



TAYLOR'S



IRYMPLE LOW DENSITY RESIDENTIAL DEVELOPMENT PLAN

DEVELOPMENT PLAN

Prepared for Mildura Rural City Council

October 2025



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Acknowledgement

The Mildura Rural City Council acknowledges the Traditional Owners of the land which is today known as the municipality of the Mildura Rural City. We pay our respects to Elders past and present and celebrate and respect their continuing cultures and acknowledge the memories of their ancestors.

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1 INTRODUCTION

The Irymple Low Density Residential Development Plan is the most recent progression in planning for part of the Urban Transition Area which separates the main Mildura Urban Area from the Irymple township.

The Development Plan area previously formed part of a much larger farming district established in the late 1800s – the Irymple irrigation settlement – comprising 12,000 acres (around 4,850 hectares). For the duration of the post-settlement history of Mildura, the area has been established for small-scale irrigation-based farming.

Contemporary strategic planning of the Mildura Rural City Council (Council) has set an alternative future land use intention for the Development Plan area as a low density residential precinct. This strategic direction originated with the *Mildura Housing and Settlement Strategy 2013*, which identified the Urban Transition Area within which the Development Plan area is situated and also recommended rezoning of the land – from the Farming Zone to the current Low Density Residential Zone. The rezoning was implemented by Amendment C89 to the Mildura Planning Scheme in 2016.

This Development Plan provides an important statutory tool to coordinate the incremental development of the Development Plan area, on a viable land development basis and according to planning guidelines which collectively aim to realise an outcome that is compatible with the strategic planning intent.



2 DEVELOPMENT PLAN CONTEXT

2.1 GEOGRAPHIC CONTEXT

The Development Plan area is located between the main urban area of Mildura and the Irymple township, and on the south-west side of Fifteenth Street, which is the primary arterial road connection between these communities.

The Development Plan area forms part of the Mildura-Irymple Urban Transition Area, which is defined as being between Benetook Avenue and Sandilong Avenue.

The Transition Area has the important strategic land use planning function of maintaining a sense of physical separation and openness between south-eastern urban edge Mildura and Irymple (see Figure 1).

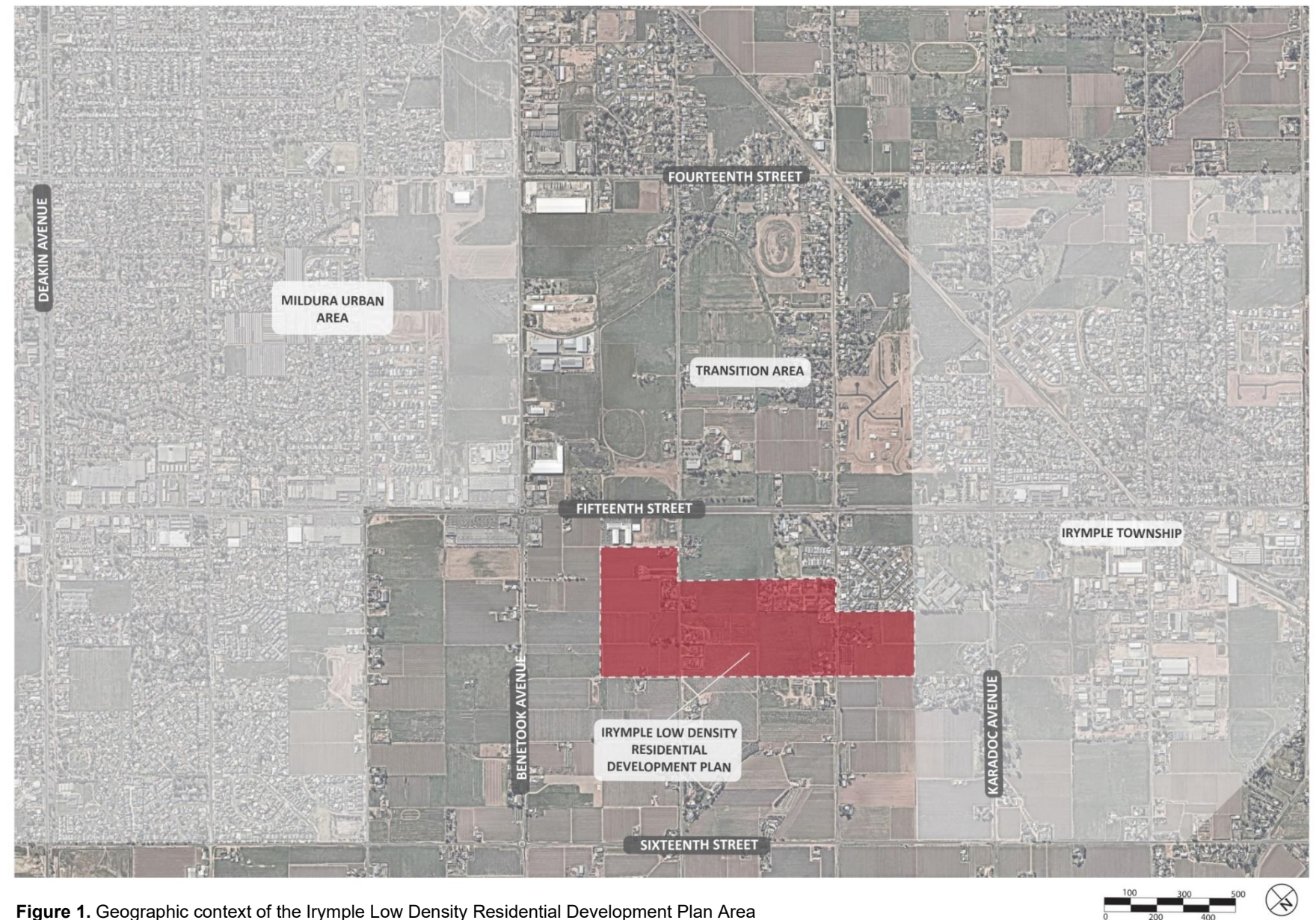


Figure 1. Geographic context of the Irymple Low Density Residential Development Plan Area

2.2 DEVELOPMENT PLAN AREA
DEFINITION

The Development Plan area occupies 50.96 hectares of land and is defined by the intersecting boundaries of existing cadastre parcels in private ownership. No public roads or other notable landscape features otherwise define the study area boundaries (see Figure 2).

In its longest dimension, along a north-west to south-east axis, the area spans a distance of almost 1.3 kilometres and is generally located between Benetook Avenue to the north-west and Karadoc Avenue to the south-east, as well as by Fifteenth Street to the north-east.

