

Shepparton & Mooroopna 2050: Regional City Growth Plan

Background Report



July 2020

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1 INTRODUCTION

The Victorian Planning Authority (VPA) and Greater Shepparton City Council (Council) has prepared the *Shepparton & Mooroopna 2050: Regional City Growth Plan* (Growth Plan) to guide the sustainable development of the Shepparton-Mooroopna urban area to the year 2050.

The Growth Plan is a high-level and broad strategy that:

- Sets out the future vision for Shepparton and Mooroopna.
- Guides sustainable future growth and development over the next 30 years.
- Identifies the steps needed to manage growth.
- Defines key projects and infrastructure required to support growth.
- Provides certainty for public and private investment decision making.

The *Shepparton & Mooroopna 2050: Regional City Growth Plan Background Report* (Background Report) should be read in conjunction with the Growth Plan. The Background Report contains complementary information that provides an evidence base for the Growth Plan.

2 OUTCOME 1 – A CITY FOR THE GOULBURN REGION

Relevant documents:

Hume Region Planning for Freight Pilot (2013)

City of Greater Shepparton, Industrial Land Review (2011)

Shepparton Residential and Industrial Land Supply Assessment (2019)

Shepparton Health and Tertiary Education Precincts Action Plan (2020)

Shepparton Irrigation Region Groundwater Management Area Local Management Plan (2015)

Regional Irrigated Land and Water Use Mapping in the GMID – Dairy Evaluation (2017)

Goulburn Broken Regional Catchment Strategy 2013 – 2019 (2013)

Regional Irrigated Land and Water Use Mapping in the GMID – Summary (2017)

Cultural Diversity and Inclusion Strategy and Action Plan 2015 – 2018 (2015)

Greater Shepparton Multicultural Strategy 2019 – 2022 (2019)

Greater Shepparton City Council Reconciliation Action Plan (Reflect) (2019)

Shepparton East Agricultural Land Use Options Report (2020)

2.1 Freight

Greater Shepparton has a key role within the Victorian and national freight network.

The major road routes that service Shepparton and Mooroopna are:

- Midland Highway – The Midland Highway links all major regional cities in Victoria. It extends in an arc shape from Geelong to Mansfield connecting Ballarat, Bendigo and Shepparton. It provides the only east-west connection within the immediate vicinity of Shepparton and is heavily used by trucks including B-Double and Higher Mass Limit Trucks.
- Goulburn Valley Highway – Goulburn Valley Highway is a north-south route providing connections between Central New South Wales (NSW) and Melbourne, via Seymour. It travels directly through the major retail precinct of central Shepparton.
- Shepparton Alternative Route (SAR) – The SAR is located on the eastern side of Shepparton and incorporates River Road, Doyles Road and Grahamvale Road. The SAR forms part of the inland freight route to rural NSW and Brisbane.

The road network underscores the role that Shepparton plays in performing a (predominantly eastern seaboard) national freight task. The radial nature of the road network has historically focussed all cross-town freight movements through the central commercial areas of Shepparton and Mooroopna.

Freight is an important sector as Shepparton and Mooroopna accommodate through movements for trucks travelling north as far as Brisbane and east to Bendigo and beyond. There are also a number of freight movements that start their journey in Shepparton to transport food products, both fresh and processed, within Victoria, nationally and internationally. Major industry around Shepparton has focussed its activities to the east of the town which is served by the SAR.

The economy of Greater Shepparton continues to thrive on the back of a number of service, health, food, manufacturing and tourism sectors. Activity in these sectors is placing increased pressure on existing road networks which are trying to accommodate population growth and additional demand for freight movement.

In relation to freight rail, Shepparton is serviced by a rail line linking to Melbourne and Tocumwal to the north. In addition, there are branch lines that link Toolamba to Echuca and Shepparton to Dookie.

2.2 GV Freight & logistics Centre (GV Link site)

Council purchased the land for the GV Link site in 2011. GV Link is a modern transport and logistics centre which is being built on a 331 hectare green field site on Toolamba Road, two kilometres south of the Midland Highway at Mooroopna, 4.7 kilometres south west of Shepparton. Current and proposed road and rail infrastructure will enable easy site access now and into the future.

As a modern transport and logistics centre, GV Link has the potential to provide significant benefits for Victoria and the Goulburn Valley including a more efficient supply chain for regional products to market, reduced congestion on roads into and around Melbourne, direct rail access to the Port of Melbourne and easier access to global markets for local businesses. There are three stages identified for GV Link:

- Stage 1 – a general freight and logistics area comprising four allotments.
- Stage 2 – an additional freight and logistics area comprising five allotments.
- Stage 3 – a true intermodal terminal connecting GV Link businesses to streamlined road transport and a high capacity modern rail terminal.

2.3 Industry

The current supply of industrial land that services Shepparton and Mooroopna is mainly located in the east of Shepparton and at Lemnos.

The *Industrial Land Review, City of Greater Shepparton (2011)* was an assessment of industrial land use and development in the City of Greater Shepparton, which looked at land supply, transport and other associated issues, options and future requirements.

The Review provided a framework for future site assessment and selection, and makes recommendations on actions to be taken to plan strategically for the best outcomes for industrial development in the municipality. The *Industrial Land Review, City of Greater Shepparton (2011)* was adopted by Council in July 2011 and was implemented through Amendment C162 to the Greater Shepparton Planning Scheme (Planning Scheme). This amendment introduced a number of industrial investigation areas, the areas within the scope of the Growth Plan are identified below:

- Investigation area 7 – Wanganui Road, Shepparton North. This area includes lands on the northern side of Wanganui Road and land owned by Council to the south of Wanganui Road. The land is constrained by flooding and further investigation is required to explore mitigation options to guide any future rezoning of this land. This area could be utilised for industrial uses should an increase in demand occur in the future as the land will be bounded by major transport routes.
- Investigation area 8 – Mooroopna south. All land to the south of Mooroopna in proximity to the GV Link site should be considered for inclusion in the Industrial 1 Zone. This is being held by Council as a long term industrial development option and could be a suitable site for a resource recovery precinct. The impact that the construction of the Goulburn Valley Highway Shepparton Bypass will have on traffic movement and development within the surrounding area will need to be understood.
- Investigation Area 10 – East of Doyles Road, Grahamvale. There are a number of land use interface issues to be addressed in the area. There is a mix of agriculture, residential estates such as Dobson's Estate, and the Shepparton East and Lemnos industrial areas. Further investigation is required in this area following the implementation of the Goulburn Broken Catchment Management Authority's (GBCMA) *Shepparton East Overland Flow Urban Flood Study (2017)*. In addition to this, the future role and function of the SAR will need to be known and development to the east is considered inappropriate at this time. Investigations will include issues associated with present industry, potential for expansion of industrial and / or residential uses and developments, future servicing requirements and agricultural impacts.
- Investigation Area 11 – Lemnos contains a strong cluster of transport and warehousing businesses. This investigation area is intended to complement and provide for the expansion of industry in this area. It is important to note that only the site owned by Campbells Soups Australia Pty Ltd is connected to reticulated sewerage. Future industrial development in this area should be provided with reticulated services.

The *Urban Development Program 2011: Regional Residential Report City of Greater Shepparton (UDP) (2011)* was undertaken by Spatial Economics Pty Ltd to provide an analysis of the supply and demand for residential and industrial land across the municipality.

It was commissioned as part of a state-wide program by the Department of Planning and Community Development in conjunction with Council. Spatial Economics Pty Ltd also updated the UDP with new data in 2015, resulting in the report known as the *Shepparton Residential and Industrial Land Supply Assessment* (2016).

Since the 2016 update, the consumption of industrial land in Greater Shepparton has exceeded expectations, due to uptake by large scale users. In addition, key residential growth areas in Shepparton and Kialla are now approaching their full capacity. A further update to the UDP is necessary to ensure that an adequate supply of residential and industrial land for the next 15 years is maintained.

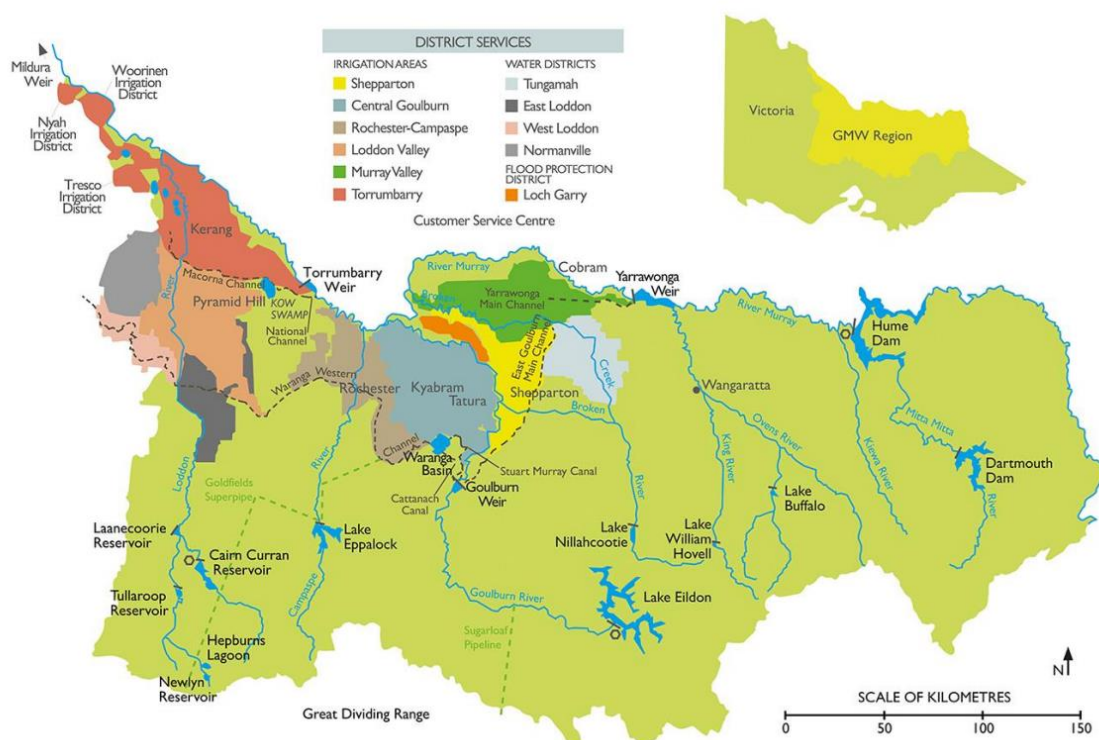
The *Industrial Land Supply & Demand Assessment* (July 2019) provided an update on industrial land supply and consumption and identifies the need for additional industrial land.

2.4 Goulburn Murray Irrigation District (GMID)

The Goulburn-Murray Irrigation District (GMID) system is the largest irrigation system in Victoria. It covers 9,950 square kilometres and accounts for more than 70% of water stored in Victoria and almost 90% of water used in irrigation across the State.

The GMID is made up of the Shepparton, Central Goulburn, Rochester-Campaspe, Loddon Valley, Murray Valley and Torrumbarry Irrigation Areas as identified in **Figure 1**.

Figure 1 GMID irrigation areas and G-MW region map



2.4.1 Goulburn Murray Irrigation District Master Plan

Initiated by the Goulburn Regional Partnership, the master plan is designed to explore the opportunities for long-term growth and prosperity across the GMID, and how this might be achieved. The Master Plan seek to develop a strategy that builds upon the resilience of the GMID through guiding the growth and development of the social, economic and environmental sustainability of the GMID into the future and delivers clear actions for implementation to ensure that the Master Plan will benefit the GMID communities going forward.

