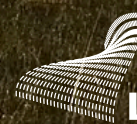


DRAFT

Latrobe*City*

Background Reports

Toongabbie Structure Plan



Latrobe*City*
a new energy

<i>Name</i>	<i>No.</i>	<i>PM Approved</i>	<i>PD Approved</i>	<i>Date</i>
Combined draft background reports	1	TM	LD	22.06.2020

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ACKNOWLEDGEMENTS

The Study Team recognises that the State of Victoria has an ancient and proud Aboriginal history and complex ownership and land stewardship systems stretching back many thousands of years. We would like to acknowledge the Traditional Owners of this land, and offer our respect to the past and present Elders, and through them to all Aboriginal and Torres Strait Islander People.

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1

Background



1.1 Project Background

Structure plans for a number of small townships in Latrobe City were initially prepared for Latrobe City Council between 2002 and 2004 by Enviro Plan and Michael Smith and Associates. Towns included in this study were Glengarry, Tyers, Toongabbie, Yallourn North, Traralgon South, Boolarra and Yinnar. In 2003, Council resolved to 'prepare and exhibit Amendment C24 to the Latrobe Planning Scheme to implement the findings and recommendations of the Small Town Structure Plans for Toongabbie, Yallourn North, and Yinnar.' However, a number of community groups and residents voiced their concerns about the plans and ultimately Council never progressed with Amendment C24.

A review of these documents in 2006 found these plans to be inappropriate for inclusion into the Latrobe Planning Scheme as they were largely a visionary document. As such, small town structure plans were undertaken for Boolarra, Glengarry and Tyers in 2010 and implemented into the Latrobe Planning Scheme in Amendment C24. However, Yinnar, Traralgon South, Yallourn North and Toongabbie are yet to have structure plans completed.

This has provided uncertainty around the growth of the townships, meaning that development has happened in a haphazard manner without consideration for the elements of the town that the community values, along with appropriate planning responses to bushfire risk mitigation.

The Toongabbie Structure Plan project has been undertaken due to a number of submissions that were received from Toongabbie residents during the Exhibition period for Amendment C105 between 22 March 2018 and 11 May 2018.

Toongabbie, like the six other small towns in the municipality, has been identified on the settlement hierarchy as an area where growth is

supported as a small town.

This growth is likely to be slow, incremental growth which is consistent with the way that Toongabbie has developed over the past 20 years. However, that growth that has occurred, and that is likely to continue to occur without any intervention, does not take the landscape and the risk from bushfire into account. As such, a structure plan is an important element of managing that growth, to ensure that it prioritises human life as specified in Clause 13.02-1S by ensuring:

- Population growth and development is directed to low risk locations and ensures the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire; and
- The vulnerability of communities to bushfire through the consideration of bushfire risk in decision making at all stages of the planning process is reduced.

Parts of the Toongabbie study area were proposed to be rezoned to Rural Living Zone in Amendment C7 in 2002, and again in Amendment C105 in 2018. However, due to a lack of demand in 2002 and further work required around the bushfire risk in 2018, this rezoning has not proceeded. A commitment was made by Latrobe City Council to undertake further work around the municipal wide bushfire risk and associated rural rezonings. That commitment included reviewing the areas identified for rural living in the *Live Work Latrobe Rural Land Use Strategy 2019*. Those rural living areas have been incorporated as investigation areas in the Toongabbie Structure Plan study area, along with five other areas that abut or are adjacent to those identified areas in order to determine the safest location for rural living precincts.

1.2 Purpose

This report comprises of five background reports that will inform the strategic directions, objectives and strategies for the Toongabbie Structure Plan. These include:

- Consultation Report;
- Context Report;
- Infrastructure and Servicing Assessment;
- Flora and Fauna Assessment; and
- Bushfire Risk Assessment.

The consultation report outlines the vision and strategic directions as envisioned by the community. The four following technical assessments inform the opportunities and constraints with Toongabbie. Together, they inform the objectives and strategies within the Toongabbie Structure Plan report to achieve the stated vision and key directions.

1.3 Context

Latrobe City is centrally located in eastern Victoria, approximately a two hour drive east of Melbourne. It sits within the heart of Gippsland within easy access to the Gippsland coastline, Mount Baw Baw snowfields and the Gippsland Lakes.

It is the fourth largest regional city municipality in Victoria. The municipality has a population of over 74,000. Latrobe City sits within the boundaries of the Braiakaulung Clan of the Gunaikurnai people of Gippsland. The indigenous community accounts for 1.3% of the City's population.

The municipality includes four main towns of Moe-Newborough, Morwell, Traralgon and Churchill and seven smaller townships of Yallourn North, Tyers, Glengarry, Toongabbie, Yinnar, Traralgon South and Boolarra.

The Latrobe Valley generates 85 percent of Victoria's electricity and contains vast deposits of brown coal. The natural environment contains nationally significant rainforest in the Strzelecki Ranges, endangered remnant grasslands of the Gippsland Plains, and includes parts of seven water supply catchments.

1.4 Locality

Toongabbie is a small town located in the Latrobe City municipality and is the northernmost settlement; the town is approximately 177 kilometres from Melbourne and approximately 17 kilometres north of Traralgon (see Figure BG1). It sits within close proximity to the Wellington Shire Council border.

Toongabbie township originated in 1862 after the discovery of gold at Stringer's Creek in Walhalla by Ned Stringer.

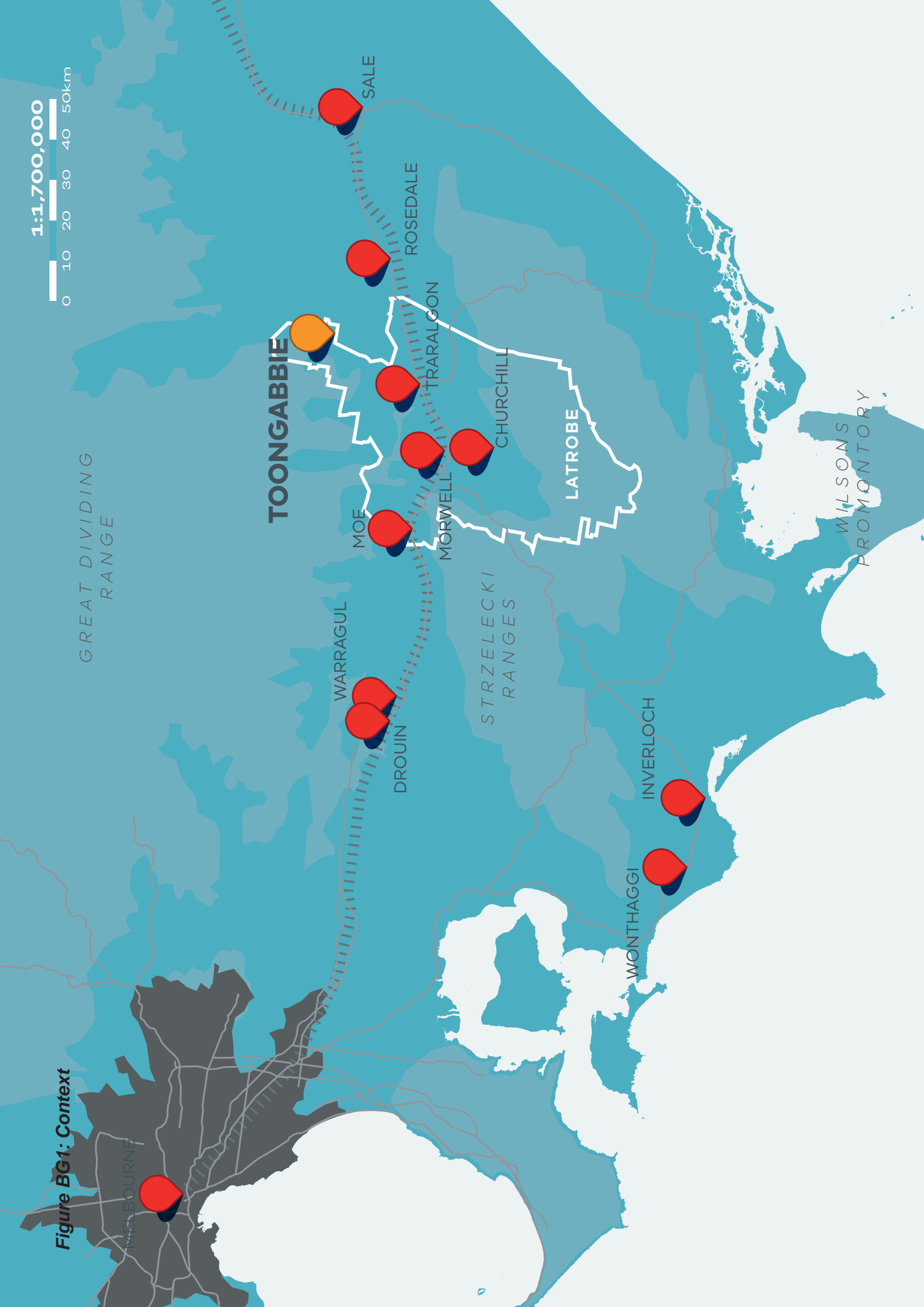
Toongabbie became a major supply depot between Sale and Walhalla. It once formed part of the stock route between Sale to Walhalla, and Walhalla to Port Albert. Miners, who rushed to the isolated gold field deep in the Great Dividing Ranges, came via Port Albert and Sale, across the red gum plains. Toongabbie was the last supply post before people attempted the difficult mountainous route to Walhalla.

Toongabbie's fortunes were inherently linked to Walhalla's. It grew when Walhalla grew and declined when Walhalla declined. It further declined when the train line was built between Moe and Walhalla.

Now, it offers a valuable lifestyle choice within the municipality within close proximity to the Alpine Ranges and the Cowwarr Weir, while still being in a short driving distance to shops and services in Traralgon.

The township was laid out and surveyed by George Hastings in 1864. A further survey was made the next year by Henry Davidson.





1.5 Rural Living Context

Proposed rural living precincts was one of the catalysts for the development of the Toongabbie Structure Plan and as such it is important to consider the context around rural living precincts.

Latrobe City Council offers a diverse range of lifestyles with rural living offering a popular and attractive lifestyle choice.

However the provision of rural living land within the municipality is highly constrained. A number of provisions in the Latrobe Planning Scheme have identified locations where future rural living cannot be located, these include:

- Coal provisions (identified as Special Use Zone - Schedule 1, State Resource Overlay and Environmental Significance Overlay - Schedule 1); and
- Australian Paper odour buffer (identified as Environmental Significance Overlay - Schedule 3).

It is also assumed that future rural living precincts will be located outside of the extent of the Bushfire Management Overlay in order to meet Clause 13.02-15 of the Latrobe Planning Scheme. Furthermore, Clause 21.02-20 states:

Support rural living in lower bushfire risk locations or where bushfire risk can be reduced to an acceptable level.

The Latrobe Planning has also identified future residential growth areas through the town structure plans and the Traralgon-Morwell Growth Framework. Clause 21.02-20 states to:

Discourage further rural living or low density residential development on the fringes of the major towns where land is designated as a long-term urban growth corridor.

Further considerations for future rural living precincts include *Live Work Latrobe Rural Land*

Use Strategy 2019 which identified productive agricultural land with the intent that these areas will be protected from further fragmentation. In addition, Clause 21.02-20 states:

Encourage rural living where there will be minimal or no negative environmental impact or conflict with commercial agriculture.

These considerations are shown in Figure BG2. The map does not consider environmental impacts or topography when looking at proposed rural living precincts. It is only an indication of areas that are outside of the previous stated considerations and constraints.

Areas that sit outside of the identified constraints and considerations are shown in Figure BG3.

It is noted that Amendment C105 has previously reviewed the land around Yinnar South and found that the topography, landslip risk, native vegetation and bushfire risk meant that further rural living in the area was not supported.

It is clear from Figure 3 that the largest areas for future rural living include Moe South, Churchill/Hazelwood North, Boolarra and Toongabbie. Moe South, Churchill/Hazelwood North and Toongabbie were the areas identified in Amendment C105 for future rural living.

Bushfire risk assessments were carried out by Bushfireplanning.com.au for each of these precincts with Moe South having too high a risk for future rural living which leaves Churchill and Toongabbie.