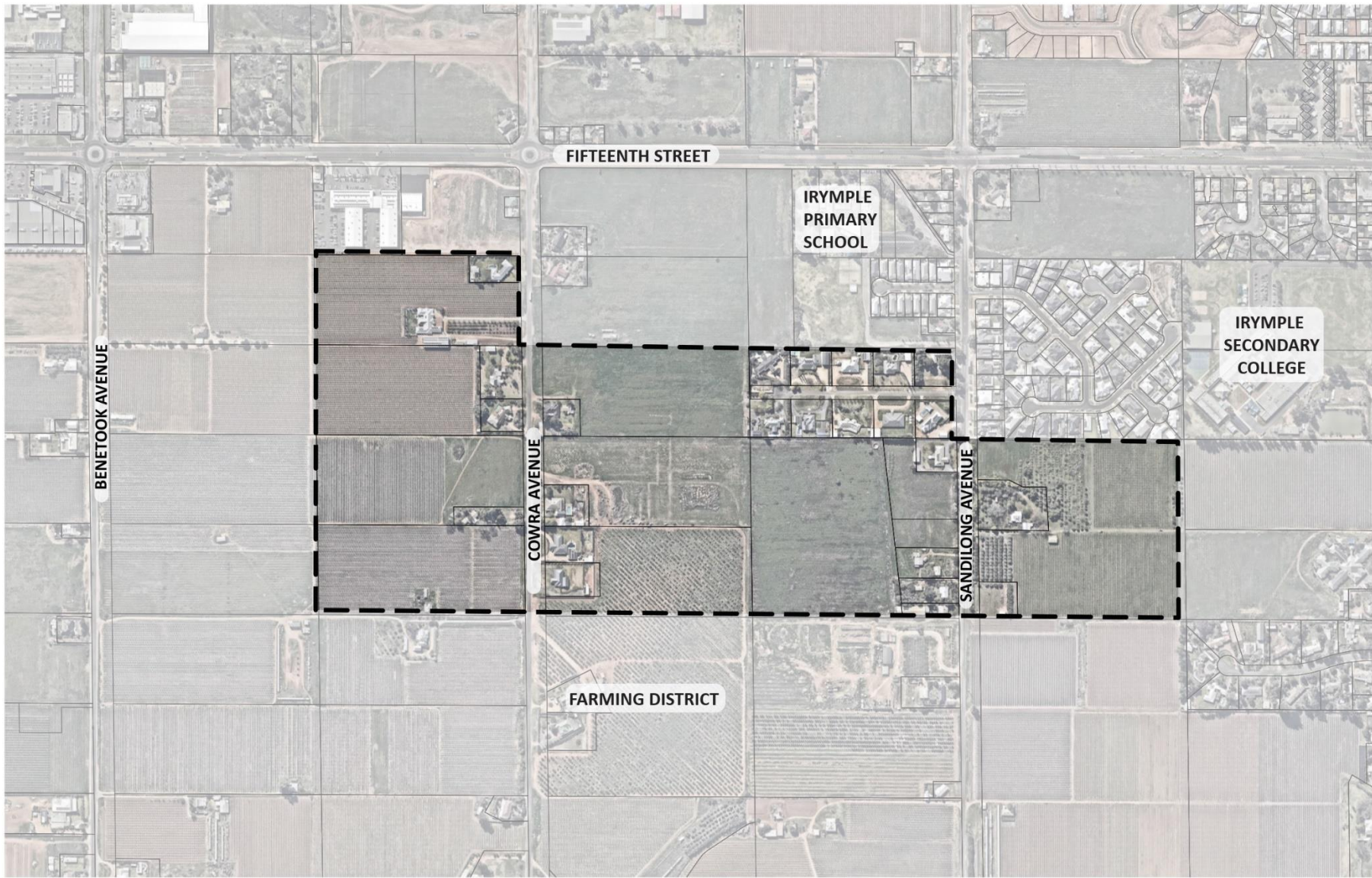


Figure 2. Study Area



2.2 DEVELOPMENT PLAN AREA
EXISTING CONDITIONS

An overview of the existing conditions of the Development Plan area is provided in this section and is represented in Figure 3.

The topography of the area is generally flat with numerous very shallow undulations and a transverse gentle ridge. The landscape has been highly modified to suit farming practices, features very limited native vegetation and has a notable lack of established trees, except in the immediate surrounds of dwellings.

The Development Plan area is comprised of 33 private landholdings of various sizes, though primarily constituted by 4 hectare (10 acre) lots, often with a smaller excised lot for a dwelling. The comparatively large number of private lots within a relatively compact area, combined with the configuration of these lots and with the limited extent of public road frontage, creates considerable planning complexity, primarily for development sequencing.

Access is currently available via two rural roads – Cowra and Sandilong Avenues – running in a north-east to south-west alignment and connecting with Fifteenth Street and Sixteenth Street, to the north and south respectively, as part of a wider grid of streets.

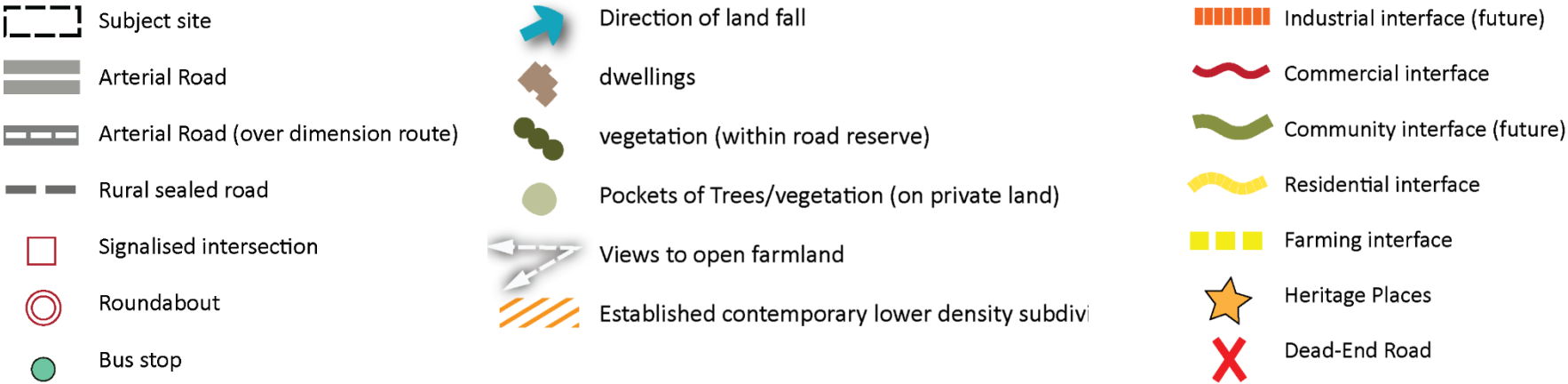
Access connecting Cowra Avenue and Sandilong Avenue is currently not available from Angel Grove which presently comprises a dead end street, as shown with a red cross.

The immediate context of the Development Plan area is noticeably diverse and quite complex, with implications for planning integration. To the north-east, along Fifteenth Street, which forms part of the main Calder Highway gateway to Mildura, both future commercial and community-based uses are proposed, noting that on major development – a large car dealership – has been completed relatively recently.

To the south-west, extensive areas of small-scale farmland continue to operate, to the east (and north-east), there are pockets of existing and planned future residential areas, and to the west an extension of the industrial precinct along the Benetook Avenue corridor is proposed (subject to a current strategic planning investigation).



Figure 3. Existing conditions of the Development Plan Area



3 PLANNING CONTEXT

This section outlines the relevant statutory planning controls that apply to the Development Plan area and also provided a summary of relevant strategic planning that has led to the statutory settings.

3.1 STATUTORY PLANNING CONTROLS

Low Density Residential Zone - Schedule 2

The Development Plan area is within the Low Density Residential Zone (LDRZ) (see Figure 4). The purpose of the LDRZ is to provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater.

Schedule 2 of the LDRZ applies and specifies a minimum land subdivision size of 0.4 hectares (4,000m²) per lot. The minimum land area is necessary to meet requirements for the safe on-site management of domestic wastewater (i.e. unsewered lots), and to achieve the development density set by the strategic planning process (see section 3.2).