It particularly aims to address the challenges facing the GMID over the coming decades such as reduced water availability for agricultural production, high infrastructure renewal and maintenance costs, ongoing structural

adjustment, pressures on natural resources, and demographic shifts. There will also be a strong focus on mitigating the impacts of climate change and globalisation.

Once completed, the Master Plan will provide GMID decision-makers and surrounding communities with a planned approach to the future, in addressing the challenges and taking advantage of the opportunities, leading to better outcomes and stronger, more resilient communities.

This project will be led by the Goulburn Regional Partnership, with assistance and input from Regional Development Victoria (RDV) and other key government agency stakeholders as required. The Goulburn Regional Partnership was established in 2016 by the State government to provide a regional voice directly to government. RDV is a statutory agency of the Department of Jobs, Precincts and Regions.

2.4.2 Goulburn-Murray Water (G-MW)

G-MW is a statutory Corporation constituted by Ministerial Order under the provision of the *Water Act 1989*. Under this Act G-MW provides, manage and operate irrigation districts, water districts and water management districts.

G-MW manages both regulated and unregulated river systems that flow into the Murray and administers groundwater within this area. G-MW has over 25,000 customers and provides over 39,000 connections in a region of 68,000km. The region G-MW is responsible includes the GMID in addition to a broader area (see **Figure 1**).

In relation to development, G-MW is interested in the impact of development on:

- Surface water and groundwater:
 - quality
 - use
 - disposal
 - G-MW infrastructure
 - G-MW services.

As identified in **Figure 1**, to the east of Shepparton is the Shepparton Irrigation District and to the west is the Central Goulburn Irrigation District, there are separate water service committees that operate in these areas as identified in **Figure 2**. The water service committees are made up of customers from the region and help G-MW better understand issues facing customers.

G-MW is delivering the \$2 billion Connections Project, funded by the Victorian and Commonwealth governments. This is the most significant upgrade to the region's irrigation infrastructure in its 100-year history and is the largest irrigation modernisation project in Australia. This project will automate much of the water delivery network, replace ageing irrigation infrastructure, meet measurement compliance requirements and ensure equitable access to maintain the true value of water while also reducing the GMID footprint, making water use sustainable and preparing for future challenges and opportunities.

2.4.3 Goulburn Broken Catchment Management Authority (GBCMA)

The GBCMA works with communities and government agencies to manage activities to protect and improve the catchment's land, water and biodiversity. This work is guided by a Regional Catchment Strategy (RCS) which is the *Goulburn Broken Regional Catchment Strategy*. This Strategy guides efforts to sustain and restore the region's natural environment and the communities that rely on healthy waterways, landscapes and biodiversity to remain prosperous and vibrant.

The catchment area for the GBCMA is identified in **Figure 2**, which identifies Shepparton as being within the "Agricultural Floodplain" district. There is some overlap with the catchment area of the GBCMA and the GMID boundary.

The *Goulburn Broken Regional Catchment Strategy* details strategic priorities along with management measures and possible actions, some notable priorities include:

- Creating opportunities for community leaders to contribute to water policy.
- Prioritising the protection of waterway and wetlands within the modernised irrigation deliver system.
- Modernising water delivery on irrigated land to provide ecological and productivity benefits.
- Delivering farm planning to integrate ecological and agricultural productivity benefits.
- Researching costs and benefits of new options for farm production, such as energy.
- Working with landholders to protect and improved biodiversity on farms and build understanding of its contribution to sustainable and profitable farming.
- Planning and implement flood, fire and drought response and recovery.

Figure 2 Goulburn Broken Catchment Authority catchment area



2.5 Irrigated land and agriculture

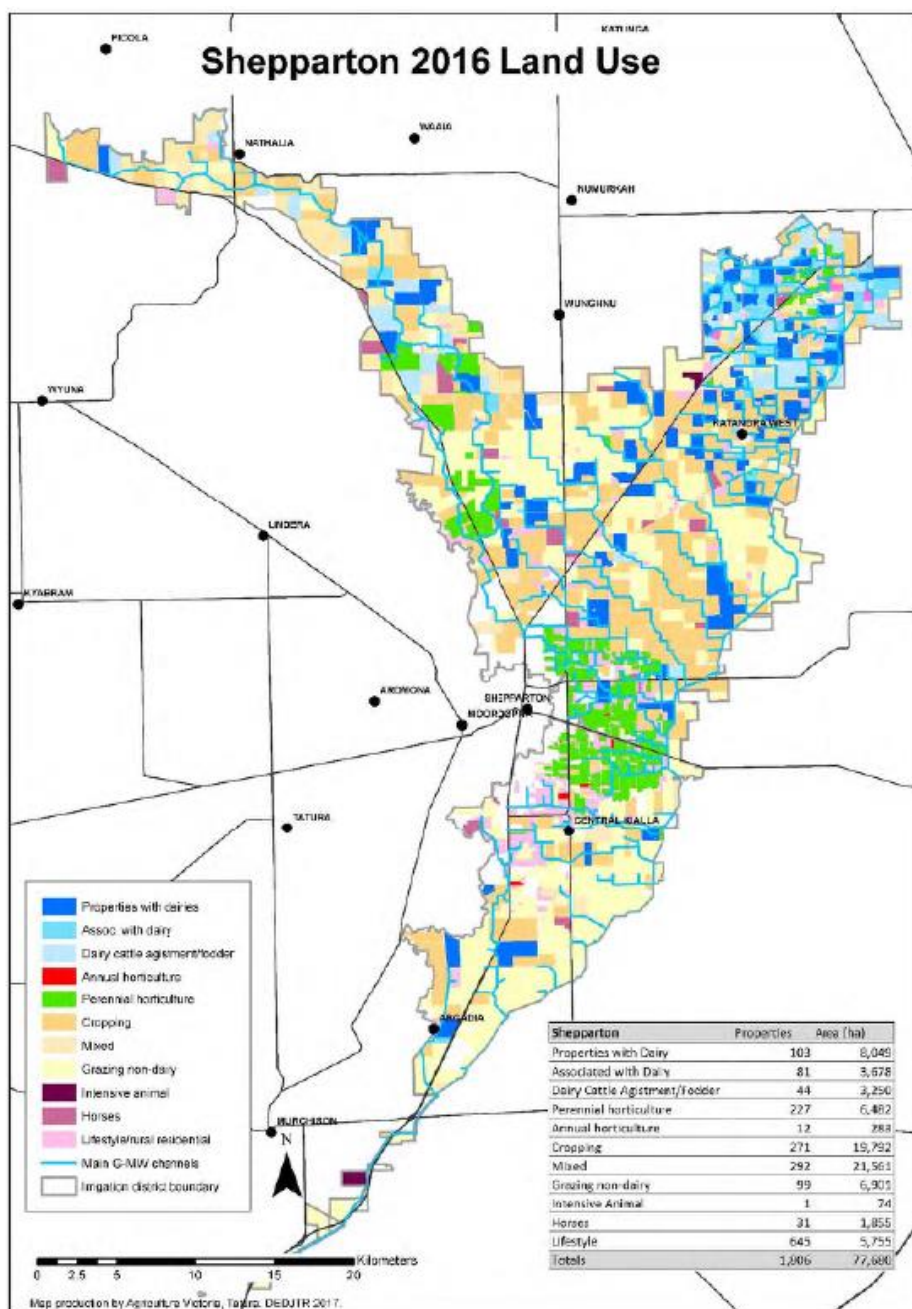
Shepparton and Mooroopna are located on the lower floodplain of the Goulburn Broken Catchment which means the soil is rich making the Goulburn Valley region one of the most productive agricultural regions and food bowls in Victoria. Approximately 25% of the total value of Victoria’s agricultural production is generated in the Goulburn Valley region.

Agriculture is central to the economy of Greater Shepparton and Victoria as a whole. Primary agricultural industries in this region include dairy, horticulture, viticulture, livestock production (beef, sheep, goats, pigs and poultry), cropping, timber production and aquaculture.

Greater Shepparton’s farm gate gross value for agricultural production in 2001 was over \$400 million and one of the highest in the Goulburn Broken Catchment. This reflects the intensity and diversity of agricultural production that irrigation permits in a relatively low rainfall area. It also explains why 20 or more major food processing companies are located in and around Shepparton.

Shepparton and Mooroopna are located on the agricultural floodplains within the Goulburn Broken Catchment, so it is essential to preserve and support the industries that rely on these floodplains to secure the economic prosperity and stability of the Greater Shepparton region. **Figure 3** shows the Shepparton Irrigation Area boundary and land use extent.

Figure 3 Shepparton Irrigation Area and land uses.



2.5.1 Dairy

Dairy is the second most extensive land use in the GMID and accounts for around half of the irrigation water used, with the remaining used by perennial and annual horticulture, cropping and mixed farming. In summary:

- The GMID dairy industry remains an extensive land use in the GMID, as such it is a critically important component of the regional economy.
- Dairy supports more than 4,000 people working on farms supplying 16 regional processing facilities which in turn provides more than 3,000 jobs across several towns. In addition GMID dairy supports other services such as vets, dairy machinery and irrigation equipment specialists, agricultural stores, financial services and agronomists.
- In 2015 –16, the GMID produced more than 1,700 million litres of milk with a farm-gate value of more than \$740 million, an estimated \$595 million of the farm-gate value was reinvested back into the local economy.
- Dairy farms have embraced the opportunity to upgrade their irrigation infrastructure over the last five years, with 65.3% undertaking works.
- Of the dairy farmers surveyed. 46.3% had received funding from Commonwealth Government programs such as the On-Farm Irrigation Efficiency Program or State programs.
- Approximately 75% of GMID dairy farmers agreed their property would still be irrigated in the next five years.

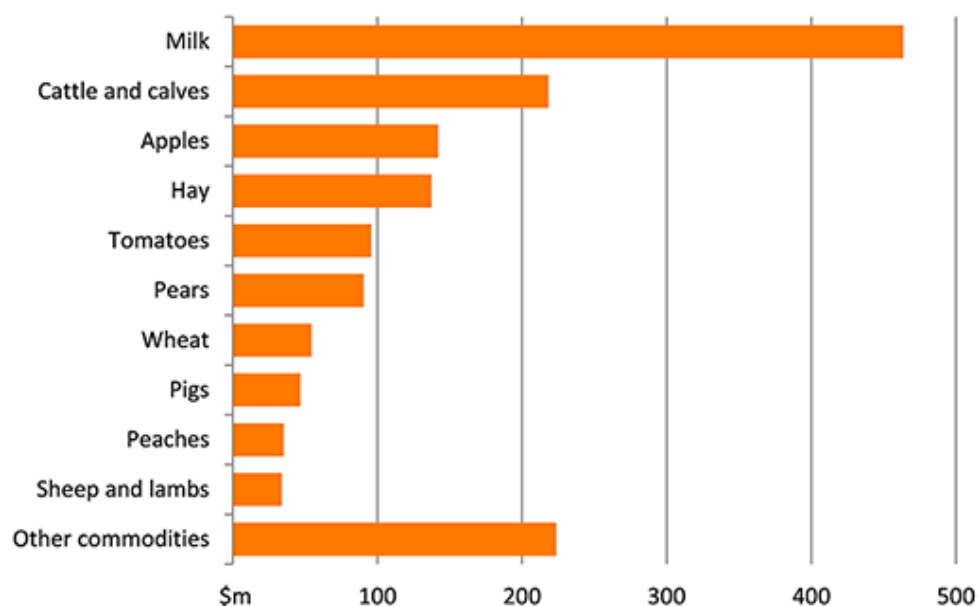
2.5.2 Orchards and fruit growing

Orchards and fruit growing play a key role in Shepparton and Mooroopna. They not only significantly contribute to the economy, but also have an important impact on character of the area. Mooroopna is known as the 'Fruit Salad City' and Shepparton is famous for being the home of SPC, the global canned fruit brand.