A desktop review of Boolarra suggests that the topography and access and egress would indicate that rural living is not appropriate. However, an in depth analysis has not been carried out.

Figure BG2: Constraints to new rural living areas

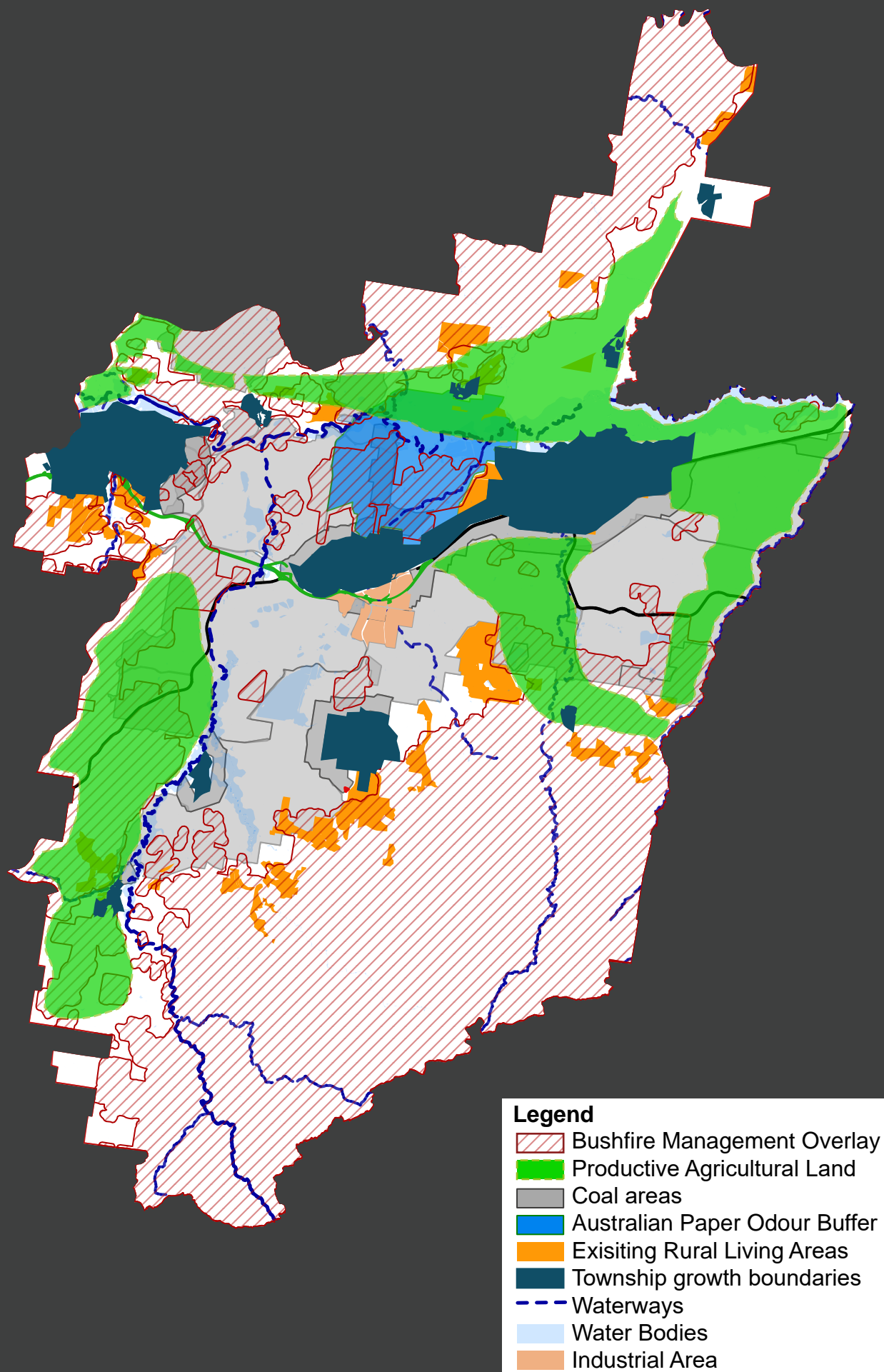
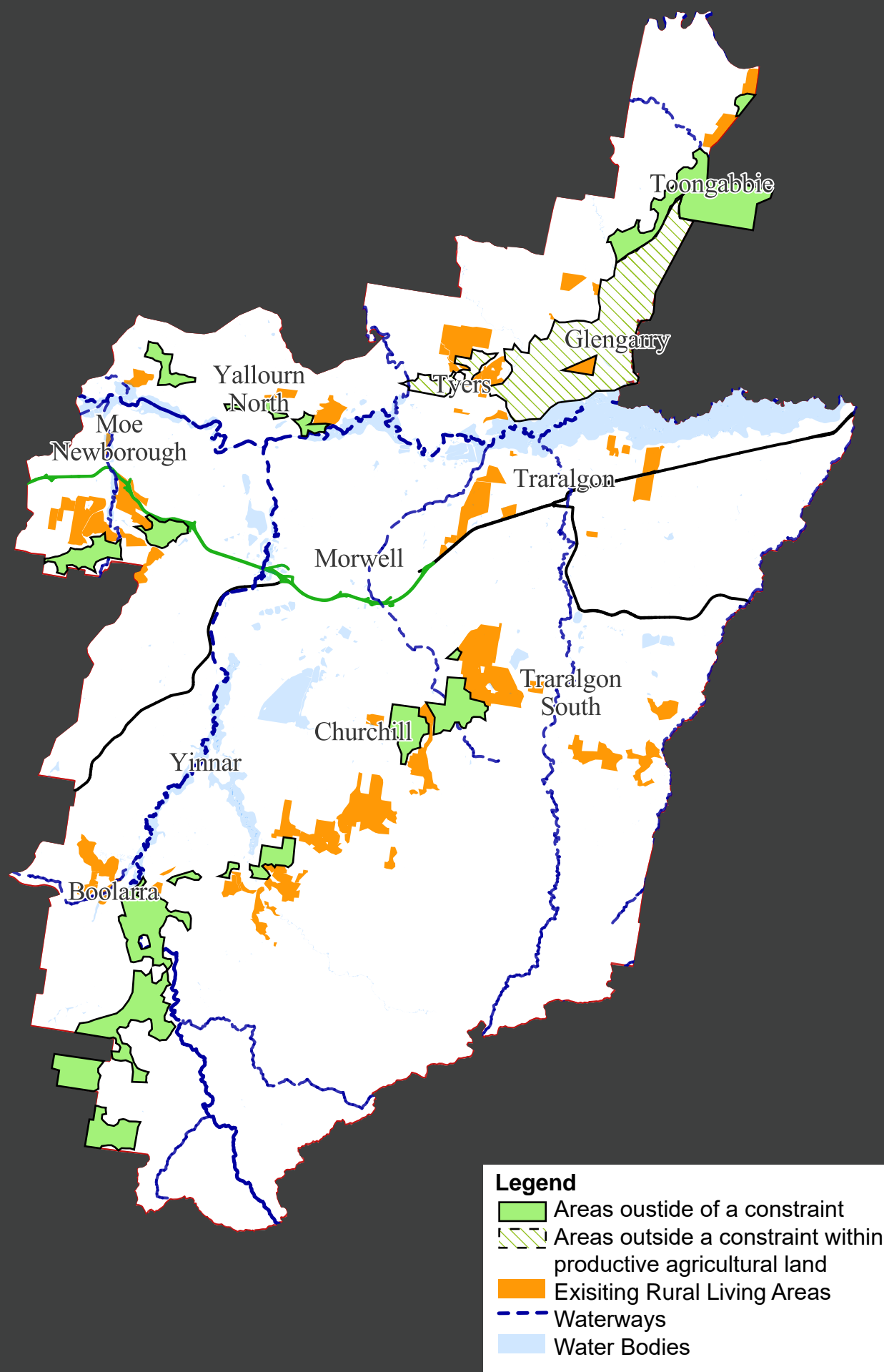


Figure BG3: Potential areas for new rural living precincts



1.6 Study Area

The study area is bordered by Harris Lane to the west, Guyatts Road to the south, Antons Lane and Traralgon-Maffra Road to the east, and Afflecks and Old Walhalla Road to the north.

Major roads include Traralgon- Maffra Road, running south-east to west through the centre of town, Toongabbie-Cowwarr Road (Victoria Street) running north-south and Stringer Road as other main thoroughfares.

The study area was determined by first including the three potential rural living precincts that were identified through the *Live Work Latrobe Rural Land Use Strategy 2019*. As the further work pertaining to the bushfire risk was the primary concern for these rezoning being deferred from Amendment C105, potential lower risk areas were identified to the south and south-east of the bushfire risk. Other areas including possible low density residential areas were identified through submissions that were made to previous projects such as Amendment C105.



Photo: Toongabbie tennis courts.
Source: McKenzie, T., 2020.



Figure BG4: Study area



Toongabbie

0 200 400 600 800 m

1.7 Study Precincts

To determine the best areas for growth within Toongabbie, nine different study precincts have been looked at as potential growth areas in preparation for the Toongabbie Structure Plan. The precincts and possible zones are listed below and shown in Figure BG5:

- Precinct A: North Rural Living Zone - Schedule 1
- Precinct B: East Low Density Residential Zone (LDRZ)
- Precinct C: East Rural Living Zone - Schedule 1
- Precinct D :East Rural Living Zone - Schedule 2 (RLZ2)
- Precinct E: South East Rural Living Zone - Schedule 2
- Precinct F: South East Rural Living Zone - Schedule 1
- Precinct G: South Rural Living Zone - Schedule 1
- Precinct H: West Rural Living Zone - Schedule 1 (RLZ1)
- Precinct J: South Low Density Residential Zone

A tenth area includes infill within the township boundary. Descriptions for each precinct are provided for each study precinct including the approximate number of lots and the number of additional houses that could be built based on the lot sizes per study area and the loss of approximately 20 percent of the land for roads and infrastructure. This does not take into account constraints such as flooding, native vegetation or cultural sensitivity. The lot yield has been determined based off of current zones schedules and have been used as a tool to guide discussion in relation to possible infrastructure and servicing provisions. The study precinct map is not an indication of what areas will be rezoned, the number of lots and potential house and lot yield take into account the existing dwellings and assume that they will stay and require their own

separate lot.

The following lot sizes potentially apply to the study precincts:

- RLZ1 - 2 Hectares
- RLZ2 - 4 Hectares
- LDRZ - 4000 square metres where there is no current sewer infrastructure, 2000 square metres where there is current sewer infrastructure.

These lot sizes are consistent with the proposed rezonings in Amendment C105, as such they have been used as the initial proposed zone. It is important to note that although the study precincts indicate the starting proposed zone, further investigation into the proposed zones, current land use, land supply and a range of other considerations may impact on the extent of the proposed zoning in each precinct and it may result in a change of the proposed zone.