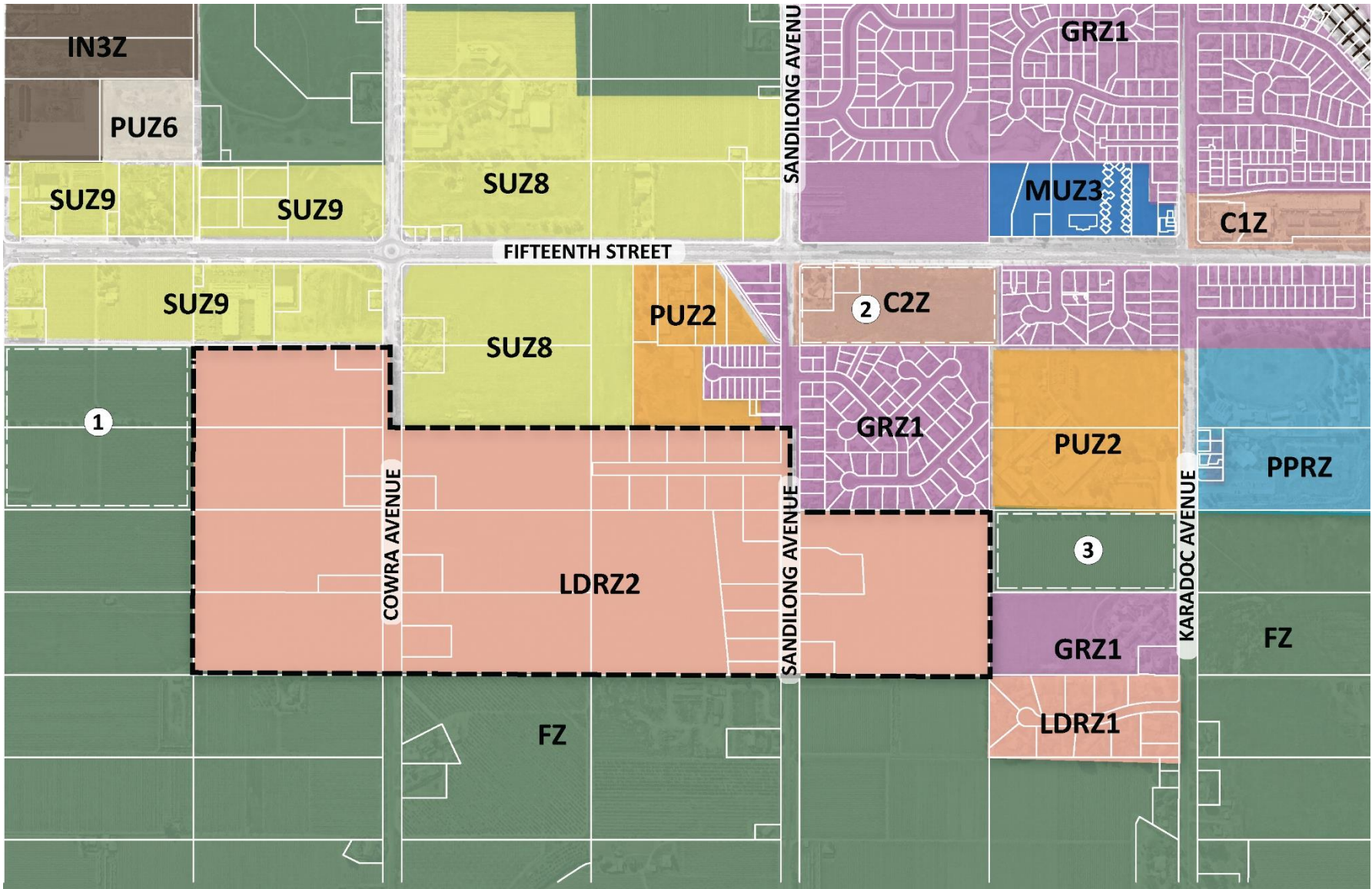


Figure 4. Zoning of the Development Plan area and surrounds

- | | | |
|--|--|---|
|  Commercial 1 and 2 Zone (C1Z and C2Z) |  Special Use Zone 8 and 9 (SUZ8 and SUZ9) |  Potential Industrial 3 Zone (IN3Z) |
|  Farming Zone (FZ) |  Public Use Zone 2 (PUZ2) |  Proposed General Residential Zone (GRZ) |
|  General Residential 1 Zone (GRZ1) |  Public Use Zone 6 (PUZ6) |  Proposed General Residential Zone (GRZ) |
|  Low Density Residential 1 and 2 Zone (LDRZ1 and LDRZ2) |  Mixed Use Zone 3 (MUZ3) | |
|  Industrial 3 Zone (IN3Z) |  Public Park and Recreation Zone (PPRZ) | |

Development Plan Overlay – Schedule 4 (Irymple Low Density Residential Development Plan)

Development Plan Overlay – Schedule 4 (DPO4) also applies to the Development Plan area. DPO4 sets out the requirements for a Development Plan prepared for consideration for approval by Council under this overlay. The Development Plan must include the following requirements:

- The means of servicing to lots, including the provision of reticulated water and sewerage to all residential lots, or alternative Environment Protection Authority Victoria approved effluent disposal systems.
- The need for open space, as considered necessary by the responsible authority, in accordance with the relevant guidelines.
- The need for any other community infrastructure, as considered necessary by the responsible authority.
- Any sites of flora or fauna significance or archaeological or heritage significance, and how these could be integrated into the design of any subdivision.
- Areas subject to the impacts of salinity.
- The application of water sensitive urban design principles.
- The comments of Lower Murray Water.
- The comments of the Mallee Catchment Management Authority.

The Development Plan must provide for the following:

- A clearly distinguishable road hierarchy, with the differences in road function reflected in the road width, design, layout and road reserve treatments.
- Identification of the means of draining the land.
- Identification of common trenching of compatible services.
- Appropriate interface treatments to schools and areas of public open space.
- Pedestrian linkages to Irymple Primary School and Irymple Secondary School and to Fifteenth Street and the Irymple town centre.
- Integration with the General Residential Zone to the south-east.
- Inclusion of greenways or other linear open spaces, to provide opportunities for incidental exercise and social interaction.
- Retention of any existing tree stands of value and the development of an appropriate landscaping theme for nature strips and public open space, including the use of salt tolerant plants where relevant.
- Identification of public realm treatments and interfaces which reflect the low density residential nature of the area, such as post and wire fencing (or no fencing) rather than solid fencing.

Development Contributions Plan Overlay

Three Development Contributions Plan Overlays (DCPOs) apply to the Development Plan area, in full or in part, for the purpose of levying contributions for the provision of works, services and facilities before development can commence.

All development types with the DCPO areas will be liable for development contributions. Contribution rates for are set out on an area basis corresponding to infrastructure type (drainage, roads, open space, etc).

DCP01 – Infrastructure Works

DCP01 applies to lots within study area located to the north-west of Cowra Avenue and implements the Mildura South Development Contributions Plan (No 1) (2005).

DCP02 – Infrastructure Works

DCP02 applies to the entire study area and implements Development Contributions Plan No. 2 (2006).

DCP03 – Infrastructure Works

DCP03 applies to the entire study area and implements Development Contributions Plan No. 3 (2007).

3.2 RELEVANT STRATEGIC PLANNING

Mildura Housing and Settlement Strategy 2013 and Amendment C89 to the Mildura Planning Scheme

The Mildura Housing and Settlement Strategy (MHSS) is the primary strategic plan of Council to guide its land use planning for residential development and was instrumental in formulating strategic planning and design parameters for the transition area, within which the study area is located, and for the study area itself.

The MHSS states the following in relation to the transition area:

While current policy seeks to maintain a 'break' between Mildura and Irymple, this is principally expressed along Fifteenth Street, where commercial and community development is proposed to occur in a 'campus' style incorporating significant vegetation and signalling the transition between the two settlements...

...The MHSS does not support the development of this land at urban densities, given the land available to the north-east of Fifteenth Street, however, opportunities for a lower density of development in this area are discussed further in the relevant section of this Strategy. p.13

It is noted the MHSS does not spatially define the extents of the transition area in its Framework Plan (see Figure 4).

The MHSS also states the following in relation to the study area and its immediate context:

"Irymple

An area is also proposed for low density residential uses at the south-western extent of Irymple. Given growth of Irymple is expected to occur to the north-east, the inclusion of some additional land (approx 50ha) in this area is considered appropriate and will add to the diversity of housing available around the settlement, without compromising longer term growth. The area identified essentially 'connects' existing isolated subdivisions and proposed development to the south of Irymple, and includes the existing low density subdivision around Angel Grove in a more suitable zone. It also allows the development of a clearer urban edge along this interface.

To ensure the objective of creating a more connected and coherent settlement pattern in the southern part of the Irymple township, including a clear boundary between the township and agriculture areas to the south, a Development Plan should be prepared. This should identify a minimum lot size of 0.4ha to ensure a clear distinction in the character between this area and the urban township, and a road boundary between the low density and farming areas. Consideration should also be given to applying this Development Plan to other areas south of Fifteenth Street' p.28

Municipal Planning Strategy (Mildura Planning Scheme)

Council's Municipal Planning Strategy (MPS) is set out in Clause 02 of the Mildura Planning Scheme. The MPS provides a broad, however contextually important land use planning vision and corresponding strategic directions, with a number of relevant aspects to the study area and its Urban Transition Area context.

Clause 02.03-1 Settlement

Identifies the following strategic directions for the Urban Transition Area:

- *Facilitate the urban expansion of the 'Main Urban Area' (Mildura, Irymple and Nichols Point) as the focal point for residential growth.*
- *Facilitate an 'Urban Transition Area' between Irymple and Mildura on Fifteenth Street (between Sandilong and Cowra Avenues) with a range of education, health, tourism and community uses with attractive buildings within a spacious landscape setting.*

Clause 11.01-1L-02 Urban Transition Area

This policy applies to all land within the Mildura Urban Transition Area Structure Plan to this clause. Relevant strategies are as follows:

- *Encourage development along Fifteenth Street between Mildura and Irymple that supports a sense of land use, built form and landscape transition between the settlements.*
- *Identify the western end of the Urban Transition Area as the urban edge of Mildura.*
- *Identify the eastern end of the Urban Transition Area as the urban edge of Irymple.*
- *Provide low density residential development at the periphery of Irymple and Mildura, where these will form the long term urban growth boundary.*
- *Encourage a range of education, health, tourism and community uses within the Urban Transition Area on Fifteenth Street between Sandilong Avenue and Cowra Avenue.*
- *Encourage a range of smaller scale restricted retail premises and commercial activities within the Urban Transition Area on Fifteenth Street between Benetook Avenue and Cowra Avenue.*
- *Design development on Fifteenth Street between Benetook Avenue and Sandilong Avenue that achieves a spacious landscaped setting through:*
 - *Buildings of a low scale, set back from the road.*
 - *Significantly landscaped frontages.*
 - *Car parking within the landscaped front building setback.*
 - *Breaks between buildings.*

Mildura Irymple Urban Transition Area Design Guidelines 2007

The Mildura Irymple Urban Transition Area Design Guidelines provide an integrated strategic planning and design framework for Mildura's Urban Transition Area – located broadly between Benetook and Sandilong Avenues – and within which the Development Plan area is located. Relevant strategic directions are as follows:

Framework Plan

- A 'Farming Activities Zone' is applied to the extents of the subject study area, as well as to adjoining areas to the north-west and south-west. This direction has since been superseded by the recommendations of the Mildura Settlement and Housing Strategy 2013 and subsequent Planning Scheme Amendment C89 to implement the Low Density Residential Zone to the subject study area.
- The low density area on Angel Grove is identified as 'Existing Low Density Residential'.
- A 'Potential Special Use Zone' is also shown on Fifteenth Street, to the east of Cowra Avenue and immediately adjoining part of the north-east boundary of the Development Plan area.
- A proposed road is shown on an east-west alignment as an interface between the Farming Activities Zone and commercial area ('Future Business 4 Zone') along Fifteenth Street.