The most important commodities in the Shepparton region based on the gross value of agricultural production were milk (\$464 million), followed by cattle and calves (\$218 million) and apples (\$142 million). These commodities together contributed 53 per cent of the total value of agricultural production in the region. In 2016 –17 the Shepparton region accounted for 95 per cent (\$91 million) of the total value of Victoria's pear production. This means that along with dairy, fruit-growing is amongst the most important contributors to Victoria's economy.

Apples, tomatoes, pears and peaches had the highest value for agricultural production in 2016 – 17 as shows in **Figure 4**.

Figure 4 Value of agricultural production Shepparton region, 2016 – 17



2.6 Health and Tertiary Education

The health and tertiary education sectors are key components of the local economy, attracting visitors and providing opportunities for local residents. The *Shepparton Health and Tertiary Education Precincts Action Plan* (February 2020) (Action Plan) provides a framework to attract and align investment to grow Shepparton as a health and tertiary education destination. It aims to support the expansion of important health and tertiary education facilities, leading to increased employment opportunities and improved service provision for the benefit of the wider community.

There are two clusters of health and tertiary education facilities in Shepparton (See **Figure 5**). The first cluster is referred to as the Shepparton CBD Health and Tertiary Education Hub (CBD Hub).

The CBD Hub comprises La Trobe University, the Goulburn Ovens Institute of TAFE (GoTAFE) and Goulburn Valley Health (GV Health) Community Health Services infrastructure. There are also emerging health facilities including Genesis Care Radiation Therapy Centre at the corner of Edward Street and Corio Street.

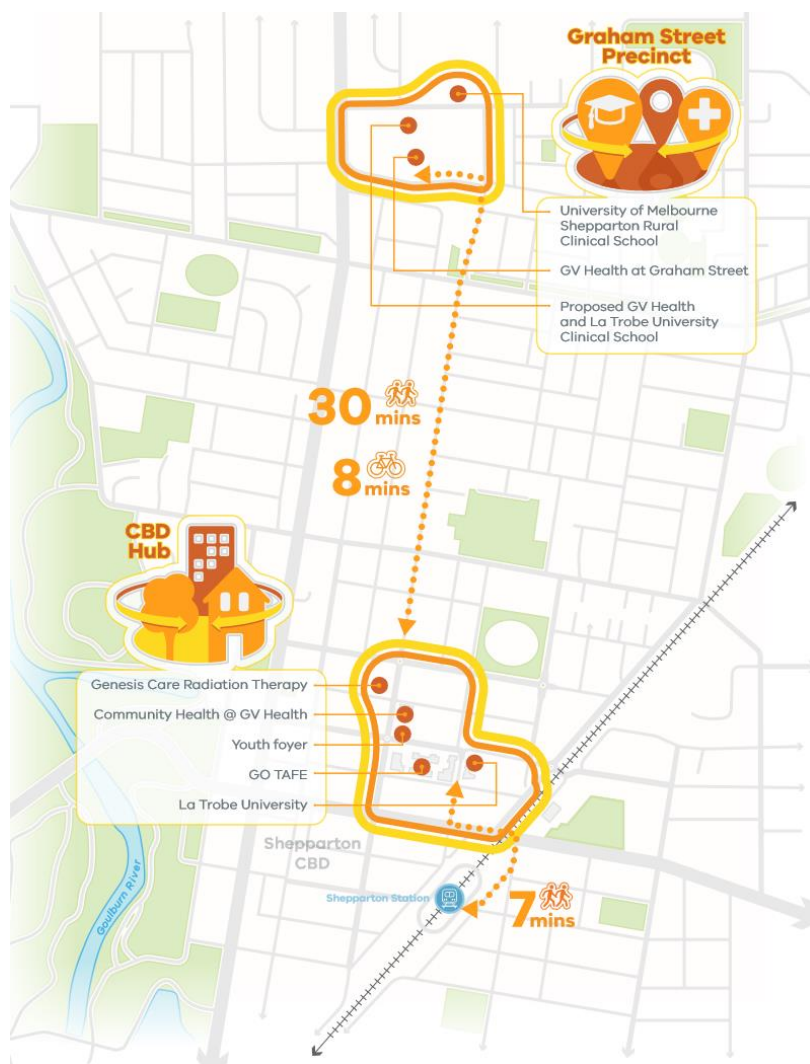
The second cluster is referred to as the Graham Street Health and Tertiary Education Precinct (Graham Street Precinct). GV Health's Graham Street Campus is the major acute referral hospital for the sub region and provides a range of acute, subacute, mental health, aged, primary health and community services across the Goulburn Sub-Region within the Hume Region and southern NSW Riverina. The University of Melbourne Shepparton Rural Clinical School is also located at Graham Street providing facilities and accommodation to support medical students in a rural placement.

There is potential for a second clinical school to be located at Graham Street. The proposed GV Health and La Trobe University Clinical Health School will support the expansion of local clinical training to create career opportunities and pathways for graduates and existing staff within GV Health. There is a willingness from GoTAFE to partner in this.

The CBD Hub and the Graham Street Precinct offer different health and education services and complement each other.

The need for a co-ordinated and collaborative approach to Health and Tertiary Education, as set out in the Action Plan, has become increasingly important due to investment in the CBD Hub with the planned extension of the facilities at GoTAFE, La Trobe University and the expansion of GV Health services at Corio Street. In addition, there has been significant investment in health and the potential for the expansion of health-related tertiary opportunities at the Graham Street Precinct.

Figure 5 health and tertiary education facilities



2.7 Reconciliation Action Plan

The *Greater Shepparton City Council Reconciliation Action Plan (Reflect)* (July, 2019) is an internal organisational plan that outlines Council's commitment to reconciliation and to ensuring Aboriginal and Torres Strait Islander Peoples and cultures are respected, acknowledged and celebrated.

Council worked with Reconciliation Australia over a lengthy period to draft the Plan, which now has Reconciliation Australia endorsement. The Plan was endorsed at the Ordinary Council Meeting held on 18 June 2019. The Plan is a 'Reflect' plan that enabled Council to reflect upon the work it has been doing over many years, and to identify opportunities that better benefit Aboriginal and Torres Strait Islander Peoples and the broader community.

The Plan has a strong focus on truth telling. It contains some information about the distressing and uncomfortable events that happened in the local area, as well as throughout Australia. Council feels acknowledgement of the true history of Australia must occur before true reconciliation can be achieved. The Plan contains actions in the areas of Relationships, Respect, Opportunities and Governance and Tracking Progress.

The Reflect Plan is expected to last for one year in duration, and Council are working to progress to the next level, Innovate. It is hoped the Plans convey a strong message to the community and Council staff that Council is serious about reconciliation and will further its positive work in this area.

The Reconciliation Action Plans will help achieve Council's vision for a future where Aboriginal and Torres Strait Islander Peoples have equitable access, inclusion and opportunities, and where Aboriginal and Torres Strait Islander Peoples' cultures are honoured and respected.

2.8 Multicultural Strategy

The *Greater Shepparton Multicultural Strategy 2019 – 2022* (2019) sets a vision to promote and facilitate good multicultural practice and leadership within and across the municipality. The strategy includes an Action Plan that focuses on the delivery of actions in three priority areas:

- valuing cultural diversity
- accessing opportunity
- enabling contribution and participation.

The strategy seeks to improve the wider community's awareness and understanding of the economic, educational, social and cultural benefits of multiculturalism.

Council adopted the Strategy at the March 2019 Council Meeting.

3 OUTCOME 2 – A CITY OF LIVEABLE NEIGHBOURHOODS

Relevant documents:

Neighbourhood Liveability Assessment of Shepparton: The application of indicators as evidence to plan for a healthy and liveable regional city (RMIT, 2018)

Neighbourhood Walkability Checklist. How walkable is your community? (Heart Foundation, 2011)

Greater Shepparton Townships Framework Plan Review (2018)

Greater Shepparton Cycling Strategy 2013 – 2017 (2013)

RiverConnect Paths Master Plan (2015)

Hume Region Significant Tracks and Trails Strategy 2014 – 2023 (2014)

3.1 Liveability

The Healthy Liveable Cities Group at RMIT developed a Neighbourhood Liveability Assessment of Shepparton and concluded Shepparton provides a high level of liveability in many areas, particularly the central area of town, the indicator results support this including:

- Good access to services of daily activity, services for older people, GPs and supermarkets in the centre of town.
- High levels of local employment across the outer areas of town.
- Two train stations with access to capital cities.
- A walkable centre of town.
- Good access to public open space in many neighbourhoods in Shepparton.
- Good school walkability but only for schools located in the northern end of the town.

The liveability index identified issues that require further exploration to improve the liveability of Shepparton, these include:

- A large proportion of lower income households (lowest 40% of household incomes) experiencing housing stress.
- The need for greater housing diversity in the outer areas of town with current housing diversity largely only available in the centre of town.
- Low levels of Year 12 or VCA completion rates in young adults aged between 18 – 24 years with less than 50% of young adults holding this level of education in a number of neighbourhoods.
- Poor access to supermarkets and associated fresh fruit and vegetables in the outer areas of town.
- An annual EGM gambling expenditure of over \$16 million during the 2016 financial year and over 900 recorded incidents in the Shepparton postcode across a 1 year period.
- Reduced access to public transport and services across the outer neighbourhoods of town particularly in Grahamvale, Shepparton East and Orrvale.
- Reduced public transport and services across the outer neighbourhoods or town, particularly in Grahamvale, Shepparton and Orrvale.

3.1.1 Walkability

The Healthy Liveable Cities Group from RMIT suggests that 800 metres is a good distance for supermarket access. A large amount of Shepparton and Mooroopna’s community is within 800 metres of a supermarket; however the residents living on the outer southern, northern and eastern areas of the city have greater distances to travel. Increased walking distances needed to access supermarkets contributes to car dependency and decreased walkability.

Improved streetscape amenity can enhance the walking environment; the following items are some examples from the Heart Foundation’s checklist for a walkable community:

- Are there trees along the route to provide shade and a pleasant environment?
- Are the street frontages interesting and attractive?
- Is the neighbourhood free from litter and broken glass?
- Do the footpaths all link up with no missing segments?
- Are there drinking fountains in parks or open space?
- Are there places to shelter from rain or hot sun?
- Can you see other people around as you walk?
- Is the wait at pedestrian lights reasonably short?
- Do you feel safely separated from road traffic?

Figure 6 and 7 show opportunities to invest in infrastructure as outlined by the Heart Foundation checklist to encourage residents and visitors to walk as a mode of transport.