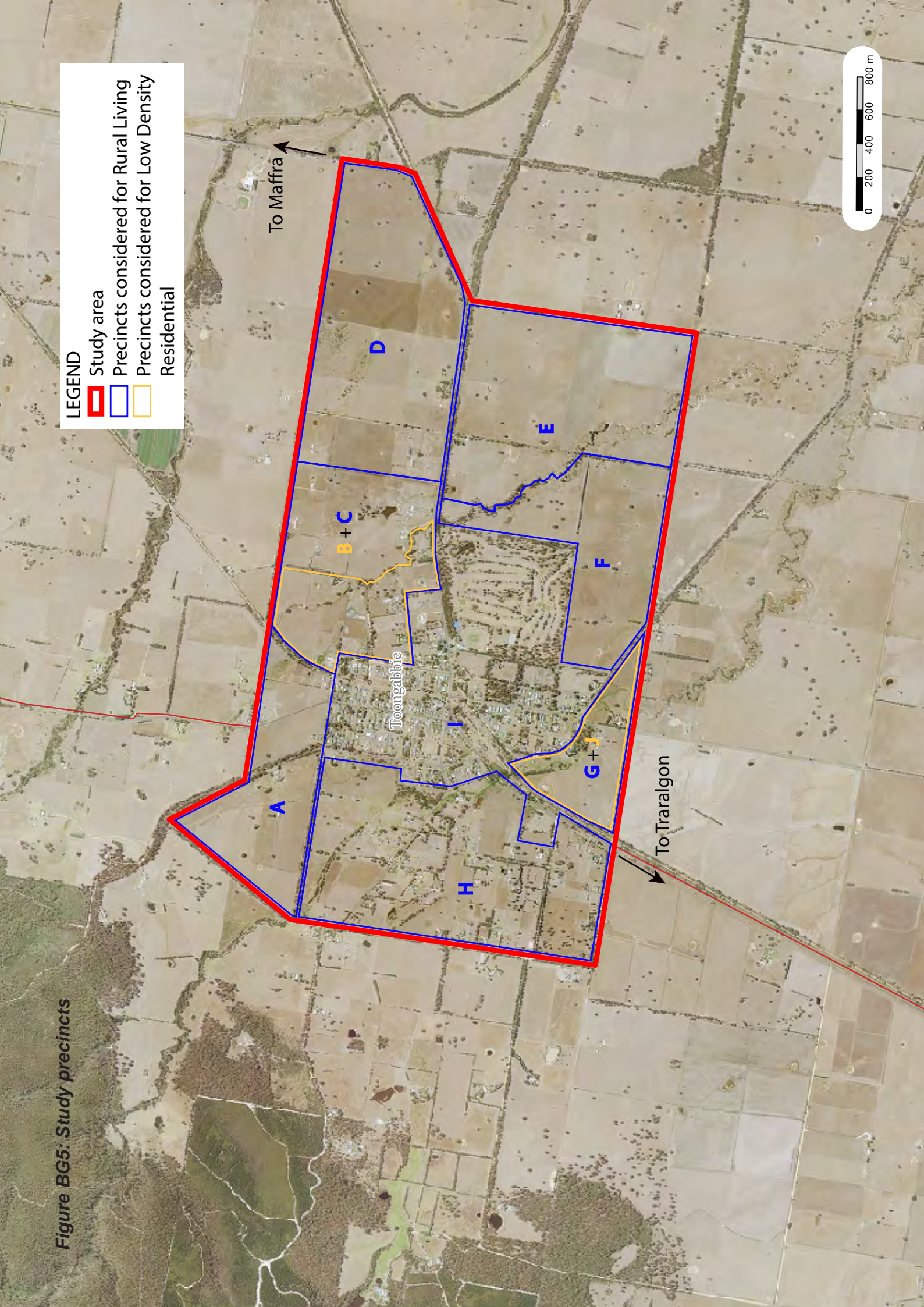
The number of dwellings may differ from the number of lots as it takes into account currently vacant lots.

The potential number of additional people for each precinct is derived from multiplying the potential additional dwellings by 2.7 persons and rounding to the nearest number. 2.7 persons is the average number of persons per dwelling in Toongabbie.

Table BG1: Study precincts

<i>Precinct</i>	<i>Description</i>	<i>No. of additional lots</i>	<i>No. of additional dwellings</i>	<i>No. of additional people</i>
A	Lots to the north of Toongabbie between the Gippsland Plains Rail Trail, Afflecks Road, Hill Street and the lot at 35 Old Walhalla Road.	22	22	59
B	All lots generally bounded by the Gippsland Plains Rail Trail, Afflecks Road, Packett Road, the creek, Main Street, Campbell Street, and Sparks Lane.	84	84	218
C	Lots to the east of Sparks Lane not including a residential zoned lot up to the 5 lots east of Packett Road.	22	23	60
D	Lots to the east of Toongabbie, including two lots to the west of Nippe Lane and all lots east of Nippe Lane between Traralgon-Maffra Road and Afflecks Road.	27	27	70
E	Lots South of Traralgon –Maffra Road east of Nippe Lane and Anton Lane Including the title west of Nippe Lane until the creek.	26	26	68
F	Lots South of the Toongabbie golf course, between Heywood Street, Hendersons Road, Guyatts Road and Nippe Lane.	33	34	88
G	Lots south of Toongabbie between the Gippsland Plains Rail Trail, Henderson Road and Guyatts Road.	10	10	27
H	All lots to the west of Toongabbie, bound by Hill Street, Harris Lane, Guyatts Road, Main Street and King Street excluding residential lots.	11	26	68
J	Lots south of Toongabbie between the Gippsland Plains Rail Trail, Henderson Road and Guyatts Road.	63	63	164

Figure BG5: Study precincts



LatrobeCity

LatrobeCity
**Consultation
Report**

Toongabbie Structure Plan
Background Report



<i>Name</i>	<i>No.</i>	<i>PM Approved</i>	<i>PD Approved</i>	<i>Date</i>
draft Consultation Report	1	TM	LD	31.01.2020
draft Consultation Report	2	TM	LD	30.04.2020

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ACKNOWLEDGEMENTS

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Executive Summary

Latrobe City Council has prepared a consultation report for the Toongabbie township area to inform the preparation of the Toongabbie Structure Plan.

The report provides an overview of the priorities by the community, which will inform the key directions and vision for the town.

The study aims to:

- Identify the respondents' priorities for Toongabbie; and
- Identify the vision and key directions.

This report will inform policy direction on the look and feel of Toongabbie and where policy can protect, promote or strengthen identified areas within Toongabbie based on stakeholder feedback as a part of the Toongabbie Structure Plan process. It will discuss the results of the surveys and the community workshops.

As a result of the consultation undertaken with the stakeholders, the key strategic directions include:

- Maintain the historic, cultural, and environmental values of Toongabbie;
- Retain the quiet, rural atmosphere;
- Promote the tourism assets;
- Improve infrastructure within the town;
- Retain the larger block sizes within the town;
- Support rural residential allotments on the outskirts of town;
- Support the community groups and associated infrastructure; and
- Protect productive agricultural land from further subdivision.



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Introduction

1.1 Purpose

The purpose of this report is to inform the development of the Toongabbie Structure Plan, by identifying the community values, ideas and aspirations which will form the key directions for the Toongabbie Structure Plan.

1.2 Engagement Approach

A Stakeholder Engagement Strategy (SES) was prepared for this project to guide the design and delivery of activities within the Latrobe community and other relevant stakeholders. The SES provided a proactive, transparent program using a series of engagement tools.

For the purpose of this report 'stakeholders' refers to community members as consultation with service agencies was undertaken in the draft *Toongabbie Structure Plan Background Report - Infrastructure and Servicing Assessment 2020*.

The tools included in the SES were selected to:

- Provide people with choice and flexibility in how they participate and contribute to the Toongabbie Structure Plan conversation; and
- Provide people with multiple opportunities to participate, while using a range of mediums.

Consultation with stakeholders was undertaken in two stages:

- A survey with 26 questions relating to Toongabbie was open between 25 March 2019 and 5 April 2019; and
- Community workshops were held on 12 September and 8 October 2019.

The surveys asked a number of questions in relation to preferred character, land uses, infrastructure, flood and bushfire mitigation and biodiversity.

The responses from the surveys were collated and ranked. There were multiple choice questions, short and long answer questions and rating questions where stakeholders were asked to rank, for example, walkability on a scale of 1 to 10. 1 being difficult and 10 being easy.

For open ended questions, the following methodology was used:

- All of the answers from stakeholders were placed in a table.
- Like for like answers were grouped together. For example 'resealing King Street' and 'unsealed roads' were grouped together under 'roads'.
- Once similar answers had been grouped, each response was counted against one of those themes, with the total number of times a theme was mentioned by all of the stakeholders, being tallied to give an overall score.
- The overall score gives each answer group a ranking in terms of the priority for the community.

The responses to the surveys helped form the focus areas for the community workshops. The workshops covered the areas of rural character, bushfire mitigation, preferred zones, and infrastructure. The results of these will be discussed in section 2 and 3 of this report.

It should be noted that in some cases the comments have been paraphrased and quotes have been used to illustrate community sentiment.

1.3 Limitations

There are a number of limitations regarding this consultation that should be acknowledged, these are outlined below:

- The engagement discussions were framed around the future growth opportunities for Toongabbie. The purpose of this engagement was to understand a range of aspirations and views for the township of Toongabbie. It is acknowledged that not everything discussed can be addressed through land use planning.
- The engagement themes for this project are quite broad, there are varying degrees of understanding or knowledge about planning amongst the stakeholders and this may have influenced their capacity to fully understand the engagement questions in relation to this project.
- This report is an analysis of the views of the general community. Not all stakeholders participated in the consultation activities and as such, the analysis can only rely on the data that is available.

1.4 Notification

For the surveys, notification was sent to 551 landowners and occupiers within the Toongabbie locality (including those within Wellington Shire) and the portion of Cowwarr that sits with Latrobe City Council.

Due to council processes, if a landowner's residential or postal address was not the same as a particular parcel of land, then a letter was sent to the landowner and the occupier of the property. This may have resulted in some stakeholders receiving two or more letters.

Additional consultation activities included:

- Flyers and fact sheets were posted at the Toongabbie General Store and the Cowwarr Post Office.
- Paper versions of the survey were available at both of the above locations.
- A link to the survey was posted on Council's website. As well as through Council's Facebook page and the Toongabbie township group's Facebook page.
- Notification was advertised in the Latrobe Valley Express.

For the workshop, all landowners and occupiers within the Toongabbie locality and respondents to the survey were sent a letter notifying them of the community workshop.

Additional notification of the workshops included:

- Fliers were posted at the Toongabbie General Store, the Cowwarr Post Office and the Toongabbie Primary School.
- Inclusion in the Toongabbie Primary School's newsletter.
- A link to RSVP to the event was posted on Council's website.

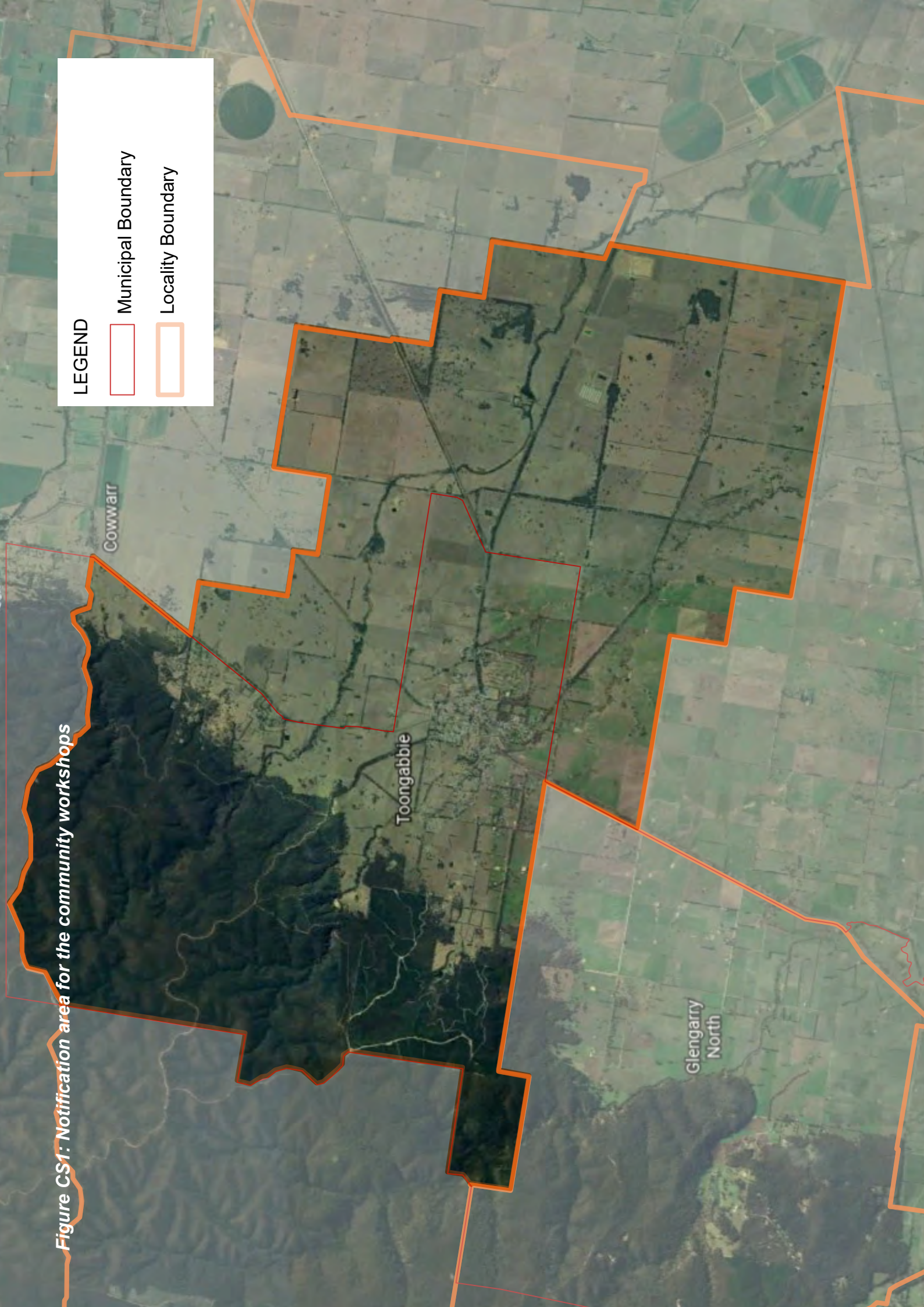


- A link to RSVP was posted on the Toongabbie Township Group's Facebook page
 - A link to RSVP on Council's Facebook page.
 - Meeting with the Toongabbie Township Group.
- Further consultation will be undertaken through the Planning Scheme Amendment Process.