**Fifteenth Street Special Uses (Community Uses)
Precinct Plan**

The statement of intent for this precinct is as follows:

The eastern portion of Fifteenth Street, between Cowra and Sandilong Avenues is part of Irymple, indeed a point of demarcation is the junction between the Highway and Cowra Avenue. The Highway frontage to the east of this junction has an open sense of place and will continue to be inhabited by institutions, including the Irymple Primary School, Henderson College and other future community, civic and/or recreational facilities. The prevailing experience in the passage through this part of Fifteenth Street is and will continue to be of landscape.

Relevant observations and strategic directions for the Irymple LDRDP are as follows (see also Figure 6):

- An access road is shown along the southern boundary of the precinct, adjoining the subject study area.
- Institutional, civic and community buildings are depicted as ‘buildings in the round’ with discrete areas of car parking and large areas of open space and boundary landscaping.
- Fencing is to be permeable and consistent in style between front and side boundaries.

Industrial-Residential Area Interface

An acoustic wall is to be provided to the rear of industrial lots abutting existing or future residential land to reduce noise and visual impacts .

4 DEVELOPMENT PLAN

4.1 INTENT

The Development Plan area is envisioned to reinforce the strategic intent of the Mildura-Irymple Urban Transition Area and of corresponding strategic planning and statutory planning controls. Its distinctive characteristics are a low density housing neighbourhood, with a semi-rural/semi-suburban character, and set within an informal and predominantly native and indigenous landscape setting.

4.2 OBJECTIVES

The Development Plan has been prepared to achieve the following objectives:

- To create an urban environment of low density character that is compatible with, and contributes to, the strategic intent of the Mildura-Irymple Urban Transition Area.
- To optimise the land development capacity of Development Plan area for low density residential lots with consideration to key constraints and requirements, including:
 - the existing pattern of land parcels and ownership
 - functional access and servicing requirements
 - the surrounding context and interface design, and
 - neighbourhood character and amenity.
- To provide an appropriate semi-rural/semi-suburban level of urbanisation and infrastructure provision
- To establish a connected neighbourhood structure, with critical external links, that provides safe access opportunities for pedestrians, cyclists and motorists.
- To provide access to public open space commensurate with the needs of a low density residential community.
- To create a public realm character that consists of an informal, bushland style that is suited to the low density residential neighbourhood and Urban Transition Area setting.

4.3 DEVELOPMENT PLAN FRAMEWORK

The framework for the Development Plan is shown in Figure 5. The framework was formulated in response to a range of intersecting and overlapping precinct planning requirements and objectives, most notably:

- The existing land cadastre structure and land parcel ownership
- Existing dwellings
- Existing legal access and viable future road connections
- Drainage catchments

Underlying the framework is a fully resolved plan of subdivision which optimises the available lot yield whilst meeting other planning requirements and objectives. The key spatial elements of the framework, as shown in Figure 5, are:

- The existing land cadastre and available land for residential development
- Proposed road reserves forming a connected internal street network with key points of external connection
- Provision for drainage reserves and public open space

The land budget corresponding to framework is shown in Figure 6.

	Area (Ha)	% of Area
Development Plan Area	50.96ha	100%
Existing Roads	3.0ha	6%
Gross Developable Area	47.9ha	94%
Public Open Space	0.2ha	0.4%
Drainage Reserve	1.5ha	3%
Total Net Developable Area	46.2ha	91%
Residential Land	41ha	80%
Road Reserve	5.1ha	10%
Pedestrian Link / Tree Reserve	0.2ha	0

Figure 6. Development Plan land budget

(areas via Vicmap Digital Data and approximate only)

The following sections provide detailed planning and design directions for the Development Plan area organised according to a series of thematic topics, as follows, with a corresponding summary description of key Development Plan elements:

- Land Subdivision, Built Form and Interfaces
- Access and Movement
- Drainage
- Open Space and Public Realm

Figure 5. Development Plan framework



4.4 LAND SUBDIVISION, BUILT FORM AND INTERFACES

Land Subdivision

Lot design

The key outcomes for lot design are:

- Lots (excepting existing parcels) are to be provided with a minimum land area of 4,000 squares metres in order to meet the statutory requirements of the Low Density Residential Zone – Schedule 2 and wastewater management requirements
- Lots are to be generally rectangular in shape with a minimum width dimension of 35 metres to provide separation between buildings and space for solar access
- Battle-axe lot arrangements should not be predominant and should be used only in circumstances where parcel geometry and access constraints require this
- Longer-than-wide lot configurations are to be provided immediately adjacent to interfaces with the Farming Zone, and Fifteenth Street commercial area (within Special Use Zone – Schedule 9)

Built form

The key outcomes for built form are:

Dwellings and ancillary buildings

- Dwellings are to be of single- or double-storey form (not exceeding 9 metres overall height above natural ground level)
- Ancillary buildings should preferably be detached from the primary dwelling and are not to be located within the front setback

Setbacks

- Dwellings should be set back at least 20 metres from the primary front boundary and at least 10 metres from side boundaries
- Dwellings on lots with direct abuttal to land in the Farming Zone should be setback at least 20 metres from the boundary abutting the land in the Farming Zone.
- Lots will abuttal to the proposed Industrial Precinct along Benetook Avenue, should be provided with a minimum 30-metre setback from the industrial land boundary

Boundary treatments, fencing and landscape

- Front boundary fencing should be avoided in preference of soft landscaping
- Any front boundary fencing required is to be provided as post and wire style fencing (or demonstrated equivalent) that does not exceed 1.5 metres in height
- Continuous runs of solid fencing (e.g. Colorbond) exceeding 30 metres are to be softened by the provision of landscaping
- Provision for at least three large canopy trees is to be made for each single dwelling, with trees to be planted within 20 metres of the dwelling boundaries

Interfaces

Farmland interface

The long south-western boundary of the Development Plan area immediately adjoins land within the Farming Zone, including areas which continue to be actively farmed. Some significant potential amenity impacts on residential

properties. The Development Plan area, as the agent of change, has a responsibility to mitigate and manage these potential impacts.

The key outcomes for the farmland interface are:

- Provision of a continuous interface road reserve of at least 18 metres width, between Cowra and Sandilong Avenues
- Specified public realm treatments to the road reserve (see section 4.7)
- For land immediately adjoining the Farming Zone, provision of lots with longer-than-wide proportions, including sufficient overall depth to accommodate a minimum setback of 20 metres to the Farming Zone

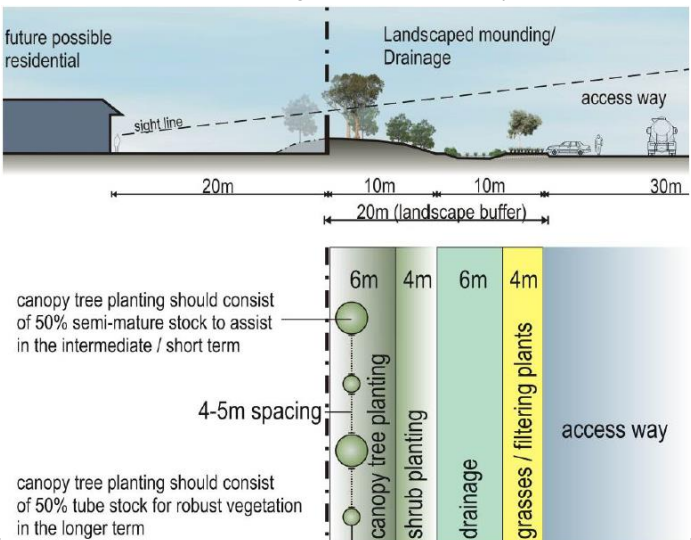
Future industrial precinct interface

The north-western boundary of the Development Plan area immediately adjoins land that is currently within the Farming Zone, however, is likely to be rezoned for industrial land use.

The key outcomes for the future industrial precinct interface are:

- Avoidance of a shared interface street due to inherent incompatibility between residential and industrial uses which is likely to lead to amenity impacts and land use conflict
- For lots immediately adjoining the industrial precinct, provision of lots with longer-than-wide proportions, including sufficient overall depth to accommodate a minimum setback of 20 metres
- Provision for a 20m landscape buffer along the rear boundary of industrial lots abutting land within the Development Plan area for the purposes of reducing noise and visual impacts. The 20m landscape buffer is to be in accordance with *Mildura Irymple Urban Transition Area Design Guidelines 2007* (see Figure 7)
- Avoidance of a trafficable road connection between the Development Plan area and industrial precinct to prevent a through route to, and associated conflicts with, Benetook Avenue, which functions as a key municipal Over-Dimensional/freight route
- Provision for at least one link between the Development Plan area and industrial precinct that is accessible and safe for pedestrians and cyclists (see section 4.5)

Figure 7. Industrial precinct interface treatment (Source: Mildura Irymple Urban Transition Area Design Guidelines 2007)



Heritage Place integration

The *Mildura Heritage Study (Part B, Stage 2)* has identified a significant heritage place at 941 Cowra Avenue, a residential dwelling named 'Arlington'. The house is a Significant Heritage Place (HO102) in the Mildura Planning Scheme. The house (and horticultural setting) is assessed as an early example of block house constructed during the early years of development of agriculture and horticulture in the Mildura region at the turn of the century (Mildura Heritage Study Part B – Stage 2, 2024). Subject to the planning control recommendations of the study, planned integration of the heritage place as part of the Development Plan area is to be required.