Figure 6 Walkable catchment to schools, train stations and local activity centres

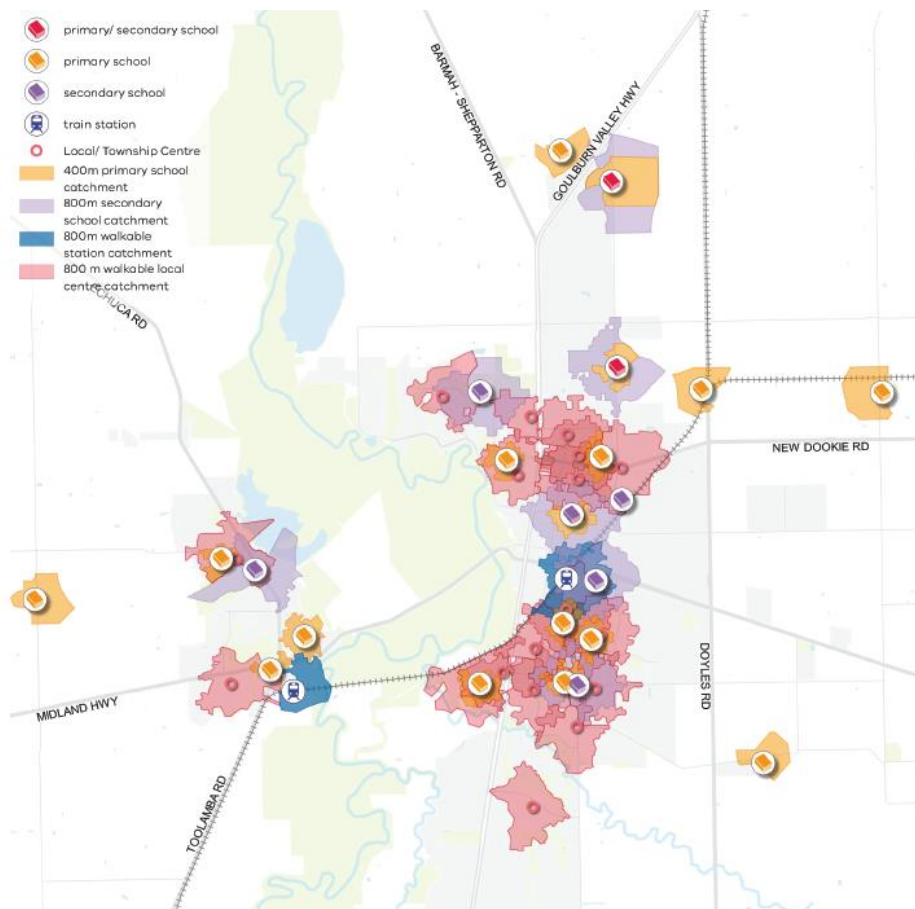
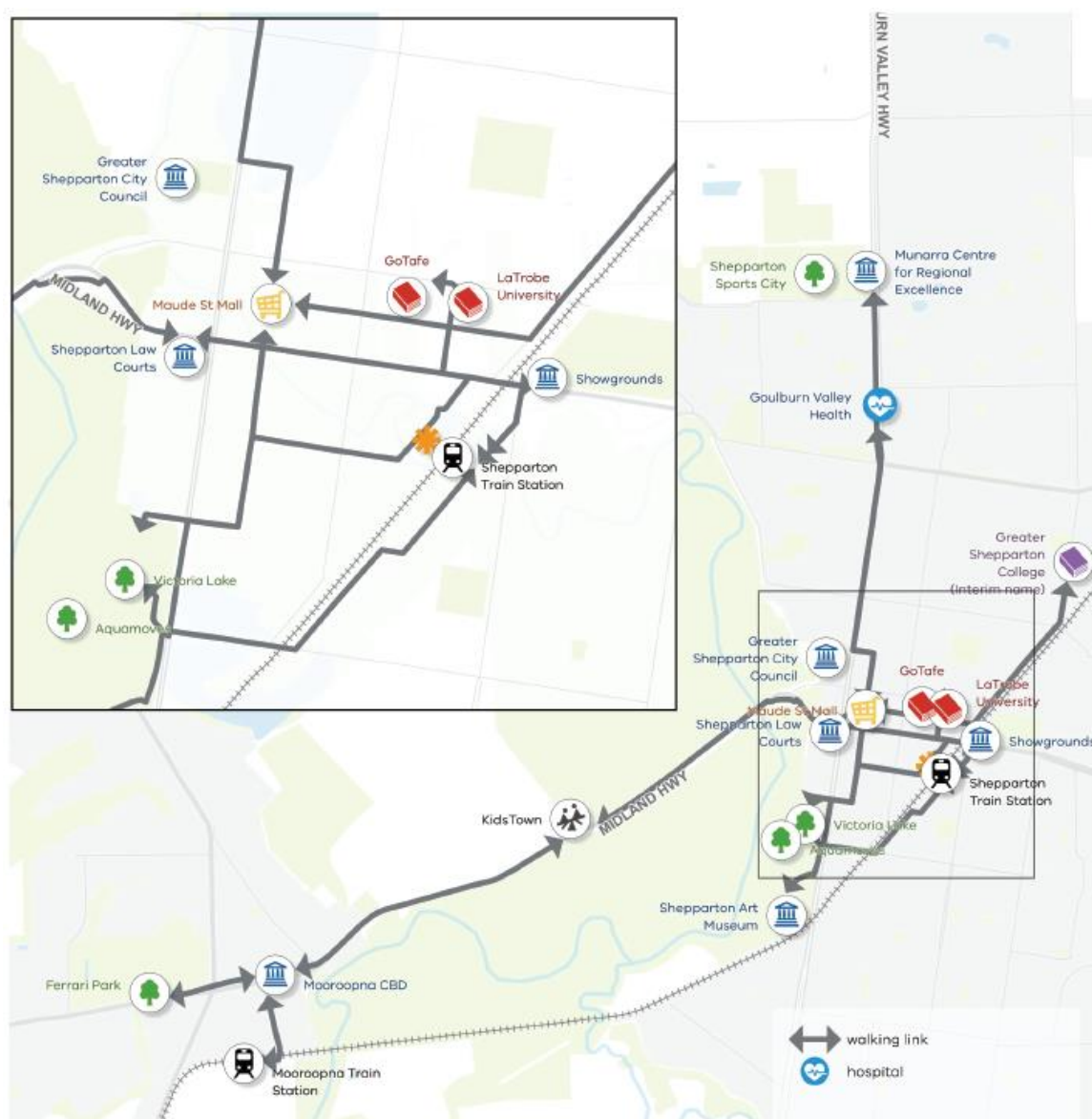


Figure 7 Key pedestrian links to destinations



3.1.2 Cycling

The *Greater Shepparton Cycling Strategy 2013 – 2017* (2013) sets the current vision for cycling infrastructure in Greater Shepparton. This document requires updating to account for infrastructure that has been built and prioritise future investment.

The Growth Plan identifies a number of opportunities to strengthen Shepparton and Mooroopna as a cycling destination. These are discussed in the Growth Plan and include investment in the Shepparton BMX track, the Shepparton Regional Park, Mount Major Mountain Bike Course and the Shepparton to Seymour trail via Nagambie.

3.2 Community Planning Program

Council is committed to developing community plans for small towns, localities and neighbourhoods.

A Community Plan is a written document that identifies a community's strengths and outlines how those strengths can be utilised to build capacity and enable empowerment for the future. A Community Plan captures the priorities a community has identified are important to a strong future.

The Community Plan process involves community representatives engaging their community through consultation, in order to gain their views on future opportunities for their town, locality, or neighbourhood. A Community Plan belongs to the community and Council aims to work to assist the community to implement the relevant areas of the plan by providing advice and information on engaging stakeholders and seeking funding from Council, governments, and other sources.

3.3 Greater Shepparton Townships Framework Plan

The *Greater Shepparton Townships Framework Plan Review* (2019) focuses on the nine townships that the *Greater Shepparton Housing Strategy* (2011) provided framework plans for. The purpose of the review is to complement and build upon the work undertaken through the Housing Strategy in 2011, and to update the framework plans for each of the townships within the municipality.

The outcome of this work will be the revised framework plans for the townships, to be implemented through Amendment C212.

The townships that are included in the Review are:

- Congupna
- Dookie
- Katandra West
- Merrigum
- Murchison
- Tallygaroopna
- Tatura
- Toolamba and Old Toolamba
- Undera.

The Housing Strategy also provided a framework plan for Shepparton East. At the commencement of the Growth Plan project there was a proposal to consider Shepparton East as part of the Growth Plan project boundary. As the project evolved, the focus was directed to the urban areas of Shepparton and Mooroopna and Shepparton East was not included in the Growth Plan project boundary. Shepparton East has not experienced substantial change since the preparation of the Housing Strategy and, as such, its anticipated that no major changes are required to the framework plan in the short term. However, there is a need to confirm this via a review and implement the framework plan into the Planning Scheme.

Any future updates to the Shepparton East framework plan will be picked up by the review of the *Greater Shepparton Townships Framework Plan Review* (2019).

3.4 Electronic Gaming Machines (EGMs)

The prevalence and location of EGMs was identified by the Healthy Liveable Cities Group from RMIT as something to improve on for the liveability of residents. Five major venues with EGMs are located in the centre of Shepparton, one to the south near Kialla, and another venue is located in Mooroopna. All venues are located within, or in very close proximity of a neighbourhood identified as having the highest level of socio-economic disadvantage in Victoria. In total, approximately \$16.4 million was expended on EGMs in Shepparton between July 2016 and June 2017.

A number of councils have prepared gaming policies and implemented these in the local planning section of their respective planning schemes. Generally, the objectives of these policies are similar and include to:

- Minimise the harms that arise from gaming.
- Discourage new gaming machines in vulnerable or disadvantaged area.
- Minimise opportunities for convenience gaming.

- Locate gaming machines where the community has a choice of non-gambling entertainment or recreation activities with the gaming venue and local area.
- Protect the amenity of areas surrounding gaming venues.

Examples of Gaming policies to refer to include City of Ballarat and Cardinia Shire Council.

4 OUTCOME 3 – A CITY OF GROWTH AND RENEWAL

Relevant documents:

- Greater Shepparton Housing Strategy (2011)*
- Greater Shepparton Affordable Housing Strategy 2020 – Houses for People (2020)*
- Mooroopna West Growth Corridor Structure Plan (2009)*
- Mooroopna West Growth Corridor Development Contributions Plan (2009)*
- Shepparton North East Precinct Structure Plan (2019)*
- Shepparton North East Development Contributions Plan (2019)*
- Shepparton East Agricultural Land Use Options Report (2020)*

4.1 Housing Strategies

The *Greater Shepparton Housing Strategy (2011)* has informed the planning of growth areas in Shepparton and Mooroopna. This includes the Shepparton North and South growth corridors; development of these corridors is nearing completion. The Housing Strategy has also informed the development of additional growth corridors: Mooroopna West, Shepparton North East and Shepparton South East.

The Housing Strategy also identified a number of investigation areas as having potential for residential or industrial development. These areas were included in the Planning Scheme by Amendment C93.

The *Greater Shepparton Affordable Housing Strategy: Houses for People (2020)* has emphasised the need for diversity of housing types and sizes in residential growth corridors, to cater for evolving changes in demographics, household configuration and lifestyle preferences.

4.1.1 Residential investigation areas

The Planning Scheme provides guidance for the development of and reflects the status of investigation areas. The investigation areas that are within the scope of the Growth Plan are identified in **Table 1**.

Table 1 Residential Investigation Areas

Investigation area	Overview from Greater Shepparton Planning Scheme	Status
1 – Kialla Paceway & Shepparton Greyhound racing environs	This area surrounds and includes the greyhound and trotting facilities and is directly adjacent to the Shepparton South Growth corridor. There is potential to extend services to this land. However, future residential development within this area will be dependent on amenity issues such as lighting, noise, odour and dust being addressed to ensure that the long term interests of the racing facilities are protected.	Identified for development as part of Amendment C199, gazetted on 15 March 2019. This Amendment supported a mix of low density residential and equine related activities.
2 – Raftery Road, Kialla	The land is adjacent to the Shepparton South Growth Corridor and is situated between the Seven Creeks and Goulburn River corridors. Development is currently restricted by the 8ha	Identified in the Growth Plan for residential development.

	minimum lot size under the Rural Living Zone. Higher density development is dependent on issues relating to servicing, flooding and the environmental assets of the two river corridors being resolved.	
3 – Adams Road area, Kialla	This area is directly adjacent to the Kialla Lakes Estate though is significantly impacted by flooding. The potential to develop this land to a more intensive residential use is dependent on this issues being resolved.	Identified for development as part of Amendment C195, gazetted on 17 August 2017. This Amendment rezoned the land to the Urban Growth Zone. A PSP and DCP will need to be prepared.
4 (also identified as investigation area 10) – East of Grahamvale Road	There are a number of land use interface issues to be addressed in this area. There is a mix of agriculture, residential estates, such as Dobson’s Estate, and the Shepparton East and Lemnos industrial areas. Further investigation is required in this area following finalisation of the Industrial Strategy. Investigations will include issues associated with present industry, potential for expansion of industrial and / or residential uses and developments, future servicing requirements and agricultural impacts.	Identified in the Growth Plan as not being suitable for residential or industrial development and reinforces as forming part of the Goulburn Murray Irrigation District as productive farm land.