Table CS1: Consultation Techniques

<i>Tool/Technique</i>	<i>Description</i>	<i>When and Where</i>
Project website	Latrobe City developed a project specific webpage on Council's website.	Online Created 25 March 2019
Fact Sheets	An initial fact sheet was prepared to support the engagement activities.	25 March to 5 April 2019 Toongabbie General Store; Cowwarr Post Office; Toongabbie Township Group Facebook Page
Surveys	A structured survey was provided to reach a range of community members. The survey included a range of open and closed answered questions and was available in hard copy and online.	25 March 2019 to 5 April 2019 Website link; Toongabbie General Store; Cowwarr Post Office Latrobe City Council Service Centres
Newspaper	The surveys were advertised in the Latrobe Valley Express Council Noticeboard.	25 March 2019
Community workshops	Two workshops were held over two evenings - one mid afternoon and one in the evening to discuss a vision for the town and a range of tools to achieve that vision. Representatives from Council's strategic planning team and infrastructure division were in attendance to facilitate the discussion, to provide information and respond to queries as well as to take in any feedback from the participants.	12 September 2019 8 October 2019 Held at Toongabbie Mechanics Institute
Social Media	Posts were made on Council's Facebook page and the Toongabbie Township Group's page for both the link to the survey and to RSVP to the community workshops.	Various

Figure CS1: Notification area for the community workshops



LEGEND

-  Municipal Boundary
-  Locality Boundary

2

Survey Findings

KEY ELEMENTS

- To provide for low density residential development in the absence of articulated sewerage
- No permit triggers for a single dwelling (but must be connected to power, water and sewerage)
- Can set min subdivision area, otherwise goes to default of 0.4ha without sewerage, 0.2ha with sewerage
- Allows outbuilding exemptions

- To provide large spacious neighbourhoods with generous setbacks
- Can set min subdivision area – in this case none
- Can set min lot sizes for single dwellings under 500m²
- Ability to vary Rescode requirements – in this case 5 have been varied
- Can set max building heights – in this case none

- Can set min subdivision area
- Can set min lot sizes for single dwellings
- Ability to vary Rescode requirements
- Can set max building heights

Ability to locate
House located
Opportunity for some
Different
Tne
A Village

Yes.

2.1 Survey Snapshot

67 people responded to the surveys. For a small community of 992 people, this is a relatively high response rate to a survey. In comparison, a recent Council-led, municipal wide project had 168 respondents. The survey had 26 questions, 5 related to demographics and further contact details. Two of those questions were in relation to a separate community plan, leaving 19 questions relating to the Toongabbie Structure Plan which have been split into four categories:

- Community Vision
- Land Use
- Accessibility
- Natural Disaster Mitigation

One question, number 21- which related to microgrids, is not discussed in this report due to a lack of answers.

The results of the demographics section are shown below. Of the Toongabbie survey responses, 29.41% were aged between 25 and 34, 22.06% between 45 and 54 and 30.88% between 55 and 64.

This implies that a wide cross section of the community responded about their ideas, values and aspirations for Toongabbie in the future. For a copy of the survey questions refer to Appendix 1. Out of the 67 stakeholders, the highest percentage of stakeholders had lived in Toongabbie for 30 or more years with 35% of responses. Those who had lived in Toongabbie between 5 to 9 years were the next highest level of responses both making up 29.41% of the responses.

This implies that both new and long-term residents are highly engaged in the community.

*Photo: Workshop for Toongabbie Structure Plan
Source: McKenzie, T. 2020.*



Toongabbie
Structure Plan

Figure CS2: Years lived in Toongabbie

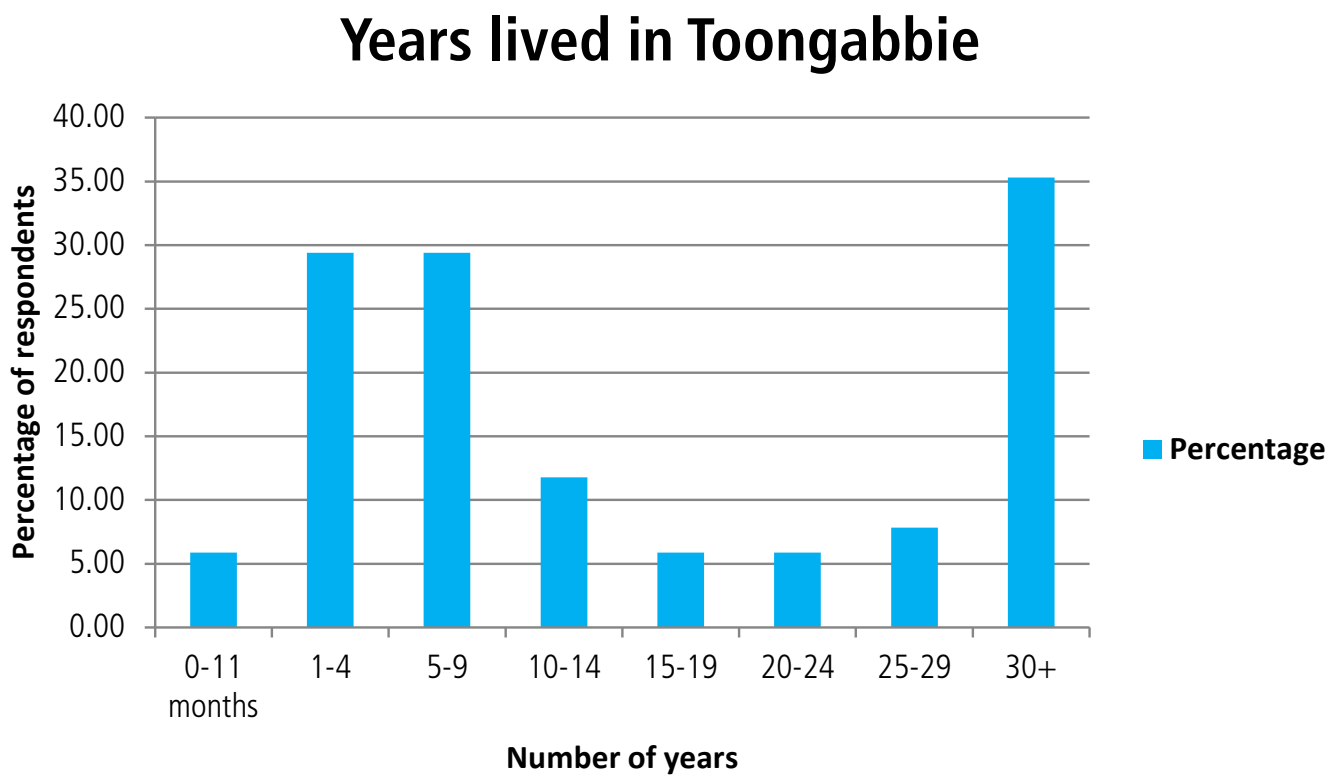
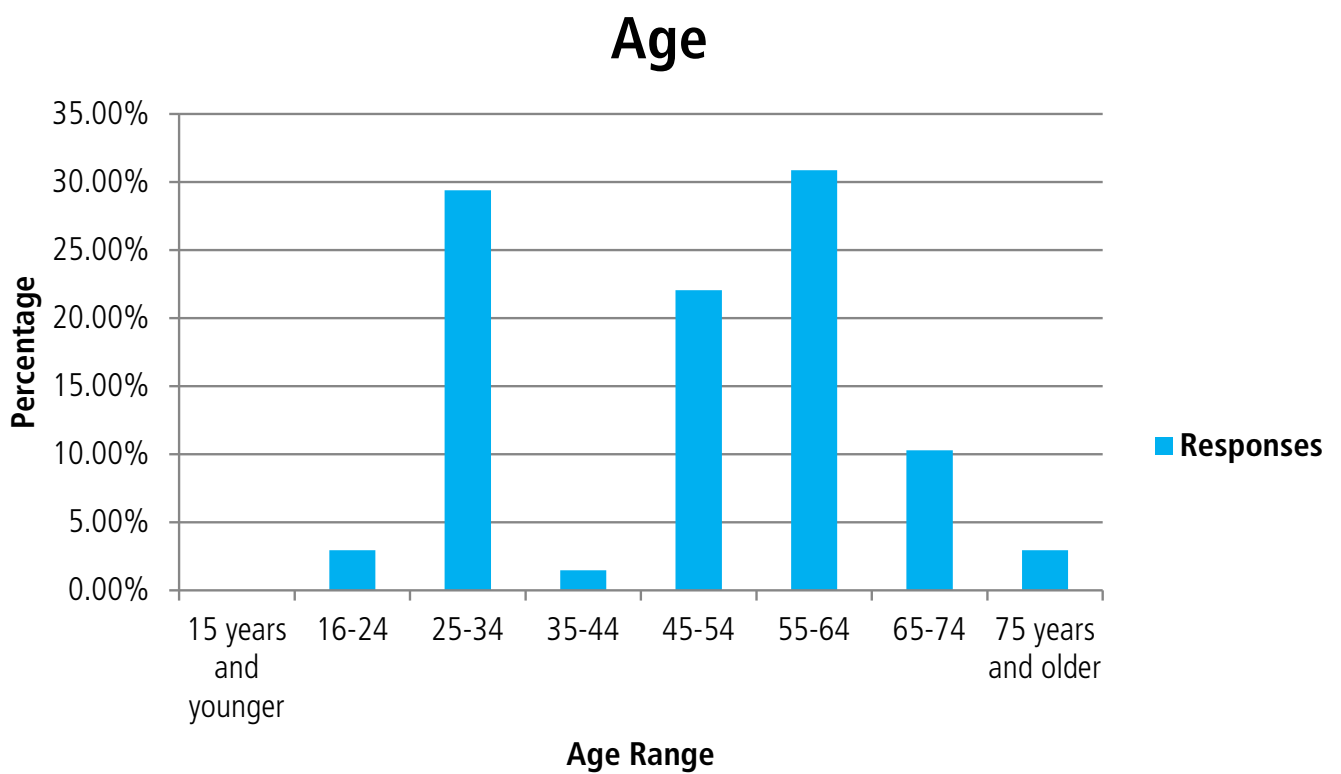