The key outcomes for the heritage place are:

- Provision of sufficient curtilage to all boundaries of any subdivided parcel to protect the integrity of the heritage place (the house and immediate setting)
- The heritage place at Cowra Avenue is contained within a large 5,840 sq.m. allotment and afforded a level of privacy given its battleaxe configuration off Cowra Avenue.
- The heritage place at Sandilong Avenue is located on the north western corner of Angel Grove and Sandilong Avenue within an established area and the DP does not include any changes to this established property.

4.5 ACCESS AND MOVEMENT

The access and movement framework (see Figure 8) is planned and designed to serve the particular needs of the Development Plan area, which will comprise a low residential development density with a small local population, contained within a relatively compact area.

Whilst it is expected that private vehicles will be the predominant mode of transportation for residents, the proposed access and movement network aims to support and encourage safe use by pedestrians and cyclists for local area commuting and recreation.

Connectivity with adjoining areas is a critical aspect of enabling local area movement, and especially critical if walking and cycling options are to be taken up for local trips. The framework makes provision for appropriate connectivity with adjoining areas with consideration to associated land uses, destinations and traffic management.

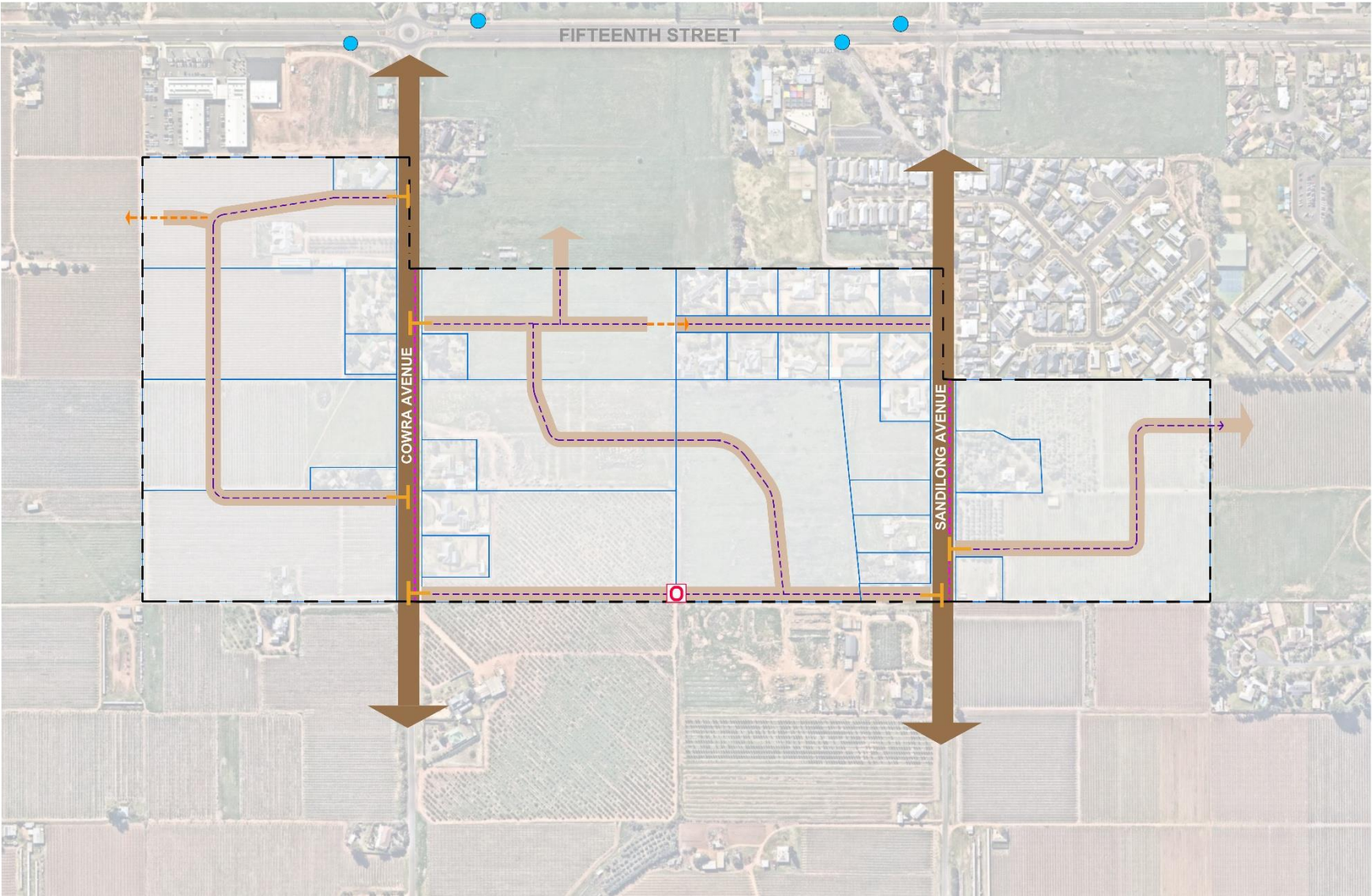


Figure 8. Access and Movement Framework Plan

LEGEND

- Development Plan Area
- Existing Lot Boundaries
- Rural Connector Street
- Internal Access Street
- Standard T-Junction
- Potential Traffic Calming
- Pedestrian Link
- Footpath
- Shared Path
- Bus Stops

Street hierarchy

A simple hierarchy of streets is proposed for the Development Plan area consisting of two street typologies, as follows. The particular characteristics of each typology are detailed in the following sections.

- Rural connector streets
- Internal access streets

Rural Connector Streets

Cowra and Sandilong Avenues form the rural connector streets within the Development Plan street network. These streets connect the Development Plan area to the arterial road network (Fifteenth Street) and are important links providing access to Development Plan area residents to nearby services and facilities, which are primarily concentrated along or in close proximity to Fifteenth Street.

Rural connector streets occupy an approximate 30 metres wide reservation comprising a central 8.0 metres-wide sealed carriageway with informal roadside drainage (see Figure 9).

Upgrade of the street environment is not required in response to the low additional vehicle traffic volumes to be generated by the Development Plan area, and a predominantly rural character of the street environment is preferred in keeping with the objectives of the Transition Area.

However the construction of standard pedestrian footpaths is necessary to complete walking connections between the Development Plan area and Fifteenth Street.

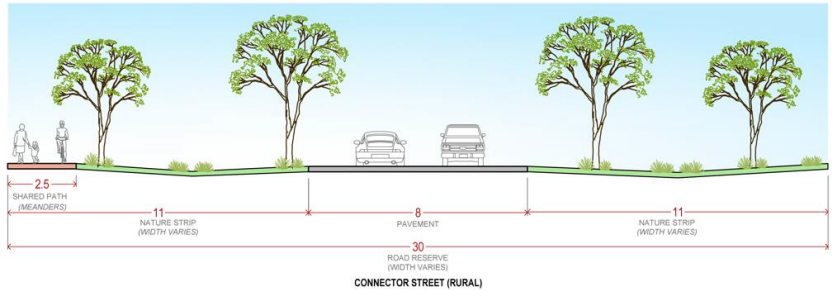


Figure 9. Rural Connector Street – Typical cross-section

Internal Access Streets

A network of access streets is proposed to create connectivity across the Development Plan area. The structure of the network is grid-based to maximise overall connectivity and arranged to provide access to all land parcels (excepting those with existing alternative access) in the most efficient way possible. Internal Access Street are to create a low-speed traffic environment that is not dominated by vehicles, noting that provision for designated on-street parking is not required and is discouraged in preference for off-street parking provision.

Six intersections of access streets with the rural connector streets are nominated. These are to be provided as standard T-intersections which have the capacity to accommodate the relatively low traffic volumes generated by the Development Plan area. Cross intersections are to not to be created in the interest of reducing local traffic speed and increasing safety conditions are all public street users.

An overall reserve width of at least 18 metres is required for all access streets (see Figure 10).