4.2 Existing Growth Areas

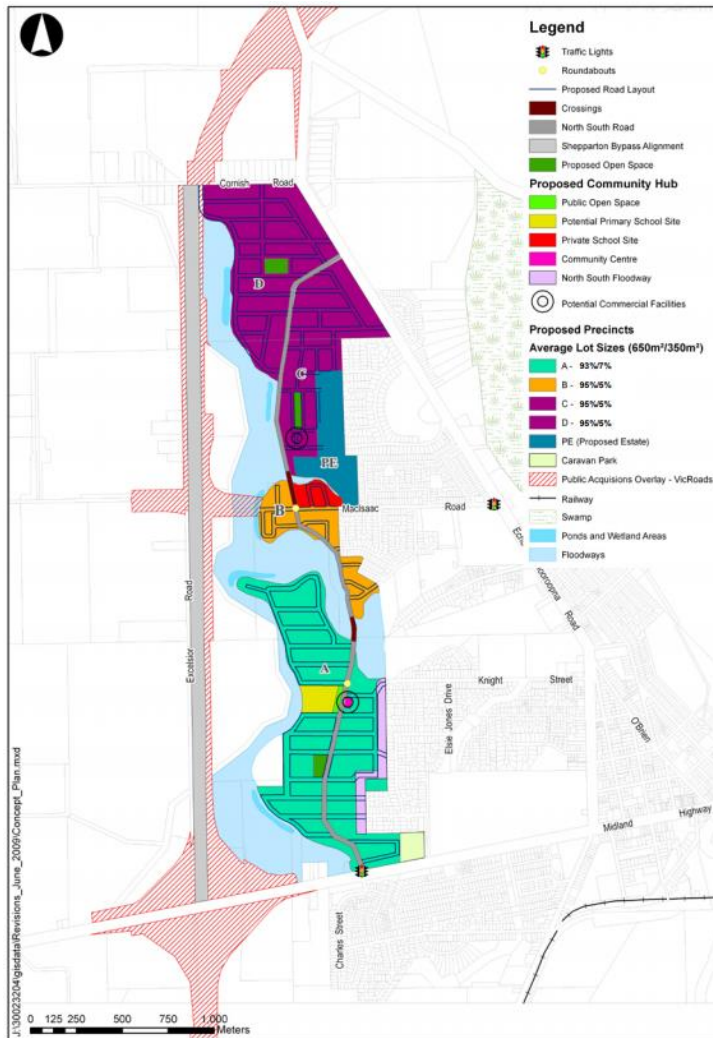
4.2.1 Mooroopna West Growth Corridor

The Mooroopna West Growth Corridor comprises 260 hectares of developable land and is bound by the established urban area of Mooroopna to the east, Cornish Road to the north, the proposed Goulburn Valley Highway Shepparton Bypass reservation along Excelsior Avenue to the west and the Midland Highway to the south. Development of this corridor has commenced and is it predicated to support a residential population of approximately 4,000 based on a total lot yield of 1,600 lots.

Planning for this corridor is guided by the *Mooroopna West Growth Corridor Structure Plan* (2009) and *Mooroopna West Growth Corridor Development Contributions Plan* (2009).

The proposed Structure for Mooroopna West is identified in **Figure 8**.

Figure 8 Mooroopna West Growth Corridor Development Plan



4.2.2 Shepparton North East Growth Corridor

The Victorian Planning Authority (VPA) in partnership with Council has prepared the *Shepparton North East Precinct Structure Plan (NEPSP)* and *Shepparton North East Development Contributions Plan (NEDCP)*. The PSP applies to approximately 177 hectares of land to the north east of the Shepparton CBD and is generally bound by Ford Road to the north, Grahamvale Road (SAR) to the east, a G-MW drainage reserve to the south and Verney Road to the west.

The PSP will deliver approximately 1,500 dwelling and cater for a population of 4,000 people.

The Future Urban Structure for the Precinct can be seen in **Figure 9**.

Figure 9 Shepparton North Future Urban Structure



4.2.3 Shepparton South East Precinct Structure Plan

The VPA and Council are preparing the Shepparton South East Precinct Structure Plan (SEPSP) and South East Development Contributions Plan (SEDCP) which applies to approximately 385 hectares of land to the south east of the Shepparton CBD. The Precinct is bound by the Midland Highway (Benalla Road) to the north, Doyles Road (SAR) to the east, Broken River to the south and existing residential development to the west.

Once fully developed, it is anticipated that the SEPSP will accommodate approximately 2,500 lots and cater for a population of 6,000 people. The SEPSP is being finalised and it is anticipated that it will be placed on public exhibition in early 2020.

4.3 Future Growth Areas

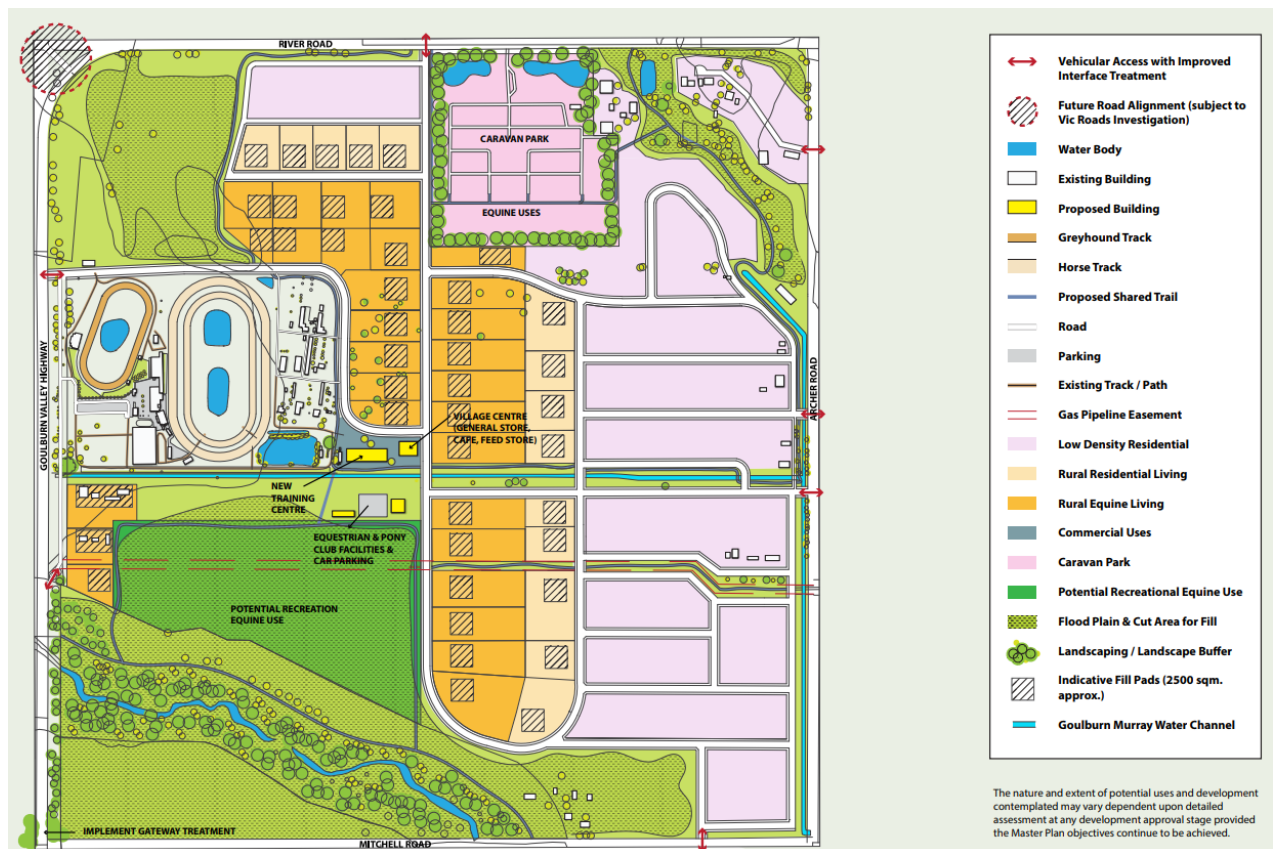
4.3.1 Kialla Raceway Development (previously Investigation Area 1)

A Master Plan was prepared for Investigation Area 1 and adopted by Council on 17 October 2017, Amendment C199 implemented the findings of the Master Plan into the Planning Scheme and was gazetted on 15 March 2018. The Master Plan is the first stage of strategic work which supports a mix of low density residential and equine related activities.

The Master Plan can be seen in **Figure 10**.

This area is now identified as the Kialla Raceway Development for development in the medium term (5 – 10 years). This growth area has the potential to deliver approximately 350 dwellings.

Figure 10 Master Plan for Kialla Raceway development



4.3.2 Kialla West Growth Corridor (previously Investigation Area 2)

Investigation Area 2 applies to an area of land along Raftery Road in Kialla. The land is adjacent to the Shepparton South Growth Corridor and is situated between the Seven Creeks and Goulburn River corridors. This Investigation Area is currently unresolved in the Planning Scheme. The Growth Plan affirms this as an appropriate location for development subject to a more detailed planning process. This Growth Area has the potential to deliver approximately 800 dwellings.

