to the development contributions for Marlboro Drive, a schedule of contributions will be prepared for inclusion in a Section 173 Agreement each development plan as prepared.

The contributions will be made towards:

- Collector roads including the cost of upgrading intersections and constructing roads to a standard greater than local access
- Drainage works to provide for the collection, conveyancing, retardation and water quality of the stormwater, including drainage infrastructure, retention basins and wetlands.
- Landscaping of public open space

In regard to public open space, it is proposed that the areas of public open space affected by the Urban Floodway Zone (which cannot be developed for residential purposes) be transferred to Council, and the Council will acquire the areas of public open space within the Floodway Overlay. All landowners would be required to pay 5% in accordance with Clause 52.01 of the Greater Shepparton Planning Scheme.

The estimated cost associated with the development for the abovementioned items is \$949,475. Based on a developable area of approximately 22.57 hectares, the anticipated developer contribution is \$42,064/hectare.

Council will agree to consider works in kind if the developer's timing of the works was to accord that of the Council.

**Marlboro Drive, Kialla**  
Concept Plan Report

coomes consulting

---

**14 Development Staging**

Due to the subject site being contained in nine individual land holdings and ownerships, the staging of the future residential development is somewhat difficult to plan or predict.

The Concept Plan has been designed so each parcel of land can be developed without being dependent on the prior development of another parcel.

The site is relatively small in area, approximately 26 hectares and given the surrounding development, there is no preference for certain properties to be developed prior to others.

Knowledge Creativity Performance  
Engineering Surveying Planning Urban Design Landscape Architecture  
Sustainability and Environment Agribusiness Project Management