Key outcomes for the internal access streets are:

- A maximum design speed of 40 kph
- A central sealed central carriageway of 6.5 metres width (to enable two-way traffic movement)
- Concrete plinth edging of the carriageway (in place of kerb and channel) to enable drainage to flanking swale drains
- Shallow swale drains either side of the carriageway of 5.0 metres width
- A pedestrian footpath of at least 1.5 metres width on at least one side of the carriageway
- Street tree planting and public realm treatments (see Section 4.8)
- Pedestrian scale lighting (approximately 4-5 metre height) positioned at an appropriate and consistent interval along footpaths and at street intersections

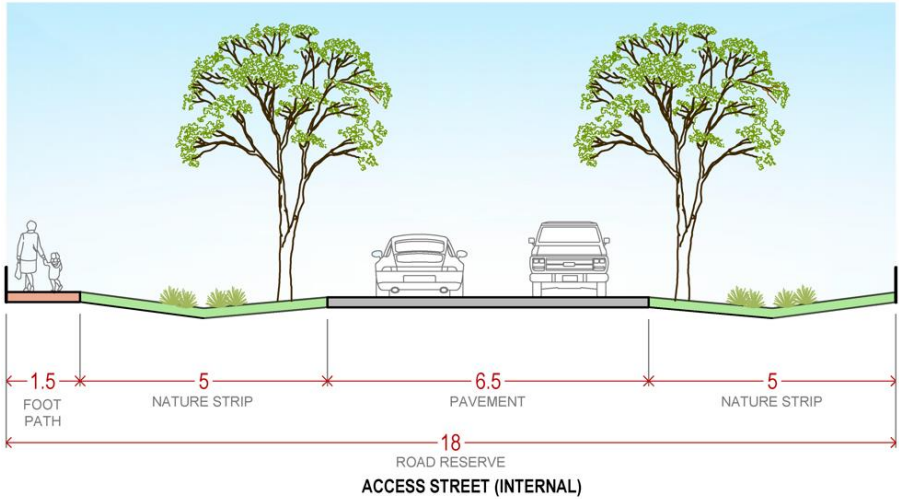


Figure 10. Internal Access Street – Typical cross-section

External Connections

Three key external street connections are proposed for the purpose of completing important strategic points of access with adjoining areas and improving access to local services and facilities.

South-eastward connection to Irymple Structure Plan area

This street connection links the Development Plan area with the proposed residential neighbourhood immediately to the south east, and form part of a connection through to Karadoc Avenue which will provide access to nearby facilities including the Irymple Secondary College, Henshilwood Reserve and the Irymple Hub (town centre).

The proposed form of the connection is an Internal Access Road.

The connection is to be provided to coincide with the adjacent land parcel currently within the Farming Zone (outside of the Development Plan area) and connect through to Karadoc Avenue. Delivery of the street through the parcel is the subject to a future land rezoning (to the General Residential Zone, per the *Irymple Structure Plan and Urban Design Framework 2021*) and associated planning controls (e.g. Development Plan Overlay).

North-eastward connection to proposed community uses precinct

This street connection links the Development Plan area with the proposed community uses precinct immediately to the north-east.

The proposed form of the connection is an Access Street.

North-westward connection to proposed industrial/commercial precinct

This street connection will link the Development Plan area with the proposed industrial/commercial precinct along Benetook Avenue.

The proposed form of the connection is a Pedestrian Link, as continuation of the Internal Access Street reserve. The absence of vehicle access has the purpose of preventing the creation of a through-connection to Benetook Avenue, which is an Over-Dimensional (OD) route and critical freight corridor.

Key outcomes for the pedestrian link are:

- A minimum width of 6 metres
- A maximum length of 30 metres
- Provision for active surveillance by dwellings on adjoining lots
- Continuation of Internal Access Street public realm treatments, including street tree planting and footpath connection
- Bollards and/or suitable landscape treatment to prevent vehicular access

Traffic Calming

The introduction of traffic calming devices within the residential streetscapes of the Development Plan area is generally not considered necessary due to the nature of the street pattern involving relatively short lengths of street.

Given the two east-west streets present a minimal risk of cut-throughs and higher traffic speed and they exceed 600m length, traffic calming devices (eg: speed humps) will be applied in suitable locations.

Walking, Cycling and Public Transport Networks

Walking network

A grid of standard footpaths provided along at least one side of all Internal Access Streets within the Development Plan area will establish the internal walking network.

Standard footpaths are to be connected to shared paths proposed along Cowra and Sandilong Avenues, which in turn will provide a continuous, safe walking with shared paths along Fifteenth Street.

Three external connections, as previously described will provide for walking access to and from adjoining areas – the proposed Industrial Precinct, the proposed Community Uses Precinct and the Irymple residential area.

At intersections, footpaths are to extend across the verge to the kerb (plinth) edge to provide continuity of sealed walking surfaces for pedestrians.

To supplement and support the walking connecting network throughout the Development Plan, all drainage reserves contain a seating and respite area to assist as a suitable rest-stop within each reserve’s unencumbered areas.



Cycling network

Low local traffic volumes, combined with the proposed design of the street network, which includes low traffic speed environments and ample physical space and amenity for safe use by cyclists, will create a comfortable cycling neighbourhood within the Development Plan area. For this reason, a specified cycling network with dedicated infrastructure (e.g. cycling paths or marked cycle lanes) is not proposed to be provided.

More critical is the establishment of safe cycling connections between the comfortable cycling neighbourhood of the Development Plan Area and key destinations such as the Irymple Hub, and nearby community facilities (e.g. the Irymple Primary and Secondary Schools) and open spaces (e.g. Henshilwood Reserve). This is to be provided by shared paths connections along Cowra and Sandilong Avenues.

Public transport network

A bus service operates along Fifteenth Street that runs between Mildura and Red Cliffs and is serviced in Irymple by bus stops located within a maximum walking distance from the Development Plan area of approximately 800-1000 metres. The completion of shared path connections along Cowra and Sandilong Avenues, will enable walking and cycling access to the bus stops.

4.6 DRAINAGE

The drainage strategy is proposed to comprise of three drainage basins and a network of roadside swales and underground drains to convey and capture stormwater flows generated from storm events up to the 1% Annual Exceedance Probability (AEP) event. Multiple basins are required to manage the stormwater generated on the site due to the undulating topography and naturally occurring low points. The development plan area is split into three corresponding catchments, each serviced by a drainage basin.

The drainage basins are proposed to discharge via gravity drains to the existing Calder Basin and Henshilwood Reserve Basin located north-east and south-east of the development plan area. The properties on the northern side of Cowra Avenue may alternatively outfall to the Etiwanda Basin located north-west of the development plan area which will be dependent on the timing for delivery of the future DCP drainage upgrades.

The basin outlet pipes are sized to convey the 20% AEP pre-developed flows. The drainage basin outfall and the capacity of the receiving drainage infrastructure remains subject to a detailed surface stormwater management strategy to be undertaken by Council.

Drainage basins

The north-west basin has been located abutting Cowra Avenue to establish visibility and access from the public road reservation. This basin services a modified catchment area located north-west of Cowra Avenue. Filling is proposed along the north-western end of the catchment to direct flows to the proposed drainage basin. The fill area will range between 1 to 2 meters in height to achieve minimum grades for underground and overland drainage.

The central 0.77ha basin location coincides with the natural low point of the central catchment and services the catchment between Cowra Avenue and Sandilong Avenue. A 0.2ha neighbourhood public open space is to be integrated with the drainage basin and provided centrally within the development area to maximise accessibility for residents and neighbourhood land uses.

The south-east basin is located at the south-east corner of the development plan area at a natural low point and will service a catchment area located east of Sandilong Avenue. Local filling is proposed in the north-west corner of the catchment to direct flows to the proposed drainage basin. The fill in this area will be limited to a maximum 1 meter in height.

Some key objectives in the design of the drainage basins are focused on the delivery of the basins as a secondary amenity to the community and ensuring that desirable landscaping treatment of the assets can be achieved. The key characteristics of the proposed drainage basin which will enable this include:

- Limiting the basin depths to maximum 1.50 meters (including 300mm freeboard).
- Ensuring batter slopes do not exceed a grade of 1 in 10.