4.3.3 Kialla North Growth Corridor (previously Investigation Area 3)

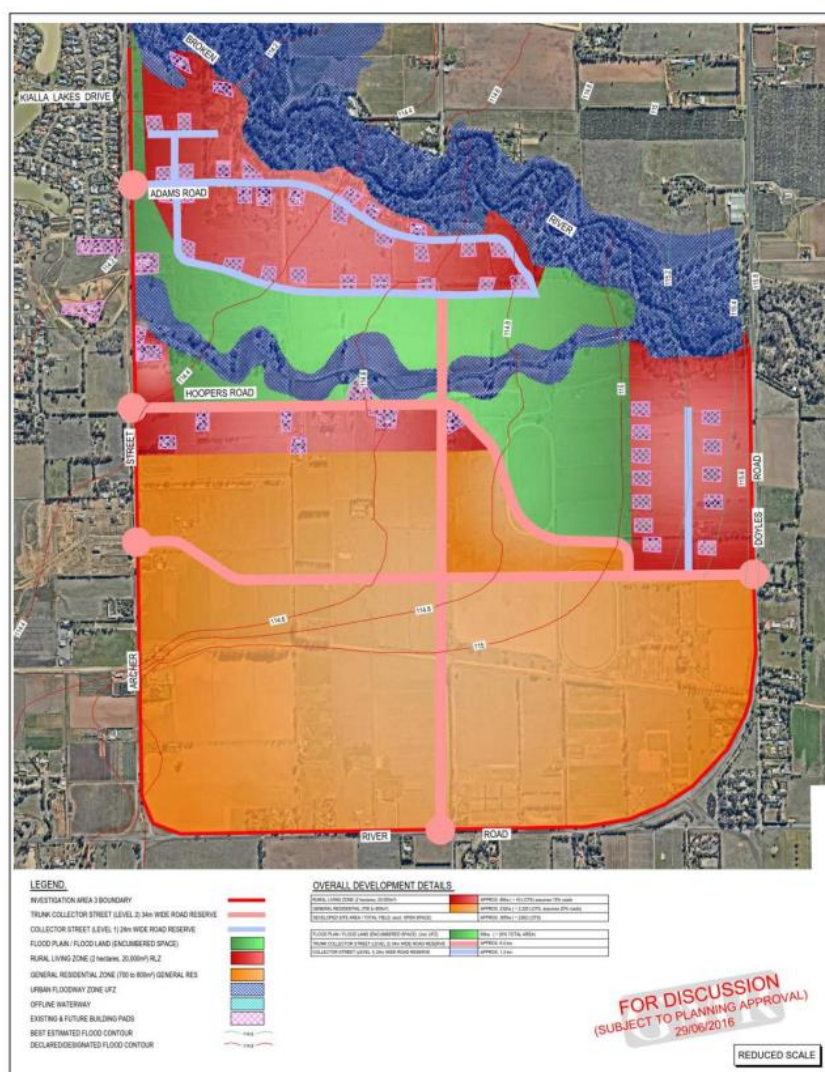
This area is directly adjacent to the Kialla Lakes Estate though it is significantly impacted by flooding. A model of flood behaviour and conceptual master plan were prepared, which informed a planning scheme amendment to identify this land for residential development. Amendment C195 rezoned Investigation Area 3 to the Urban Growth Zone Part A to safeguard the area for future development as a strategic residential growth corridor.

The Growth Plan affirms this as a location suitable for development. A precinct structure plan and development contributions plan will need to be prepared to facilitate the development of the land.

The Precinct is anticipated to deliver approximately 2,000 dwellings and cater for a population of approximately 5,000 people.

The Master Plan for the site is identified in **Figure 11**.

Figure 11 Master Plan for Kialla North Growth Corridor



4.3.4 Long term future growth

The Kialla Central area, Radio Australia Site and Shepparton Airport are identified for long term future growth. It is not expected that these areas will develop for 10+ years.

4.4 Investigation Areas 4/10 – East of Doyles Road

The location of investigation areas 4/10 is located to the east of Doyles Road outside of the current settlement boundary as shown in **Figure 12**. As outlined in the Growth Plan, this area has not been shown for development and is being reinforced as important agricultural land. This is supported by the *Shepparton East Agricultural Land Use Options Report (2020)*, which concluded the following key findings:

- Shepparton East has an ideal combination of natural attributes for high-value agriculture, including excellent soil types, Mediterranean climate and access to a secure supply of high-quality water.

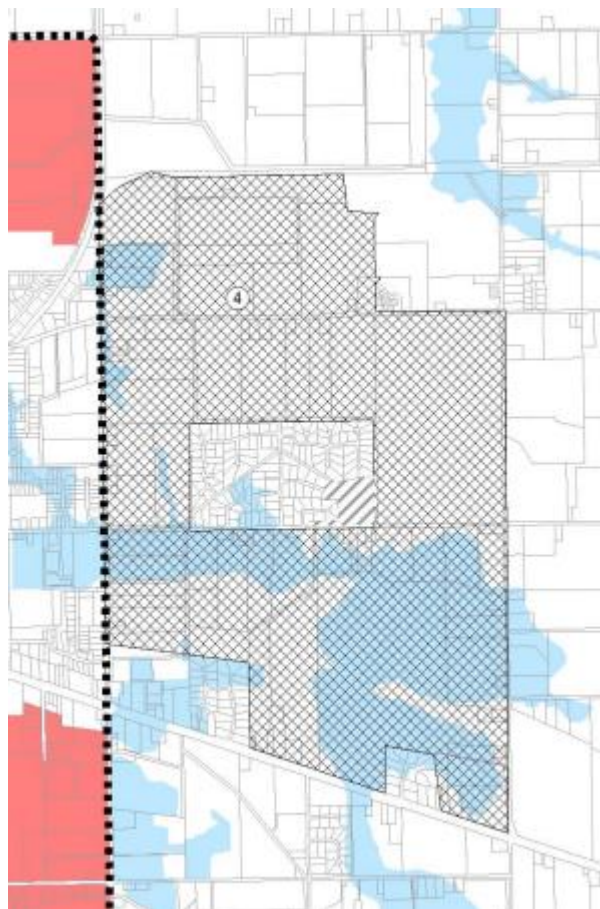
- Farm businesses are establishing new orchards affirming the productive potential of the area.
- The irrigation network servicing Shepparton East has largely been modernised which facilitates farm amalgamation, adaptation to climate change, and adoption of new technology practices.
- There are some residential and industrial land uses adjacent to Shepparton East, while not ideal from a land use conflict risk point of view, the residential estates are contained and well defined.
- Complaints regarding noise from the use of scare gun and gas guns in Shepparton East are received by Council from residential neighbours from time to time. There have been no ongoing disputes.
- EPA guidelines provide clear standards and thresholds for operation of farm machinery, frost fans and scare guns and from the low number of complaints it would appear that farmers are operating within the guidelines. The risk assessment did not identify any high priority risks that reduce the viability of agriculture in Shepparton East.
- Based on the current land ownership and a comparison with industry statistics, farm businesses in Shepparton East are considered to be at the smaller end of the spectrum of farm business sizes.
- An assessment of farm size, land values, land use conflict and planning policy on the viability of farming in Shepparton East found that farm size to be the most significant factor currently impacting farm viability.
- The biggest barrier to increasing farm scale is the uncertainty created by ambiguous planning policy, in particular the identification of Shepparton East as investigation areas for residential and industrial development. If agriculture is to be maintained in Shepparton East, it is critical that businesses are able to increase scale, by increasing the size of the farm, switching to higher value horticultural commodities or more intensive production systems such as protected horticulture.

The preparation of the Study by RMCG included a significant amount of research and analysis. A community workshop was also held which land owners from the Shepparton East were able to attend, a survey was conducted in addition to phone interviews.

A number of physical and land use constraints were also considered to determine that this land is not suitable for urban development:

- according to the *Shepparton East Overland Flow Urban Flood Study (2017)*, a large portion of the site is subject to overland flooding.
- as part of the G-MW Connections Program, there has been considerable investment in irrigation infrastructure to support the current farming practices and reinforce the land as forming part of the GMID.
- according to usage data from G-MW, the majority of land holdings are still accessing irrigation infrastructure and actively farming their land.
- the SAR is adjacent to the site on the western boundary and is a major freight route. This road is identified for potential duplication and is considered a logical eastern growth boundary for the city.
- Land supply areas can be accommodated within the settlement boundary without the need to open up a precinct in the east.

Figure 12 Location of Investigation Areas 4/10



4.5 Infill Development

The *Shepparton CBD Strategy* was finalised in October 2008 and was implemented through Amendment C92. The Amendment zoned the Shepparton CBD to the Activity Centre Zone (ACZ), which defined a number of precincts each with a unique vision. An *Addendum to the Shepparton CBD Strategy* (2016) provided the strategic justification to rezone Benalla Road and the Marketplace to the ACZ through Amendment C192.

The ACZ encourages increased densities and improvements to public realm and connections in the Shepparton CBD. There is still scope for the vision of the *Shepparton CBD Strategy* (2008) and the ACZ to be realised but much of this is left to developers proceeding with development of key sites.

The Growth Plan identifies the need for a stand alone strategic document to be prepared for Mooroopna as there is not currently a strategic document that provides guidance for the established areas of the town.

5 OUTCOME 4 – A CITY WITH INFRASTRUCTURE AND TRANSPORT

Relevant documents:

Greater Shepparton Movement and Place Strategy - Vision and Objectives Paper (2017)

Shepparton CBD Inner East Link Road, Network Traffic Modelling Assessment and Mitigations Report (2020)

Wanganui Road and Ford Road, Shepparton: Feasibility Study Design Report (2018) (Draft Report)

5.1 Road Projects

5.1.1 Goulburn Valley Highway Shepparton Bypass

Construction of the Goulburn Valley Highway Shepparton Bypass is the next logical step in providing a fully duplicated highway from Shepparton to Melbourne..

The full 36km four lane Shepparton Bypass is estimated to cost just over \$1.3 billion in 2016 dollars. In order to make the investment affordable, Council endorsed a five stage Bypass proposal at its Ordinary Council Meeting held in May 2016. The current priority is Stage 1 – Midland Highway to the Goulburn Valley Highway in Shepparton North – a total distance of 10.05kms.

The stages are as follows:

- Stage 1 – 10 kilometres of single lane carriageway in each direction and a Goulburn River bridge crossing between the Midland Highway and Wanganui Road to bypass the centre of Shepparton and Mooroopna.
- Stage 2 – 10 kilometres of single lane carriageway in each direction linking Stage 1 at Wanganui Road with the Goulburn Valley Highway at Congupna.
- Stage 3 – 16 kilometres of single lane carriageway in each direction and a Goulburn River Bridge linking Stage 1 at the Midland Highway with the Goulburn Valley Highway near Toolamba.
- Stages 4 and 5 will duplicate the entire route.

The 2017/18 State Budget allocated \$10.2 million over three years to undertake a business case, preparatory works and land acquisition for Stage 1 of the Shepparton Bypass, and the upgrade of the Ford Road, Goulburn Valley Highway and Wanganui Road intersection. The works on this upgrade are scheduled to commence in mid-2020. The Commonwealth Government has recently committed \$208 million for the construction of Stage 1 of the Shepparton Bypass.

5.1.2 Shepparton Alternative Route (SAR)

The SAR is an important arterial connection running north to south on the eastern side of Shepparton and forms a major connecting route with regional Victoria, New South Wales and southern Queensland.

The SAR links the Goulburn Valley Highway from the Grahamvale Road intersection at Congupna, continuing along Doyles Road and River Road before connecting again with the Goulburn Valley Highway on the southern edge of Shepparton.

Intersections along the SAR are being progressively upgraded to ensure the current and future role and function for the SAR is catered for.

5.1.3 Wanganui Road and Ford Road, Shepparton: Feasibility Study Design Report 2018 (Draft Report)

The purpose of the investigation was to detail how Ford and Wanganui Roads could be upgraded to cater for the potential expected increases in traffic volumes and serve as a key east-west future arterial route connecting Stage 1 of the Shepparton Bypass with the SAR (Grahamvale Road). It was envisaged that a final report would provide the elements needed to effectively advocate for future government funding as part of a future State Government budget process.

A Draft Report was released for public comment in early 2018. Council subsequently undertook further targeted consultation with land owners and occupiers of land adjacent to four community-suggested alternative alignments that submitters felt could also serve as the east-west arterial route. In total, 123 submissions were received by Council for all three consultation phases. In late 2019, it was understood that Council would consider an updated draft report in early 2020.

However, this work was superseded by that undertaken by the Department of Transport over the course of 2019 and early 2020. As a result, Council resolved to transfer all relevant material relating to the upgrade of Ford and Wanganui Roads to the Department of Transport for consideration at the Ordinary Council Meeting held in June 2020.

5.1.4 Major Road Projects Victoria

In mid-2018, the responsibility for planning and designing changes to the arterial road network across Victoria was transferred from Regional Roads Victoria (RRV) to Major Road Projects Victoria (MRPV). MRPV is a dedicated government body charged with planning and delivering major road projects for Victoria.