Figure CS3: Age



2.2 The Community's Vision for Toongabbie

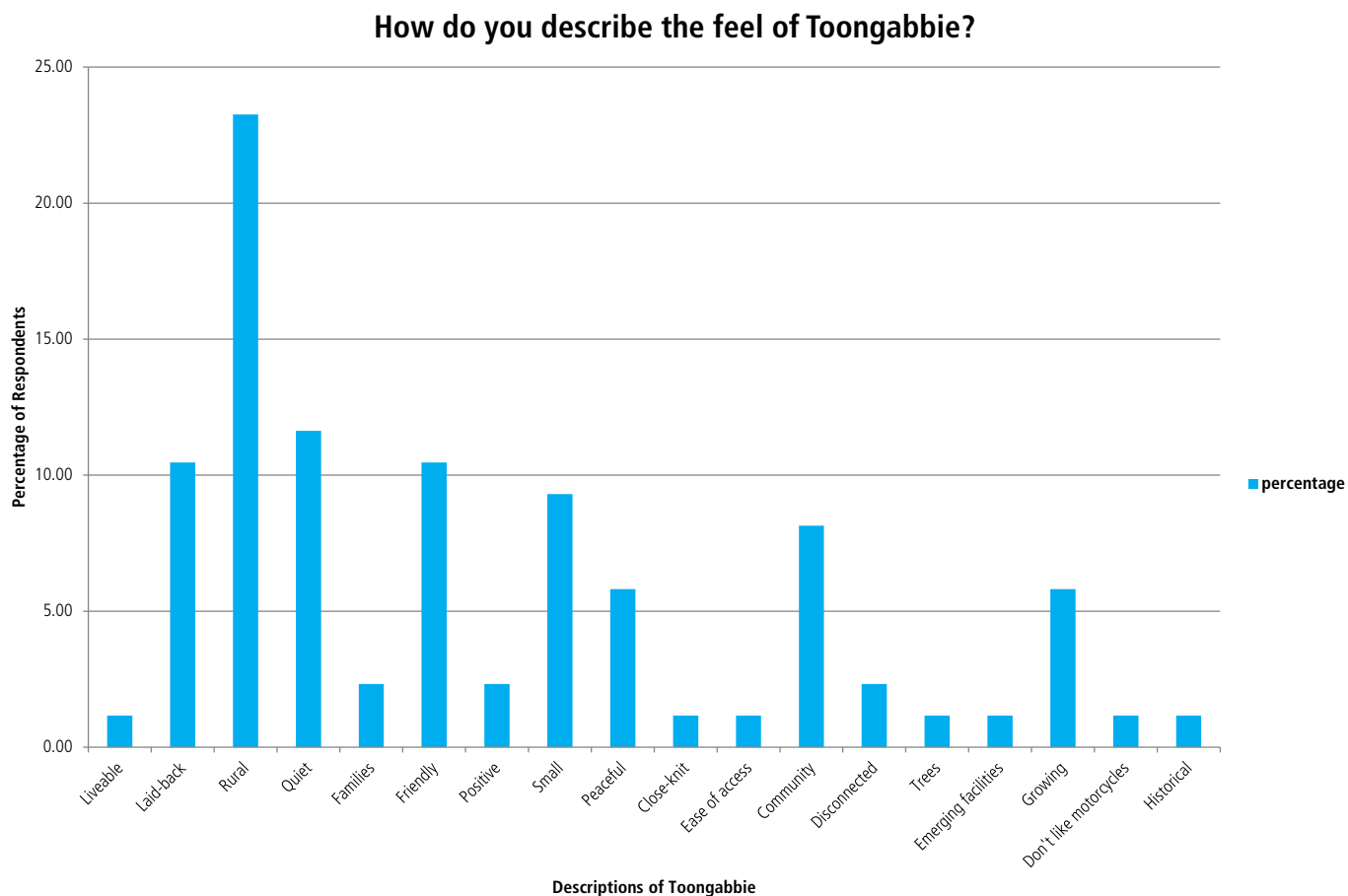
The following questions were asked to ascertain what the community valued in their town and what they wanted to see the town look like in 15-20 years:

- How would you describe the feel of Toongabbie?
- What features would you like protected in the town?
- What do you like about living in Toongabbie?
- If you could add something, what would it be?
- What would you like to see Toongabbie look like in 10 to 15 years?

2.2.1 HOW WOULD YOU DESCRIBE THE FEEL OF TOONGABBIE?

A small, relaxed, rural lifestyle was the response that came through from the survey responses. The first question (Question 5 of the survey) had the following responses:

Figure CS4: The feel of Toongabbie

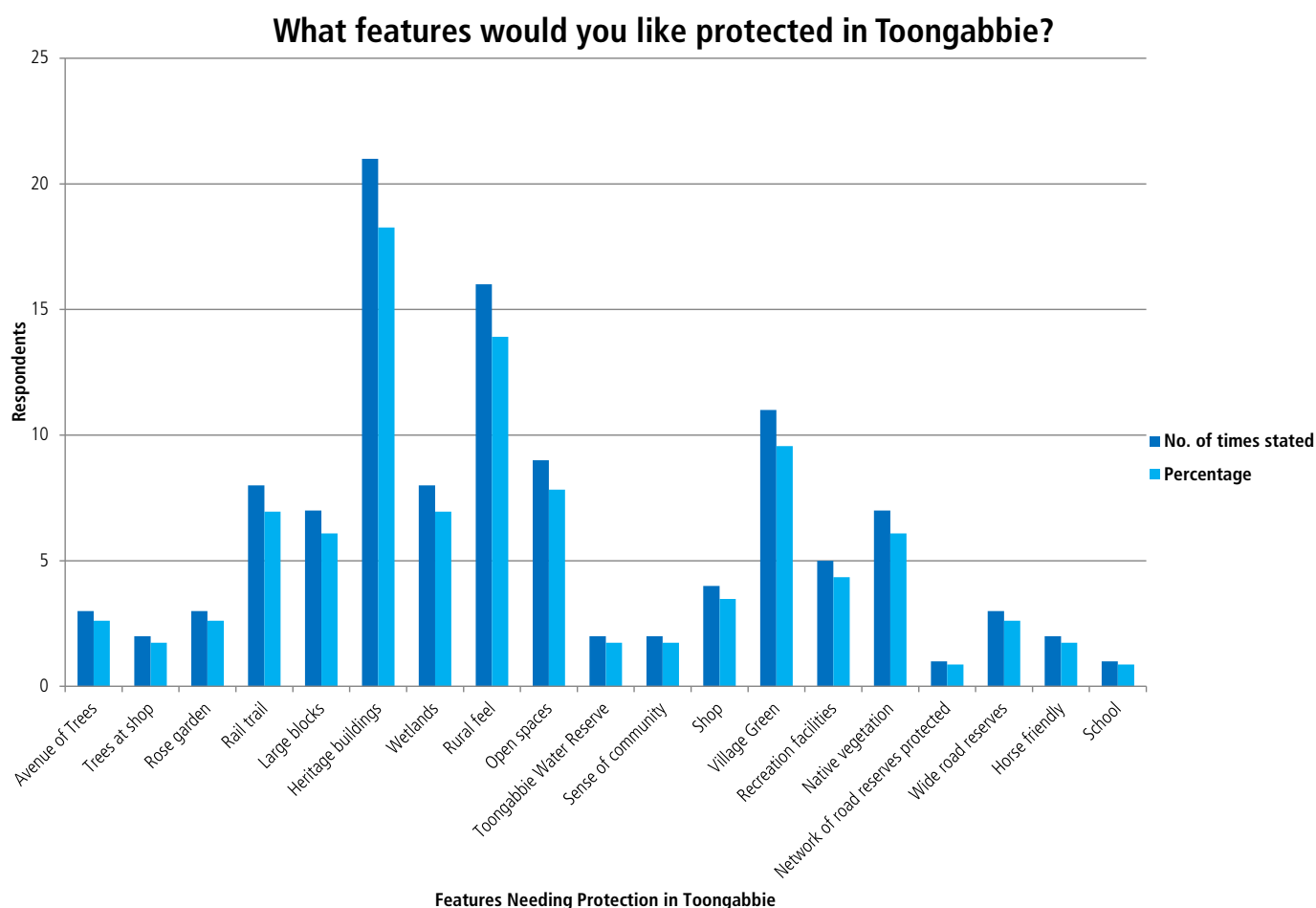


2.2.2 WHAT FEATURES WOULD YOU LIKE PROTECTED IN THE TOWN?

In broad terms there were three themes to the responses for the second question:

- The heritage aspects including the Toongabbie Mechanics Hall, the avenue of trees and the Village Green had a high number of responses.
 - The recreational and conservation aspects, including the Gippsland Plains Rail Trail, recreation reserve, the wetlands, the rose garden and Toongabbie Water Reserve were
- also stated as features that members of the people wanted to protect.
- The third theme that came through the survey responses was the large blocks and native vegetation that would protect the rural feel of Toongabbie.

Figure CS5: Protected features within Toongabbie



2.2.3 WHAT DO YOU LIKE ABOUT LIVING IN TOONGABBIE?

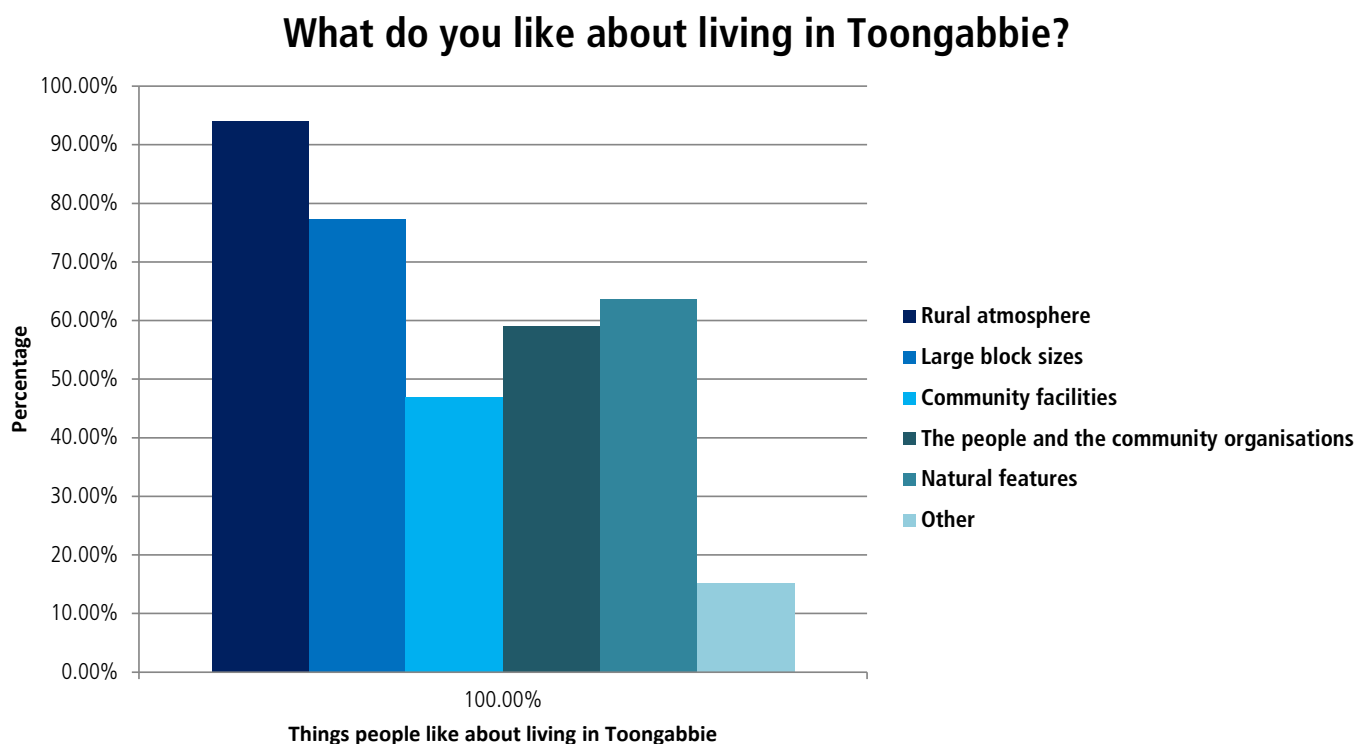
The third question was a multiple choice question, where multiple answers could apply. 93.34% of respondents said the rural atmosphere, 77.27% stated the large block sizes as a reason, while 63.64% stated the natural features as a reason for living in Toongabbie.

There were 10 responses which stated their reasons as other.