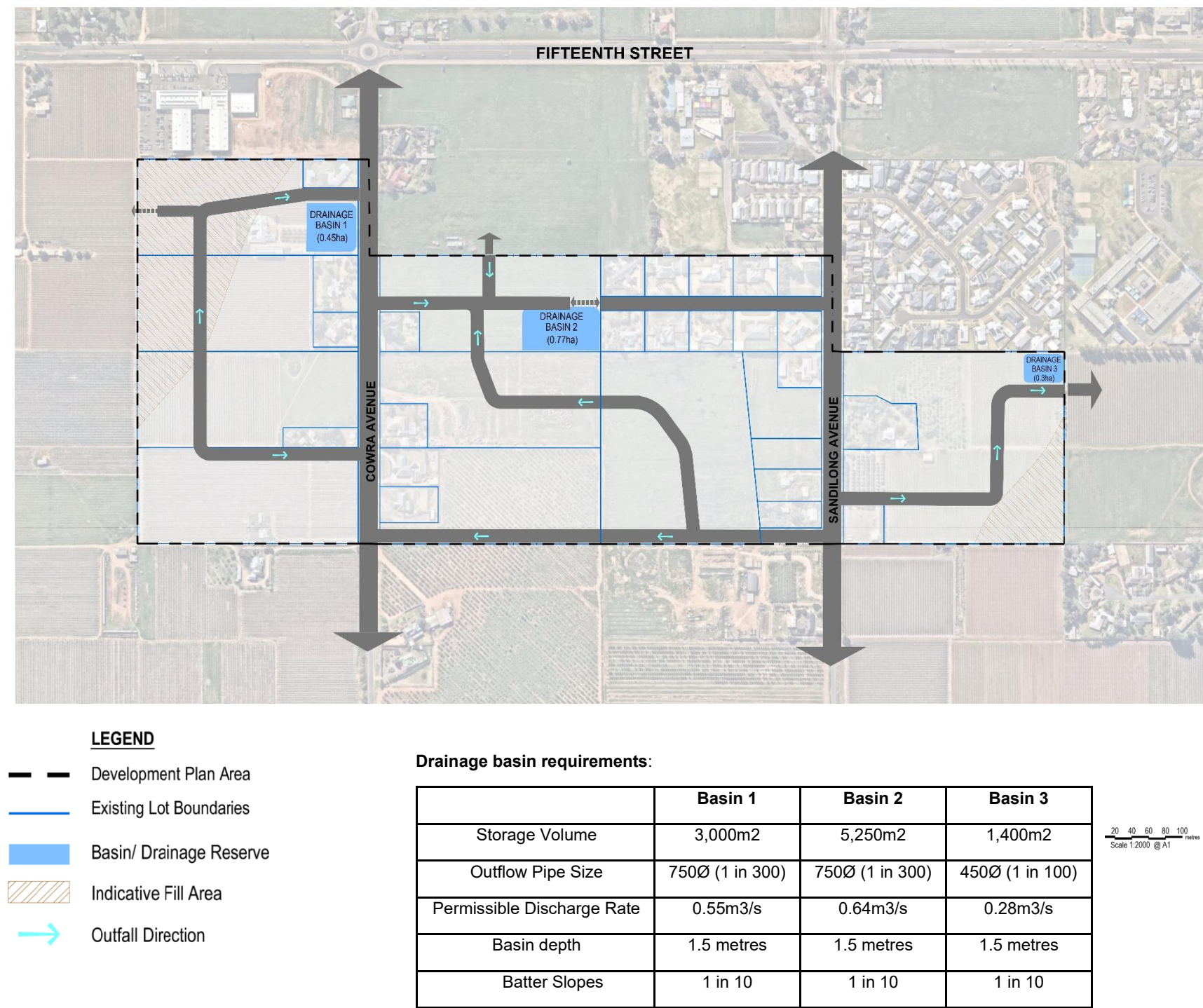
Swale drains and drainage reticulation

A network of underground drainage pipes will be required to convey minor flows up to the 20% AEP storm event to the drainage basins. Major flows greater than the 20% AEP and up to the 1% AEP storm event will be conveyed in roadside swales via the local road network.

The key outcomes for the swale drains and reticulated drainage are:

- Convey all stormwater flows generated within the catchments to the respective drainage basins.
- Provide each private lot with their own direct connection to the underground drainage network.
- The swales will be grassed/vegetated and provide passive irrigation to support canopy cover/street trees and landscaping treatments in the road reservations.

Figure 12. Precinct drainage plan



4.7 OPEN SPACE AND PUBLIC REALM

The open space and public realm framework is shown in Figure 13.

The proposed public open space network aims to balance the low density of development and relatively limited number of residents, with the need to provide for open space in a catchment that has a wider range of existing and proposed land uses and would otherwise remain entirely un-serviced.

The open space provision forms part of a wider network available to residents of the Development Plan area, which includes the Henshilwood Reserve at a maximum walking distance of around 1.5 kilometres.

The local network of streetscapes will complement the open space provision with additional scope for passive recreational activity and public realm amenity in the Development Plan area.

In addition to the central drainage reserve with open space area, the two smaller drainage reserves contain passive seating and respite areas within unencumbered areas in each reserve.

The treatment and character of the public realm is also critical to the Development Plan area outcome. An informal, semi-suburban/semi-bushland character, with a comparatively high level of public space vegetation and a reduced level of hard surfaces is envisaged and offers a visually-distinctive counterpoint to the more rigid and urbanised character of conventional suburban residential development in greenfield locations.



Figure 13. Open Space and Public Realm Framework



Neighbourhood-level public open space

A neighbourhood public open space is to be provided centrally within the Development Plan area to maximise accessibility for local residents and neighbouring land uses.

The key outcomes for this open space are:

- A minimum area of approximately 0.2ha (2,000m²), corresponding to the public open space contribution available to the Development Plan area.
- Integration of the allocated open space area with the main central drainage basin (i.e. not simply co-located)
- Creation of a main passive space suitable in size for accommodating a local play space, several seating areas, soft landscaping and a connecting foot path
- Creation of secondary passive space accommodating seating areas, soft landscaping and a connecting foot path are provided to the two smaller drainages reserves within unencumbered areas
- Allocation of remaining open space to provide additional curtilage to the drainage basin, sufficient to enable safe walking access around the perimeter and for soft landscaping of basin edges and/or boundaries of adjoining residential lots
- Extension of the perceived open space to the street edge (carriageway), enabled by integrated design (e.g. meandering footpaths that extend partly into the open space and connect through continuity of landscaping treatments)
- Provision of street frontage (including shared zones) on at least two sides
- A canopy cover target for the open space (excluding drainage basin) of at least 50%.

Rural Connector Street streetscapes

The public realm treatment of Cowra and Sandilong Avenues is to largely preserve their existing rural and informal character, with only minor modifications, in the interest of maintaining a predominantly rural street setting with essential amenities that is compatible with the Urban Transition Area.

The key outcomes for these streetscapes are:

- Maintenance of the existing 6.0 metres-wide central carriageway
- The addition of gravel shoulders to provide clearance for safe/emergency stopping if required
- A standard, brushed concrete pedestrian footpath on at least one side of the street, connecting to existing footpaths on Fifteenth Street
- Preservation of in-situ vegetation (unless assessed to be arboriculturally unsound or unsuitable)
- Additional native and/or indigenous street verge plantings, arranged informally in intermittent clusters and copes to frame the vista along the road

Internal Access Street streetscapes

The public realm treatment of the Internal Access Streets requires a coordinated approach due to the continuity of streets across multiple land parcels which may be developed in isolation.

The key outcomes for these streetscapes are:

- A planting character based on indigenous and native species
- Informal street tree planting in clusters rather than uniform rows
- Random intermixing of street tree species, generally in accordance with the Development Area planting palette (see Figure 14)
- A canopy cover target of at least 50%.

- Provision for understorey planting only in association with public open space and drainage reserve interfaces and with widened verges, generally in accordance with the Development Area planting palette (see Figure 14)
- Grassed swale drains
- A concrete footpath with gently meandering alignment where verge space and street tree planting design permits

It is noted that, where variation in the overall reserve width is required (for instance due to geometric constraints associated with existing land subdivision), the additional reserve width is to be allocated as a widened verge with provision for additional street tree and understorey planting.

Farmland interface streetscape

The public realm treatment of this streetscape, located between Cowra and Sandilong Avenues, is to be different and distinct from other internal access roads. This is because of its additional role as an interface street to the very different character of the farmland and as a buffer between residences and farming activities.

The key outcomes for the streetscape are:

- An asymmetric cross-section with widened verge on one side to accommodate roadside drainage and more concentrated landscaping
- A reduced carriageway width due to residential development on one side only
- Dense landscaping of verges, comprising street trees planted at closer centres and understorey planting, to provide a vegetative barrier to trap dust and spray drift
- Informal planting arrangements (i.e. clusters of trees and understorey plantings, rather than rigid rows and blocks)
- Provision of street landscape ‘breaks’ to create glimpses of the farming landscape from the public streetscape and adjoining residences
- A compacted crushed-rock footpath with gently meandering alignment where verge space and street tree planting design permits

Angel Grove streetscape

Several improvements to the public realm of the Angel Grove streetscape are recommended as follows. These are to be initiated by Council as public works:

- Reclamation (part or all) of the existing road reserve area at the north-western end to provide pedestrian continuity of the proposed access street
- Construction of a standard pedestrian footpath on at least one side of the carriageway connecting to Sandilong Avenue
- Street tree planting to close gaps in existing (private) plantings and to provide continuous shading of the footpath

Development Plan area Planting Palette

Species name	Common name
Trees	
Acacia stenophylla	Eumong
Brachyciton populneus	Kurrajong
Callistemon ‘Harkness’	
Eucalyptus Torwood	
Geijera parvifolia	Wilga
Shrubs and Groundcovers	
Atriplex sp.	Saltbush
Craspedia globosa	Billy Buttons
Dianella sp.	Flax Lily
Eremophila sp.	Emu Bush
Lomandra sp.	
Maireana sedifolia	Pearl Bluebush
Myoporum parvifolium	Creeping Boobialla
Westringia Sp.	Native Rosemary

Figure 14. Development Plan area Planting Palette

5 IMPLEMENTATION

5.1 DEVELOPMENT CONTRIBUTIONS

The majority of infrastructure items within the Development Plan area do not require development contributions to be apportioned.