MRPV merged the business case for all three projects listed above into the Bypassing Shepparton business case. To inform the business case, RRV and MRPV completed further planning studies on the wider Shepparton and Mooroopna road network in 2018 and 2019 to inform all future arterial road upgrades. A critical component of these planning studies was the completion of an updated integrated transport model in mid-2019. This information will inform all future planning and design work for road upgrades across Shepparton and Mooroopna. MRPV also undertook additional design reviews for all three projects to ensure that the routes comply with recently updated standards for arterial roads.

The business case is expected to be submitted to the Department of Transport for consideration in a future State Government budget process.

5.1.5 Shepparton CBD Inner East Link Road (interim name)

The purpose of this study is to prepare a traffic impact assessment, to understand the issues and opportunities involved in establishing the Shepparton CBD Inner East Link Road (interim name), which would effectively realise an eastern bypass of the city centre as envisaged by the *Shepparton CBD Strategy* (2008).

The road is designed to provide a safe and efficient alternative route to Wyndham Street for vehicles, pedestrians and cyclists travelling between the south and north-east of the Shepparton CBD, and assist in catering for the future traffic needs of the City.

In partnership with the Department of Transport and RRV, Council prepared the *Shepparton CBD Inner East Link Road, Network Traffic Modelling Assessment and Mitigations Report* (2020).

The report recommended the upgrading of five key intersections along the route at a cost of \$15.3 million.

5.2 Greater Shepparton Movement and Place Strategy

The *Greater Shepparton Movement and Place Strategy* (MAPS) is being prepared to provide a framework for positive changes to the physical assets and operations of the transport network. MAPS aims to provide a comprehensive understanding of the existing and future transport requirements. The strategy will take a holistic approach to the provision of an improved transport system for various modes including walking, cycling, public transport, driving and freight movements.

The *Greater Shepparton Movement and Place Strategy - Vision and Objectives Paper 2017* provides the long-term vision and objectives of the MAPS based on community and stakeholder feedback and analysis of data and trends related to transport in Shepparton.

The Draft MAPS is expected to be prepared in early 2021 once the wider arterial road investigations being undertaken by Department of Transport, MRPV and RRV are completed over the coming months.

5.3 Public Transport

5.3.1 Rail

The upgrade of the existing passenger rail services between Seymour and Shepparton is imperative to the delivery of better rail connectivity to Melbourne for residents of Greater Shepparton. In 2017, the State Government allocated \$43.5 million (of which \$33 million was for capital works) towards improved passenger rail transport. The works comprise Stage 1 of three stages required to realise the Shepparton Line Upgrade and have recently been completed. In May 2018, the State Government allocated a further \$313 million towards achieving Stage 2 of the Shepparton Line Upgrade. Stage 2 includes signalling crossing loop extension at Murchison East, 59 level crossings between Donnybrook and Shepparton, platform extensions, stabling to house VLocity trains at Shepparton and the preparation of a business case to finalise the scope and costs for Stage 3.

Stage 3 will allow for nine return services using VLocity trains. It is understood that Stage 3 will be realised soon after the completion of Stage 2.

In the long term, it will be essential that Shepparton services are routed through a new heavy rail link via Melbourne Tullamarine Airport. Further work will be required to secure commitment from the State and Commonwealth Governments to ensure sustainable regional transport solutions.

The Department of Transport is preparing the *Shepparton Rail Freight Planning Study*. The study will lead to enhanced freight capacity, ensuring the benefits for both freight and passenger services are maximised. Currently underway, the \$10 million study is jointly funded by the Victorian and Commonwealth governments and includes a \$9 million package of rail freight infrastructure upgrades.

5.3.2 Community Hub

What makes a successful community hub:

- Know the local context you are planning within.
- Use an evidence-based approach.
- Scope and create partnerships early.
- Engage with your community.
- Co-locate your hub with open/outdoor space.
- Provide a mix of programmed and informal space.
- Being mindful of the scale and size of the hub.
- Include consideration of “other” spaces such as storage, wet and dry areas, waiting area, reception area – access points.

There is an opportunity to co-locate a youth component in the community. Youth unemployment and disadvantage is a key issue that needs to be addressed. Council will work with community representatives and NGOs to assist in developing a Youth hub in the Shepparton CBD. The development of the Youth Hub should respond to the needs of Greater Shepparton’s youth, and have regard to the new GOTAFE skills and Jobs Centre to ensure that there is not an overlap in services. Work with the community and organisations such as the Lighthouse Project and Rumbalara to ensure this facility provide the appropriate services to meet young people needs. In developing a business case, the following should be considered:

- Support NGOs undertaking community consultation activities to determine the role and services provided at the Youth Hub.
- Identify appropriate sites, including opportunities for co-location with the Health and Tertiary Education Hub.
- Seek Commonwealth and State Government funding, as well as philanthropic donations to help establish the Youth Hub.

6 OUTCOME 5 – A CITY THAT IS GREENER AND EMBRACES WATER

Relevant documents:

Shepparton East Overland Flow Urban Flood Study (2017)

Shepparton Mooroopna Flood Mapping and Flood Intelligence Project Report March (2019)

Urban Forest Strategy (2017 – 2037) (2017)

6.1 Flood Studies

6.1.1 Shepparton Mooroopna Flood Mapping and Flood Intelligence Project (2019)

The purpose of the *Shepparton Mooroopna Flood Mapping and Flood Intelligence Project Report (March 2019)* is to update the flood intelligence and mapping tools contained within the existing *Shepparton Mooroopna Floodplain Management Study: Floodplain Management Plan October 2002*. The Report was funded by the Commonwealth and State Governments, and Council. It seeks to update the existing information on flood risk within the Shepparton-Mooroopna area. The project involved detailed hydrological and hydraulic modelling of the Goulburn River, Seven Creeks and the Broken River, producing flood mapping and flood intelligence information.

In line with State and regional flood strategies, a priority outcome of the project was to share the updated flood mapping and intelligence information with stakeholders and the wider community.

At the Ordinary Council Meeting held on 18 September 2018, Council resolved to release a draft for public comment commencing on Monday 24 September and concluding on Wednesday 7 November 2018. At the Ordinary Council Meeting held on 19 March 2019, Council resolved to adopt the Report; to prepare and exhibit a planning scheme amendment to include the findings and recommendations of the Report; and to adopt the *Greater Shepparton City Council Municipal Flood Emergency Plan (2018)*.

A planning scheme amendment is required to implement the findings and recommendations of the Report. Further consultation will be undertaken as part of the planning scheme amendment process, in accordance with the *Planning and Environment Act 1987*.

6.1.2 Shepparton East Overland Flow Urban Flood Study (2017)

The *Shepparton East Overland Flow Urban Flood Study (2017)* was commissioned by the GBCMA to investigate overland flooding in the Shepparton East area, including the issues that caused and/or exacerbated flooding as a result of the localised intense storm activity experienced in 1993 and in 2012.

A planning scheme amendment is required to implement the findings and recommendations of the Study. Further consultation will be undertaken as part of the planning scheme amendment process, in accordance with the *Planning and Environment Act 1987*.

6.2 Urban Forest Strategy

The *Urban Forest Strategy (2017 – 2037)* (2017) sets ambitious targets for Council to achieve the following by 2037:

- Increase urban forest canopy cover in each town (includes Shepparton and Mooroopna) to 40%.
- Reduce the number of vacant street tree sites to zero.
- Improve urban forest diversity by age and useful life expectancy.
- Increase the number of biodiversity links through each towns' street and road network.
- Include urban trees in all major Council infrastructure projects at planning, design and implementation phase.
- Ensure best practice urban tree management is being delivered across all Council programs.

The Strategy also audited towns to identify gaps in street tree cover in order to achieve the target to reduce the number of vacant street tree sites to zero and provides guidance on species diversity and street tree species across the municipality.



The Urban Forest Strategy aims to improve Greater Shepparton's overall liveability through equitable best practice tree planting transforming residential streets from the above image to the below.

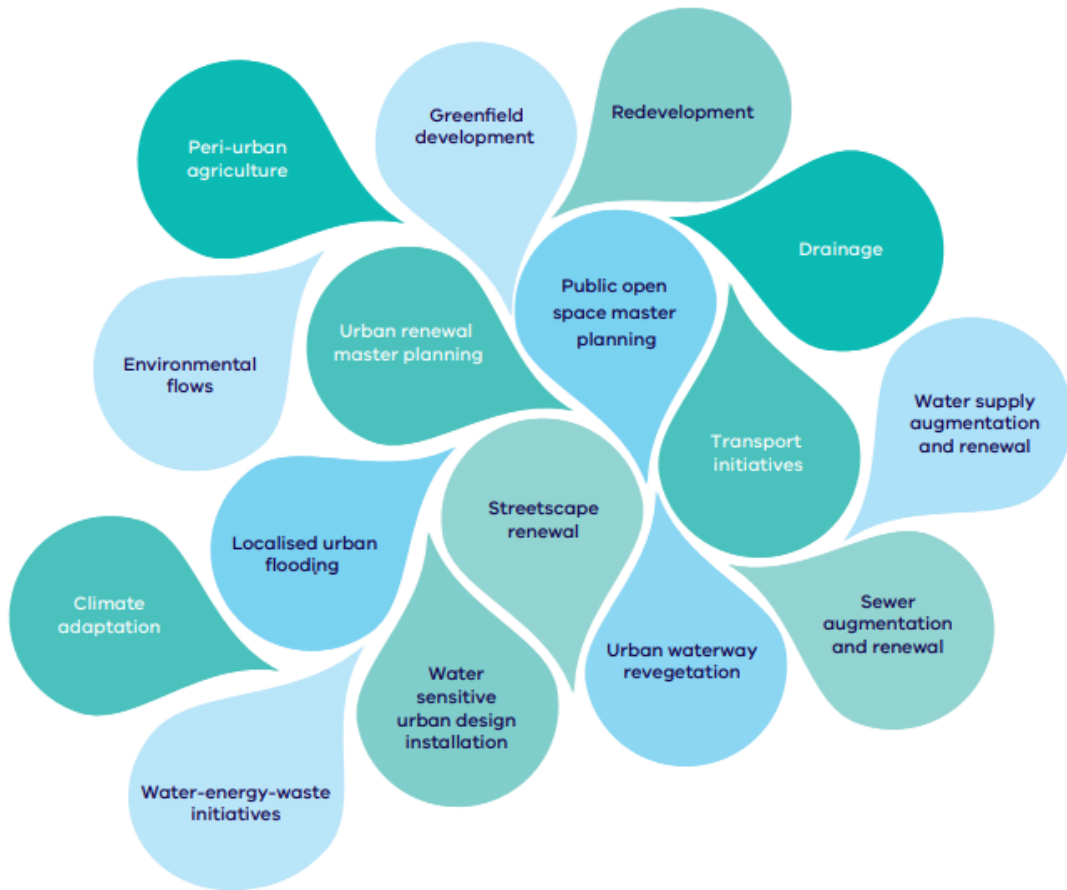


6.3 Integrated Water Management (IWM)

A number of councils have prepared IWM Plans for their municipal areas. An IWM Plan explores options and sets out recommendations for future water management. It has the potential to deliver on liveability and community benefits by developing an approach to whole or urban water cycle management, including stormwater management, wastewater, water supplies and waterways.

The DELWP *Integrated Water Management Framework* (2017) identifies examples of opportunities that can be leveraged by IWM as identified in **Figure 13**.