These response included:

- Peace and quiet
- Great place for family life
- Recreational facilities
- Access to the Rail Trail and bush tracks
- Proximity to Traralgon but it still retains its rural atmosphere
- Clean air

Figure CS6: Living in Toongabbie

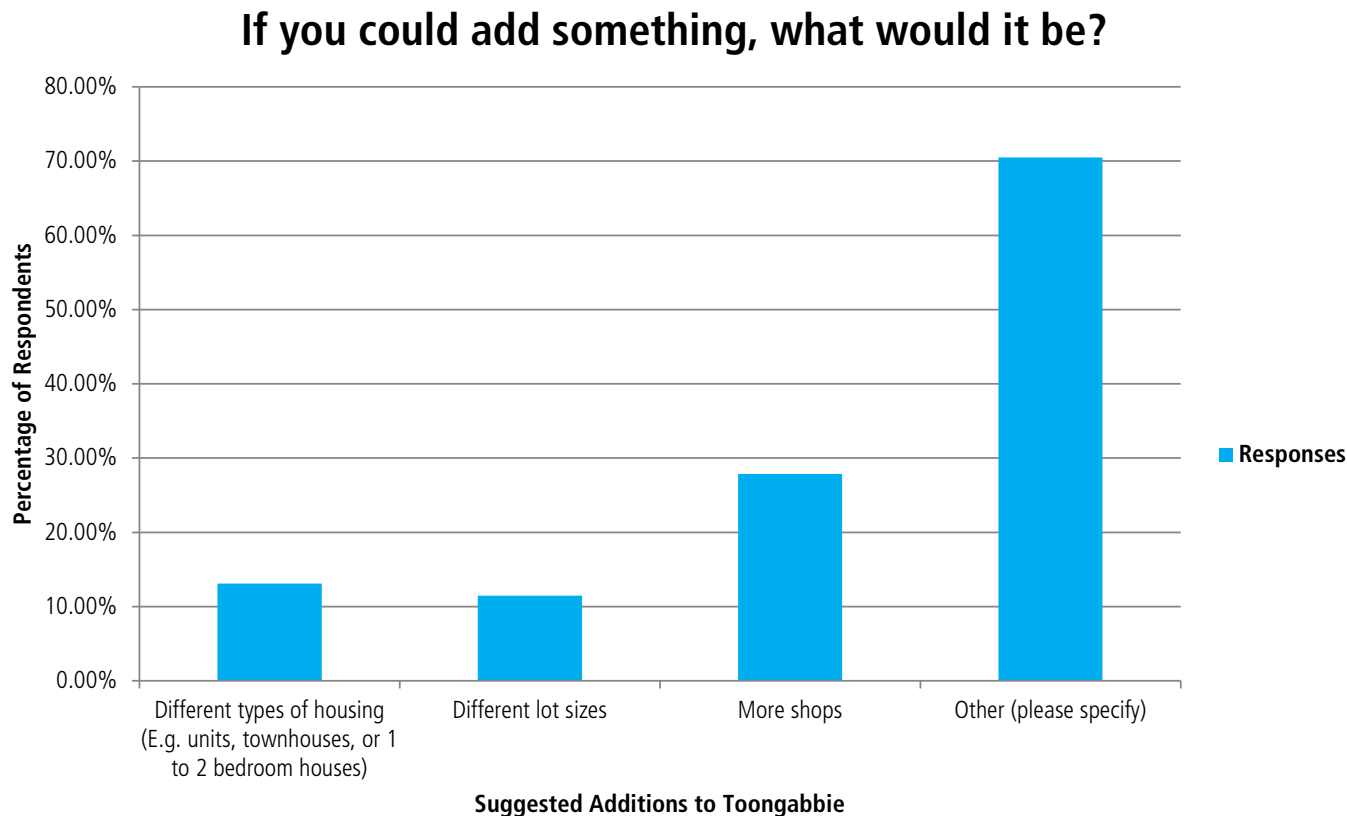


2.2.4 IF YOU COULD ADD SOMETHING, WHAT WOULD IT BE?

This question was a multiple choice question, 27.87% responded with more shops, while 70.49% responded with 'other'. 'Other' responses included:

- Greater potential for business opportunities along the Rail Trail
- Further accommodation considerations
- Affordable housing for older people
- Improved mobile phone coverage and a reliable NBN service
- More land for housing
- More sealed roads
- A pub/hotel
- Truck parking stops
- Home mail delivery
- A preschool and/or childcare
- Better drainage around town
- A cafe or bakery
- Updated skate park with a BMX track/area
- More footpaths/bike paths including a safe connection to Cowwarr Weir
- Local artisan shops/studios
- More public transport
- Free camping

Figure CS7: Change in development



2.2.5 WHAT WOULD YOU LIKE TOONGABBIE TO LOOK LIKE IN 10 TO 15 YEARS?

The main theme to come out of the response to the questions was that respondents wanted to retain the size of the town while improving liveability through greater choice in shops, more sealed roads and footpath connections.

This question was not ranked as the responses repeated a lot of the themes discussed in the previous four questions.

In the word cloud, the larger the word, the more times it was stated as a response.

2.2.6 IMPLICATIONS

The responses to the vision survey questions, demonstrate that the community value the rural character including the large block sizes, space between dwellings and retention of native vegetation that contribute to the rural atmosphere.

It demonstrates that the community aspire to be more self-contained by having greater access to shops and to services such as childcare and play more of a service centre role.

Figure CS8: Word cloud - future Toongabbie

Q11 What would you like Toongabbie to look like in 10 to 15 years?

The word cloud displays various responses to the question. The most prominent words are 'shop', 'town', 'roads', 'better', 'housing', 'Similar', 'sealed roads', 'infrastructure', 'school', 'keep updated', 'bigger', 'small', 'facilities', 'stay', 'much', 'different', 'now', 'little', 'area', 'still', 'changes', 'pub', 'community', 'rail', 'trail', 'rural', 'larger', and 'now'.



2.3 Preferred Land Use

The following questions were asked to ascertain what the community wanted to see in their town in terms of land use activities over 15-20 years:

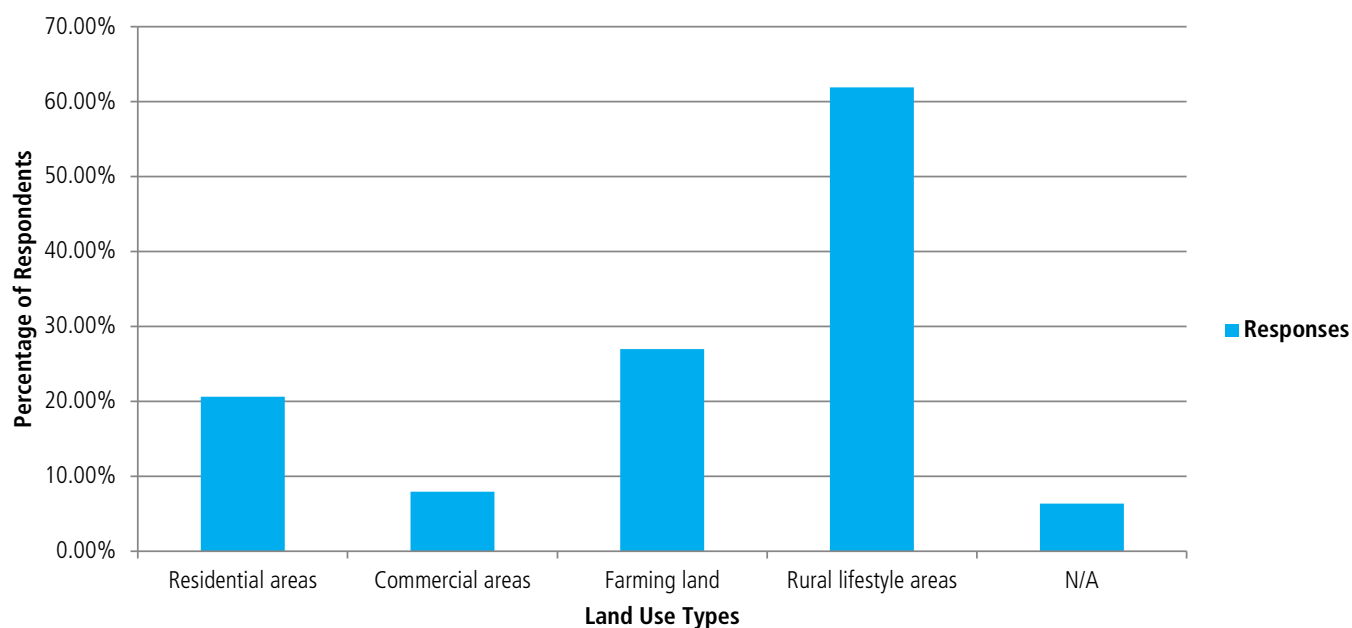
- In the future, would you like to see more residential areas, commercial areas, farmland, or rural lifestyle areas in Toongabbie?
- Should there be greater opportunities to work in and around Toongabbie?
- What sectors would you like jobs to grow in?
- Would you like to see farmland protected?
- What features would you promote to visitors in Toongabbie?

2.3.1 IN THE FUTURE, WOULD YOU LIKE TO SEE MORE RESIDENTIAL AREAS, COMMERCIAL AREAS, FARMLAND, OR RURAL LIFESTYLE AREAS IN TOONGABBIE?

There were 63 responses to this question, with 61.90% stating that they would like to see more rural residential areas. In the four 'other' responses, three stated that they would like to see no change, while one stated that they would like to see more of each category.

Figure CS9: Change in land uses

In the future, would you like to see more residential areas, commercial areas, farmland, or rural lifestyle areas in Toongabbie?



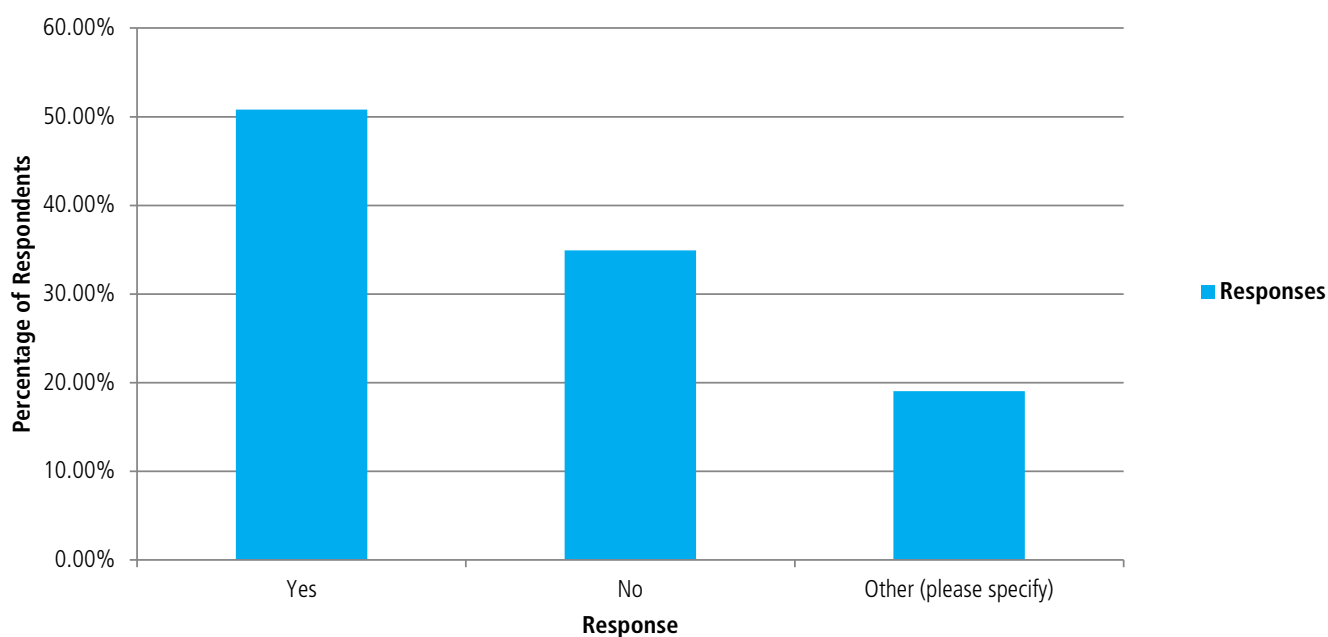
2.3.2 SHOULD THERE BE GREATER OPPORTUNITIES TO WORK IN AND AROUND TOONGABBIE?