Infrastructure will be provided by each landowner/developer, generally in accordance with the Development Plan, and as is necessary to facilitate development of the corresponding land parcel/s.

Connection of land parcels to existing servicing points, including any associated headworks, will be the responsibility of each landowner/developer and subject to agreement with relevant service authorities.

Several items of infrastructure do require development contributions to be apportioned, as described in Figure 15.

Implementation of development contributions will be subject to detailed assessment of infrastructure requirements and amendment to the corresponding Development Contributions Plan Overlay Schedules in the Mildura Planning Scheme.

Figure 15. Infrastructure items subject to Development Contributions

Infrastructure Item	Indicative Parameters
Drainage	
Drainage basin (north-west catchment)	Land allocation and drainage basin construction, including landscape works
Drainage basin 2 (main basin)	Land allocation and drainage basin construction, including landscape works
Drainage outfall	To be determined by Council, subject to Drainage Strategy
Road	
Cowra Avenue – shared path	Construction of shared path, to at least 2.5 metres width, between southern-most local road in Development Plan area to Fifteenth Street
Sandilong Avenue – shared path	Construction of shared path, to at least 2.5 metres width between southern-most local road in Development Plan area to Fifteenth Street
Open Space	
Neighbourhood-level public open space capital improvement work	In accordance with Public Open Space Strategy service standards, including provision for Local Play Space

5.2 PUBLIC OPEN SPACE CONTRIBUTIONS

Contributions for the provision of public open space are to be made at a rate of 5% of the corresponding site area (land parcel area). For parcels with a designated a public open space area under the Development Plan, this contribution will be made in as land, transferred to and vested in Council.

For land parcels where a public open space area is not designated by the Development Plan, the contribution is payable as cash-in-lieu of land payment, equivalent to 5% of the land value.

Cash-in-lieu payments are to be used to meet the cost of public open space land purchase, by Council, that exceeds the public open space contribution for affected parcels.

5.4 SERVICING

The availability of servicing infrastructure to the Development Plan area is generally commensurate with the standard of servicing provided to conventional residential development land and so is fully serviceable for the purpose of the Development Plan, noting the important qualification related to the sewerage of lots.

Sewer

The Development Plan area is to be serviced by on-site wastewater management systems.

Reticulated sewer is nonetheless available to the Development Plan area, via a 450mm rising sewer main along Cowra Avenue, and a 150mm gravity sewer in Sandilong Avenue which terminates at the frontage to Angel Grove.

Lower Murray Water (LMW) have advised that the existing network has limited capacity and upgrades would be required to service the entirety of the Development Plan area.

Water

Water mains exist along both Sandilong Avenue and Cowra Avenue, within the Development Plan area, and are advised by Lower Murray Water to have capacity to service partial development of the land at the proposed density. Minor upgrades will be required to service increased demand for the entire Development Plan area.

It is the responsibility of the developer to apply to LMW for water connection requirements and approvals prior to development.

Electricity

Power is available by extension and possible upgrades to the existing high voltage overhead electricity lines located on the south-east side of the Sandilong and Cowra Avenues road reservations.

It is the responsibility of the developer to consult with Powercor to confirm any substation requirements and locations prior to development.

Telecommunications

Telstra and NBN telecommunications infrastructure is located within Cowra Avenue and Sandilong Avenue, within the Development Plan Area.

Applications must be made to supply proposed developments and it is the responsibility of the developer to provide design and installation of internal pit and pipe infrastructure according to authority specifications.

Gas

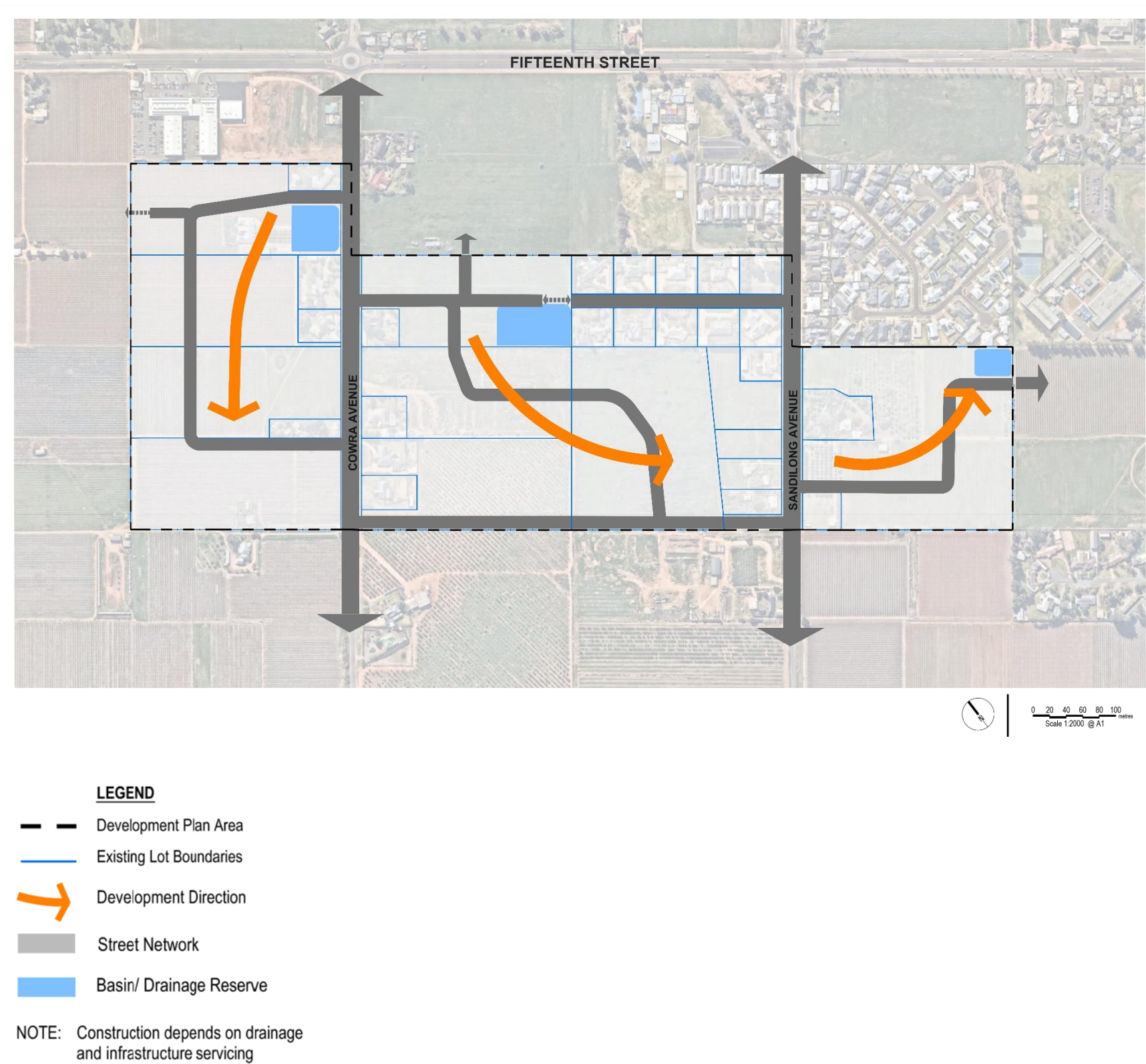
The extension of supply of reticulated gas within should be in accordance the State Government's Gas Substitution Roadmap which is based on a policy to prohibit the connection to reticulated gas of new residential dwellings requiring a planning permit – in this case associated with the subdivision of land.

5.5 DEVELOPMENT SEQUENCING

Although the Development Plan area is relatively compact, it is structured according to a quite fragmented pattern of land ownership which creates complexities for development sequencing. There are in particular limitations due to factors such as right of way access constraints and precinct drainage requirements.

In preparing the Development Plan, careful consideration has been given to maximising the flexibility for individual sites to be developed independently, noting that the initial development of several land parcels is a critical prerequisite for the subsequent development other parcels. A guiding framework for logical development sequencing is shown in Figure 16.

Figure 16. Development Sequencing Framework



5.6 SUBMISSION REQUIREMENTS FOR PLANNING PERMIT APPLICATIONS

Permit applications for the subdivision of land under this Development Plan are required to be supported by the following documentation:

- An **Arboricultural Assessment** of any *in situ* trees within the subject site, and of any adjacent roadside trees that may be affected by the proposal
- A **Salinity Risk Assessment** of the subject site, including of any proposed earthworks/filling that will alter natural ground levels
- A **Land Capability Assessment** addressing the risks to human health and the environment of an on-site wastewater management system constructed, installed or altered on the lot/s in accordance with the requirements of the Environment Protection Regulations under the Environment Protection Act 2017