Figure 13 Opportunities that can be leveraged by IWM



7 OUTCOME 6 – A CITY OF INNOVATION AND RESILIENCE

Relevant documents:

Solar Energy Facilities Design and Development Guidelines (2019)

Renewable Energy Action Plan (2017)

Community Engagement and Benefit Sharing in Renewable Energy Development (2017)

Solar Energy Facilities – Design and Development Guidelines (2019)

Advice on Automated and Zero Emissions Vehicles Infrastructure (2018)

Parliament of Victoria Inquiry into electric vehicles (2018)

Turning Waste into Energy (2017)

Victoria's Climate Change Act (2017)

<https://arena.gov.au/renewable-energy/hydrogen/>

<https://www.energy.vic.gov.au/renewable-energy/victorian-hydrogen-investment-program>

<http://www.invest.vic.gov.au/opportunities/hydrogen-energy-supply-chain>

7.1 Environmentally Sustainable Design (ESD)

Council is partnering with fifteen other councils to deliver the Sustainable Design Assessment in Planning Process project. This project seeks to improve the consideration of ESD principles during the subdivision approval process. This project was successful in receiving funding through the Collaborative Councils' Sustainability Fund Partnership for the second stage. The councils are working collaboratively to:

- Define 'best practice' ESD with respect to greenfield subdivision and determine how it should be measured.
- Establish a framework to enable assessment of ESD in subdivisions.
- Develop a suite of tools and a model for collaborative implementation, with transferability across the State.

The project provides a basis to progressively improve sustainability of subdivisions without creating an unreasonable burden on land developers or homeowners.

7.2 Environmental Upgrade Finance (EUF)

EUF is a council-based financing mechanism enabling business owners to better access finance for environmental upgrades to existing non-residential buildings. Under an EUF agreement, a lender provides finance to a building owner and council collects repayments through the rates system. Greater Shepparton is a participating council, so can administer EUF finance.

7.3 Renewable energy

Victoria's *Climate Change Act 2017* establishes a target for Victoria to have net zero greenhouse gas emissions by 2050. Victoria's Climate Change Framework makes it clear that moving to a clean energy supply by

increasing renewable energy generation is a key pillar of the State's approach to emissions reduction. There are many opportunities for Greater Shepparton to be a regional leader in this area.

7.3.1 Solar

Greater Shepparton has received applications for a number of large-scale solar energy facilities. Solar energy provides a clean source of energy generation and contributes to the reduction of greenhouse gas emissions which will establish Greater Shepparton as a leader in sustainability in Victoria.

Due to Greater Shepparton's strong agricultural sector and availability of land, it is ideal to co-locate solar farms with agricultural production. This helps to stabilise farm incomes, which can fluctuate due to changing commodity prices and climatic patterns.

When well-sited and carefully designed, solar energy facilities have minimal impacts on surrounding communities, the environment and on agricultural activities. However, significant land use change can raise concerns across communities about potential impacts, which is why public engagement will be an important part of the development process.

The DELWP *Solar Energy Facilities – Design and Development Guidelines* (2019) must be considered when contemplating the most appropriate location for solar energy facilities. Consideration should be given to:

- relevant government policy
- appropriate site location – analysis of opportunities and constraints
- regulatory requirements
- best practice design and development features
- and early and effective community engagement.

Further strategic considerations include:

- policy context, zones and overlays
- agricultural values including irrigation infrastructure impacts
- heritage and Aboriginal cultural values
- landscape values and visual amenity
- biodiversity and native vegetation
- access to the Victorian electricity grid
- other infrastructure requirements
- cumulative effect of solar energy facilities in the area.

Protecting Agricultural Land

Strategies to protect agricultural land are set out in all Victorian planning schemes. Clause 14.01 Agriculture: Protection of agricultural land includes the objective to protect the State's agricultural base by preserving productive farmland.

Key measures are outlined, including the need to:

- Protect strategically important agricultural and primary production land from incompatible uses.
- Protect productive farmland that is of strategic significance in the local or regional context.
- Avoid permanent removal of productive agricultural land from the State's agricultural base without consideration of the economic importance of the land for the agricultural production and processing sectors.

The Farming Zone (Clause 35.07) sets out decision guidelines for 'agricultural issues and the impacts from non-agriculture uses'.

Productive farmland that is of 'strategic significance' represents the most productive farming land in the State. This productivity arises from a combination of land attributes and economic factors. Most rural land is not considered to be strategically significant agricultural land.

When making decisions on the appropriate location of solar energy facilities, councils should require permit applicants to provide an assessment of:

- The agricultural quality of the proposed site.
- The amount of strategically significant agricultural land in the council area and in the region (the regional assessment should include impacts across the area defined by the Regional Growth Plan boundaries, unless otherwise determined by the Council).
- The potential impact of removing this land from agricultural production. The proponent should lodge a report on this assessment with the permit application. Strategically significant agricultural land may include other elements – these criteria have been adapted for use specifically in relation to solar energy facility development.

Irrigated Land

Agricultural land, particularly irrigated land, is a valuable resource, and successive governments have invested heavily in improving agricultural production, including by modernising irrigation infrastructure.

Areas serviced by modernised irrigation infrastructure are designated as strategically significant agricultural land. Careful planning is needed to ensure areas of high agricultural significance are not negatively impacted by solar facilities and do not become fragmented or unworkable as a regional resource. Proponents should demonstrate that the solar energy development will have limited impacts on the significant investments, such as the GMID, that have been made by the Victorian and Commonwealth governments to upgrade irrigation infrastructure, supporting agricultural production in the region.

G-MW suggests that there are large tracts of farming land outside the declared GMID where the siting of solar farms:

- Would not impact on the irrigated agriculture which typically has higher economic returns and is vitally important for our regional communities and the regional, State and national economy.
- Would not compromise the public investment in modernised irrigation delivery infrastructure.
- Would not compromise regional development objectives to retain and attract the return of water usage in the GMID.
- Would not impact on the communities in the GMID which are typically more densely settled than dry land areas.

7.3.2 Solar Homes

Created as a portfolio entity within DELWP, Solar Victoria is responsible for the delivery of the Victorian Government's Solar Homes Program.

The program is a key initiative of the Victorian Government's commitment to reduce energy costs, boost energy supply, create new jobs in the renewables sector and tackle climate change. In the first year of program operations, over 33,000 households have taken up the program offering and installed Solar PV and Solar Hot Water systems. This rapid take up highlights the willingness of Victorians to adopt renewable energy technology, take charge of their power bills and to create a better future.

Over 10 years, the Solar Homes Program will enable the installation of solar panels, solar hot water systems or batteries on 770,000 homes across the State, resulting in over one million Victorian homes powered by renewable energy.

The program will help hundreds of thousands of Victorian households to cut their power bills all while promoting and maintaining the highest standards in safety and quality possible using accredited providers and approved products.

The Solar Homes Program will cut Victoria's carbon emissions by almost four million tonnes – the same as taking one million of Victoria's 4.6 million cars off the road – and generate an eighth of Victoria's 50 per cent target for renewable energy by 2030.

7.4 Transport Energy

7.4.1 Electric energy

The Central Victorian Greenhouse Alliance is partnering with a number of regional councils (including Greater Shepparton), the EV Council Australia and DELWP to develop a business case for providing a network of public electric vehicle charging infrastructure across the State.

Investment into renewable transport energies in regional areas:

Investment in technological innovations for the diversification of transport energy sources should be explored. The *Parliament of Victoria Inquiry into electric vehicles* (May, 2018) identified that regional communities rely heavily on fuel. Alternative transport energy sources could provide the fuel security regional communities need. This should include considerations of energy sources such as electric and hydrogen fuel sources for transport energy.

Increase in peak energy demand:

In the absence of any demand management, incentives and other mechanisms for managing charging behaviour, a battery electric vehicle fleet is likely to cause large increases in peak electricity demand due to a high proportion of people charging their vehicle at the end of the day when they arrive home. On top of this, given the forecast emissions profile of Victoria's energy sector, unless the additional electricity demand for battery electric vehicles comes from zero emissions sources, they could actually lead to an overall increase in greenhouse gas emissions in Victoria.

7.4.2 Hydrogen fuel

There are great renewable energy opportunities, including zero emission vehicles, in regional Victoria. Greater Shepparton could be a potential hub for this to lead the way for a more sustainable future.

What is hydrogen?

Hydrogen is the most common chemical in the universe. It can be produced as a gas or liquid, or made part of other materials, and has many uses such as fuel for transport or a way to store electricity. When it is produced using renewable energy or processes, hydrogen becomes a way of storing renewable energy for use at a later time when it is needed. The only by-products of hydrogen fuel in vehicles is pure water and heat without all the toxic emissions from petrol making it, in theory, a zero emissions fuel.

The hydrogen economy cycle consists of three key steps:

- hydrogen production
- hydrogen storage and delivery
- hydrogen consumption – converting the chemical energy of hydrogen into other forms of energy.

Victorian Hydrogen Investment Program

The Victorian Government is ensuring Victoria captures the benefits of a green hydrogen economy through the Victorian Hydrogen Investment Program (VHIP).

VHIP sets out a clear pathway to developing the Victorian hydrogen sector across three activity streams:

- **Market testing:** Through the Request for Industry Submissions process, the Victorian Government will determine the current extent of market interest and opportunity for hydrogen, including status of potential projects. This process will inform future investment programs.

- Industry development: The Victorian Government will conduct extensive stakeholder consultation through a Hydrogen Industry Development Discussion Paper. This will build a solid understanding of the sector's primary drivers, barriers, opportunities for growth and other capabilities. The Discussion Paper will be used to create a Victorian Hydrogen Industry Development Plan.
- Victorian Government investment program: The Victorian Government will provide funding to leverage hydrogen research, trials, pilots and demonstrations, creating a strong base of industry knowledge, skills and seed funding.

7.5 Sustainable Waste Management

7.5.1 Waste to energy

Waste to energy facilities can play an important role in an integrated waste management system. Only a handful of waste to energy facilities currently operate in Victoria and only four per cent of waste is diverted to energy recovery. Most of those use organic feedstocks to generate energy they use on site.

Waste to energy facilities can support Victoria's energy transition by providing a small amount of distributed, reliable, partly renewable energy. Waste to energy generation is considered 'renewable energy' where organic waste (biomass) is used as the feedstock.

Waste to energy facilities can add a small volume of supply, and improve both the reliability and diversity of Victoria's energy mix. For example, mass combustion waste to energy facilities provide reliable, dispatchable electricity. On-site generation and consumption can reduce demand from the electricity and gas grids.

Proposed old Heinz factory waste-to-energy plant

A waste-to-energy facility has been proposed for the old Heinz factory in Girgarre. It is expected to process 23,382 tonnes of dairy waste per year from the nearby dairy industry, and 3475 tonnes of food products, 2421 tonnes of fruit and vegetables and 722 tonnes of supermarket and grocery waste. This waste will generate power for a new dairy factory.

The collection radius includes Bendigo, Shepparton, Echuca and areas in New South Wales.

The site was chosen due to the large amount of fruits and vegetables that are produced in the Goulburn Valley which would provide sources of uncontaminated organic waste streams.

7.5.2 Composting facilities

Shepparton is already home to a commercial scale composting facility. It is run by Western Composting Technology who constructed the facility as their flagship plant in October 2008. The Shepparton facility collects and recycles green waste, garden waste and commercial food waste into usable compost products. Products are sold to wholesalers who blend with their own soil conditioners and additives to help grow fresh produce and for use in landscaping. Each year, the Shepparton plant processes 20,000 tonnes of food and organic waste from approximately 49,000 households, and 2,000 tonnes of solid commercial food waste.

There is potential for the addition of more composting facilities in the Shepparton region. This will reduce landfill waste whilst also providing employment opportunity for the area.



Shepparton & Mooroopna 2050: Regional City Growth Plan
Background Report

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