The purpose of the next two questions were to ascertain the appetite of Toongabbie residents for further work choices and whether there was a gap identified in the market by residents whether this be for full-time, part-time or casual positions. 50.79% said that there should be, with a number of the 'other' responses pointing to agricultural

and tourism opportunities. On balance, a number of the 'other' responses pointed to the proximity of Traralgon as a major employment centre which meant that Toongabbie did not require any more employment opportunities.

Figure CS10: Work opportunities

Should there be greater opportunities to work in and around Toongabbie?

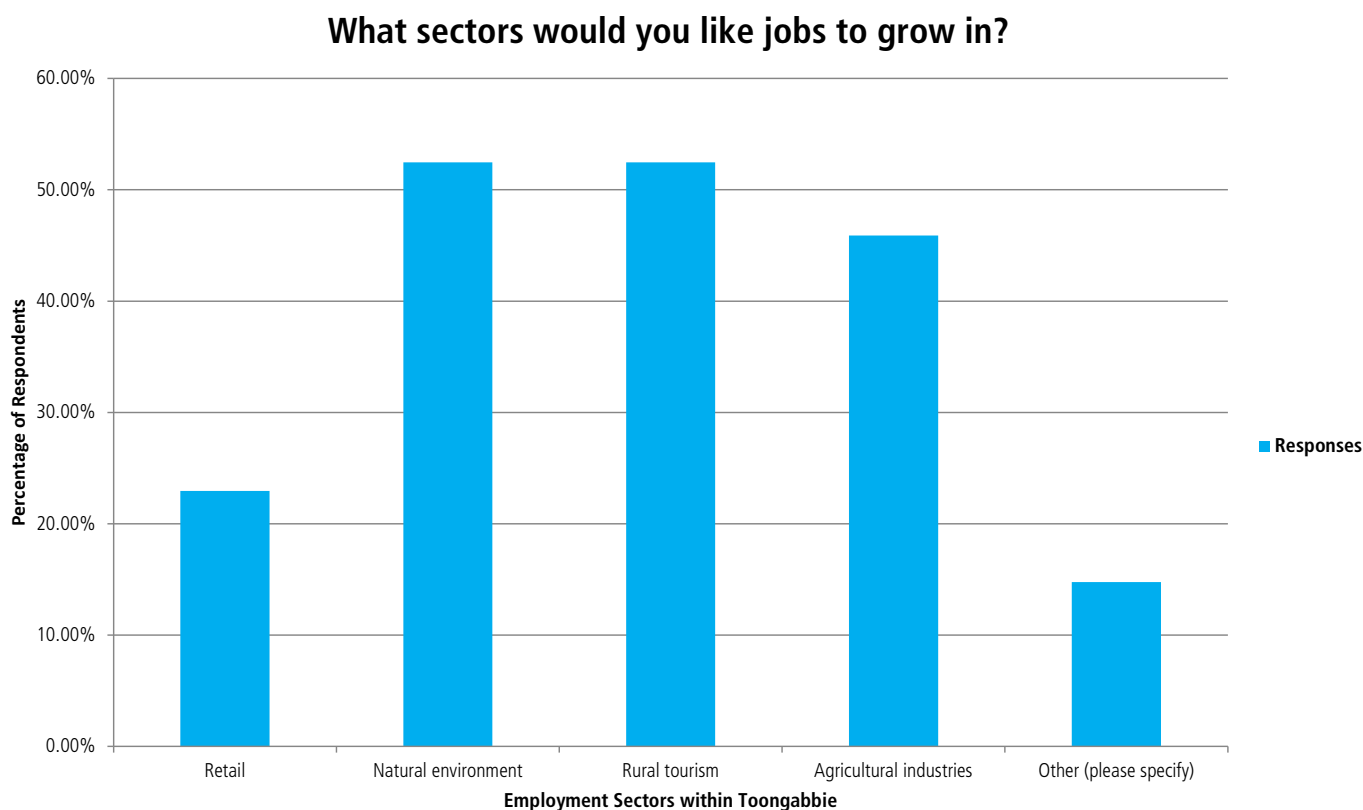


2.3.3 WHAT SECTORS WOULD YOU LIKE JOBS TO GROW IN?

A follow up question to the previous one, where what industries could support further growth within Toongabbie was further explored. As Toongabbie does not have any identified industrial land and the Live Work Latrobe Industrial and Employment Strategy did not indicate any need for industrial land in or near Toongabbie, this option was not explored.

The majority of respondents stated that the natural environment, rural tourism and agricultural industries as the top three choices for employment sector growth. Of the nine 'other' responses, one stated that childcare was needed, one would like to see more artisan trades, one would like to see growth in all of the sectors while six did not want to see any further growth.

Figure CS11: Employment sector growth



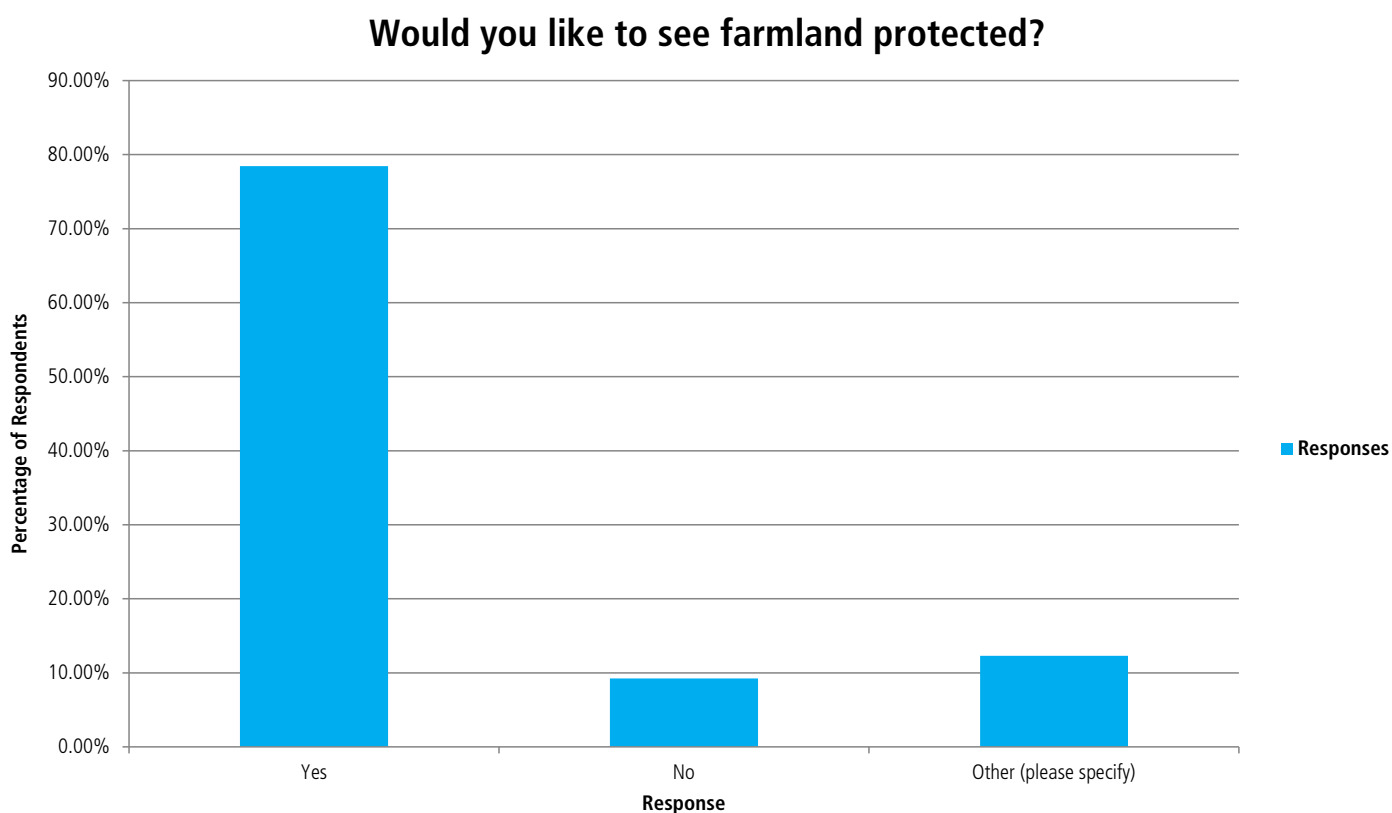
2.3.4 WOULD YOU LIKE TO SEE FARMLAND PROTECTED?

The question was asked to ascertain what the priorities are for the community and how far they wanted to see land uses expand.

Of the 65 respondents to the question, 78.46% stated that they would like farmland protected.

Of the 12.31% that stated 'other', several respondents stated that the fragmented land close to town should not be protected, while one stated that the farmland should be protected if it contained significant native vegetation.

Figure CS12: Protection of farmland



2.3.5 WHAT FEATURES WOULD YOU PROMOTE TO VISITORS IN TOONGABBIE?

This question had 154 separate responses. Of those, answers that related to the lifestyle including things like 'great community', 'peace and quiet', 'tranquillity' and 'country town' were grouped under lifestyle.

Similarly, a number of responses referred to 'tennis courts' or 'golf course'; these were grouped under sporting facilities. If something that was mentioned did not have any related responses, then it was grouped under 'other'.

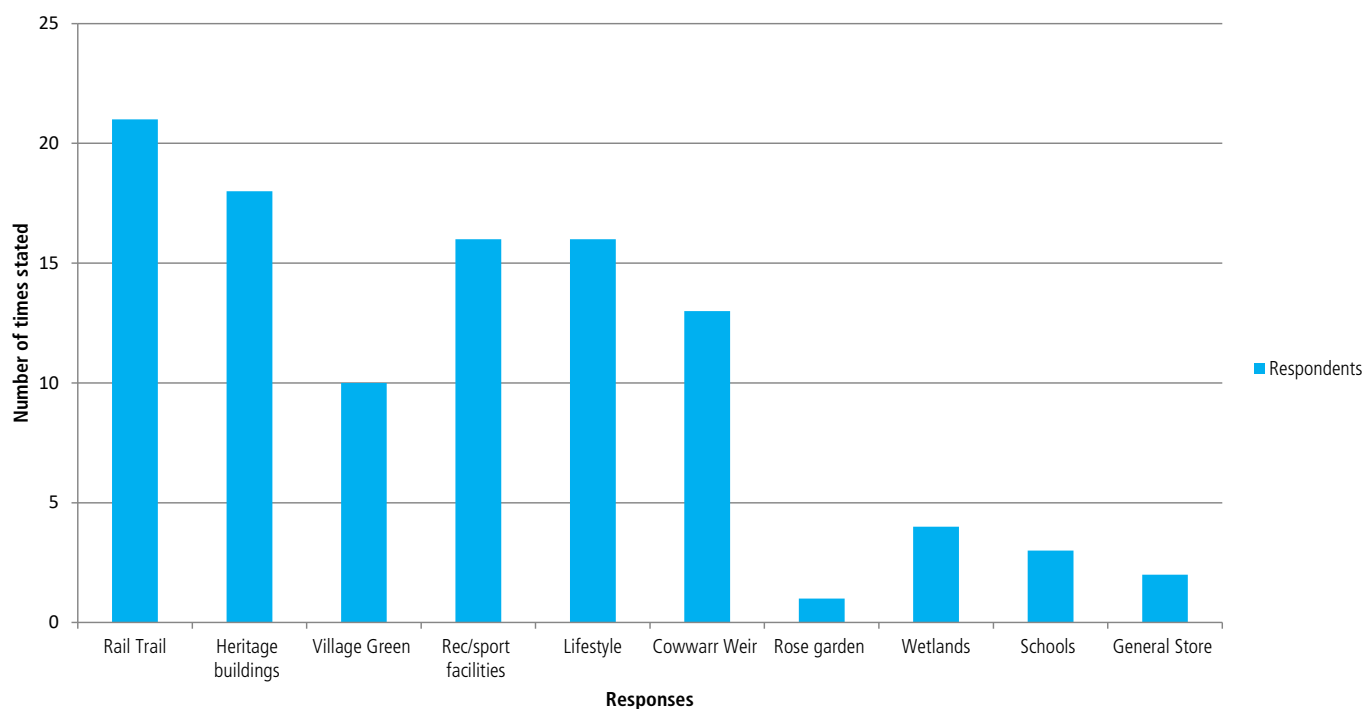
Other responses included:

- Stringer Memorial
- Murals hanging in the Toongabbie Recreation Hall main building
- Rose Garden
- Men's Shed
- Bruton's Bridge
- Walhalla Road

The Gippsland Plains Rail Trail (14.94%), Lifestyle (12.99%), Sporting Facilities (11.04%), Mechanics' Institute (11.04%) and the Village Green (9.09%) were the top five responses.

Figure CS13: Promotion of Toongabbie

In the future, would you like to see more residential areas, commercial areas, farmland, or rural lifestyle areas in Toongabbie?



2.3.6 IMPLICATIONS

The responses to the land use survey questions, reinforce that the current land uses are highly valued and that the main perceived need is for more rural living zoned land. It also indicates that the community would like to take greater advantage of the natural assets surrounding Toongabbie.

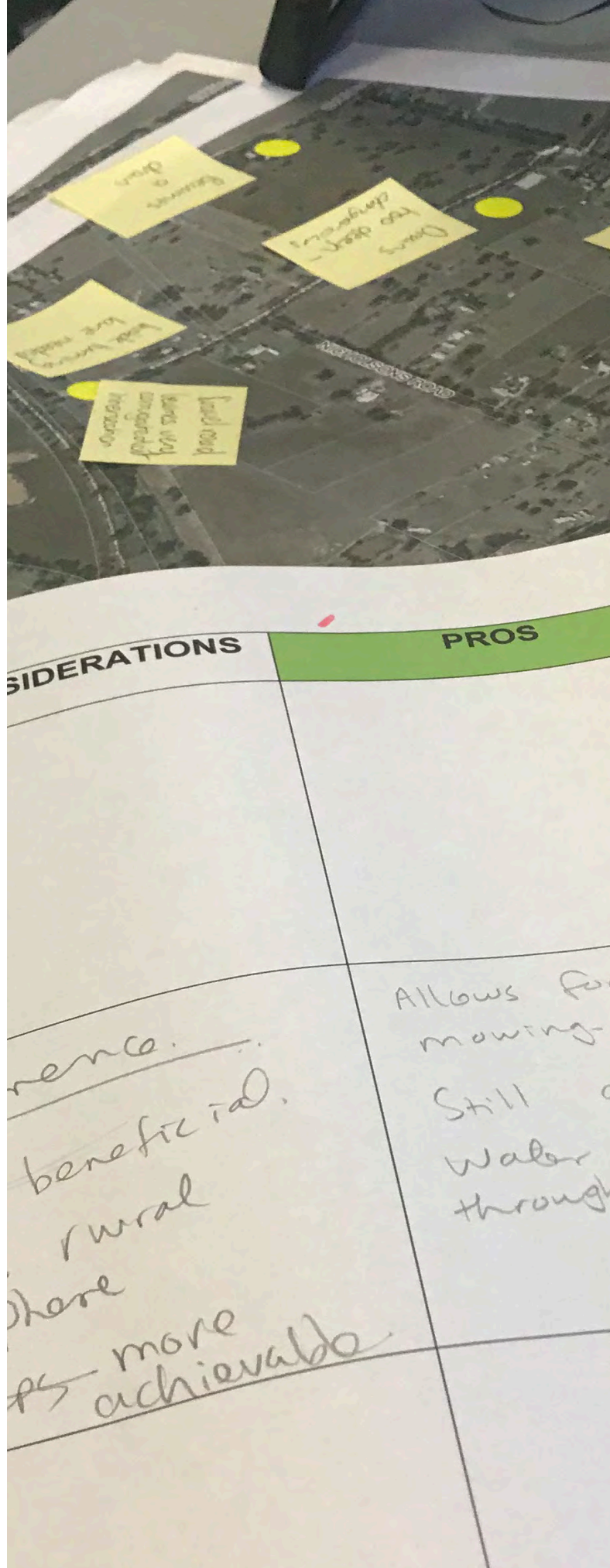


Photo: Material from consultation in Toongabbie.
Source: McKenzie, T. 2019.



2.4 Accessibility

Liveability is a key aspect of future growth and a large part of that is how people can move around, how easy it is to move around and what hinders movement. As such, four questions were asked to explore accessibility in Toongabbie, these are:

- How easy is it to walk around Toongabbie?
- How easy is it to ride (horse or bike) around Toongabbie?
- How easy is it to drive around Toongabbie?
- What improvements could be made to increase accessibility and movement around Toongabbie?

2.4.1 HOW EASY IS IT TO WALK/RIDE/DRIVE AROUND TOONGABBIE?

For the purpose of evaluation, the scores for the first three questions were aggregated and an average score derived, with 0 being inaccessible and 10 being highly accessible.

For driving, the average score was 2.6, for riding either a horse or a bike, it was 3.5 and for walking, it was 4.7. It clearly demonstrates that Toongabbie residents feel that improvements could be made to make the town more accessible.

Figure CS14: Accessibility

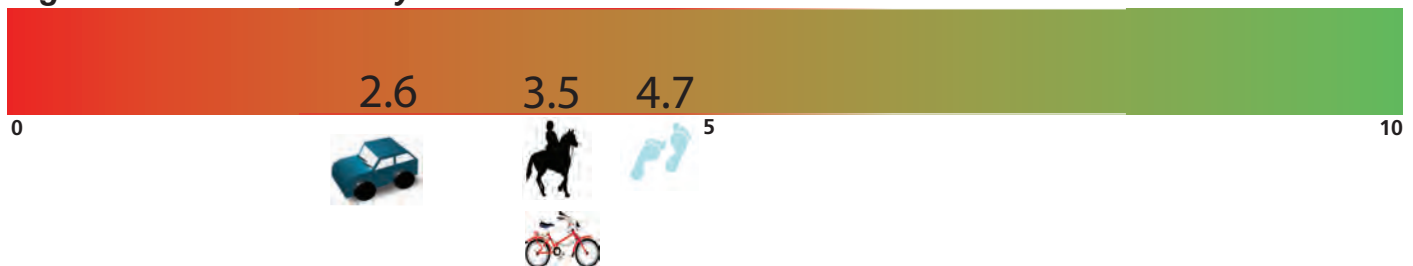
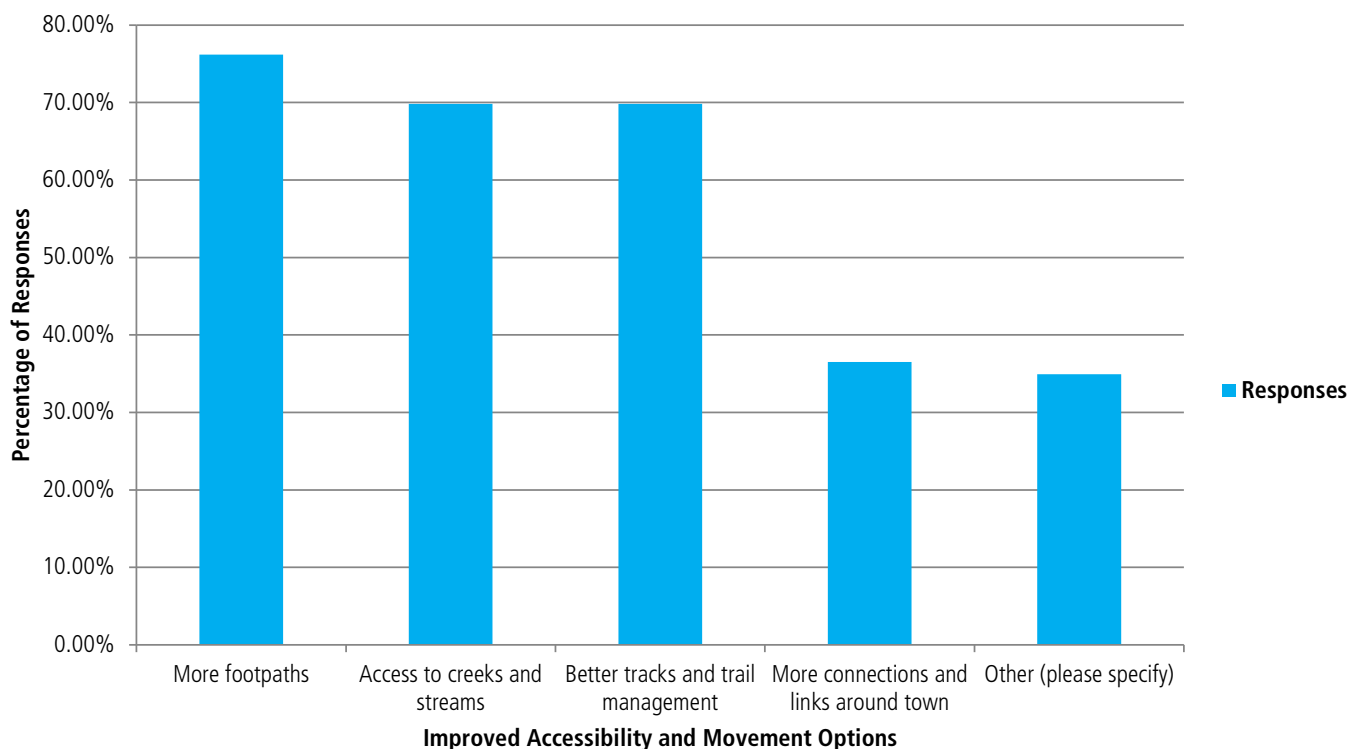


Figure CS15: Improvements to accessibility

What improvements could be made to increase accessibility and movement around Toongabbie?



2.4.2 WHAT IMPROVEMENTS COULD BE MADE TO INCREASE ACCESSIBILITY AND MOVEMENT AROUND TOONGABBIE?

Out of the possible responses, 'more footpaths' was selected by 76.19% of respondents, 'access to creeks and streams' and 'better tracks and trail management' were selected by 69.84% of the respondents.

There were a number of different responses under 'other' to this question which included:

- Clean up footpaths from shop to school regularly— often grass is growing over it;
- Extend path from shop along Main Street to Sparks Lane;
- Better crossing for Traralgon-Maffra Road for Gippsland Plains Rail Trail and school crossing;
- Currently makeshift electric fencing left in situ alongside roads and fencing off unmade roads either denies access or prevents walkers, riders and carriages from moving off the roads away from road traffic. These are not always visible and they are a hazard. This is a safety concern;
- Better roads and drainage;
- Completed infrastructure;
- More bus services to Traralgon and Sale;
- More street lights for walking in an evening in

2.5 Natural Disaster Mitigation

The following questions were used to ascertain whether there were areas where future growth should be avoided or whether mitigation measures should be included in future policy in regards to bushfire risk and flooding risk.

- Have you experienced any flooding/drainage issues?
- When did this occur?
- What changes would you like to see in relation to flooding or drainage issues?
- What might be done to reduce the risk of bushfire?

2.5.1 HAVE YOU EXPERIENCED ANY FLOODING/ DRAINAGE ISSUES?

For this question, there was a split on whether residents had experienced stormwater or flooding events. Stakeholders highlighted:

- The lack of egress to the area to the west of Toongabbie when the bridge over the Toongabbie Creek on Humphrey Road is flooded;
- Traralgon-Maffra Road has also experienced flooding in the past; and
- A lack of drains contributing to stormwater flooding events.

2.5.2 WHEN DID THIS OCCUR?

Flooding events through stormwater run over events have occurred in Toongabbie in 1995, 2011, 2012, 2013, 2014, 2017, 2018 and 2019, while the last major flooding events occurred in 1995.

the cooler months; and

- Need more concrete paths including the rail trail plus the verges on Victoria st, Nicholson st etc., filled in and fixed up to avoid pedestrians rolling their ankles or cars rolling such as what happened in the recent bushfire emergency.

2.4.3 IMPLICATIONS

There is a clear desire to have more connections around town and more defined footpaths, along with sealed roads and better drainage.

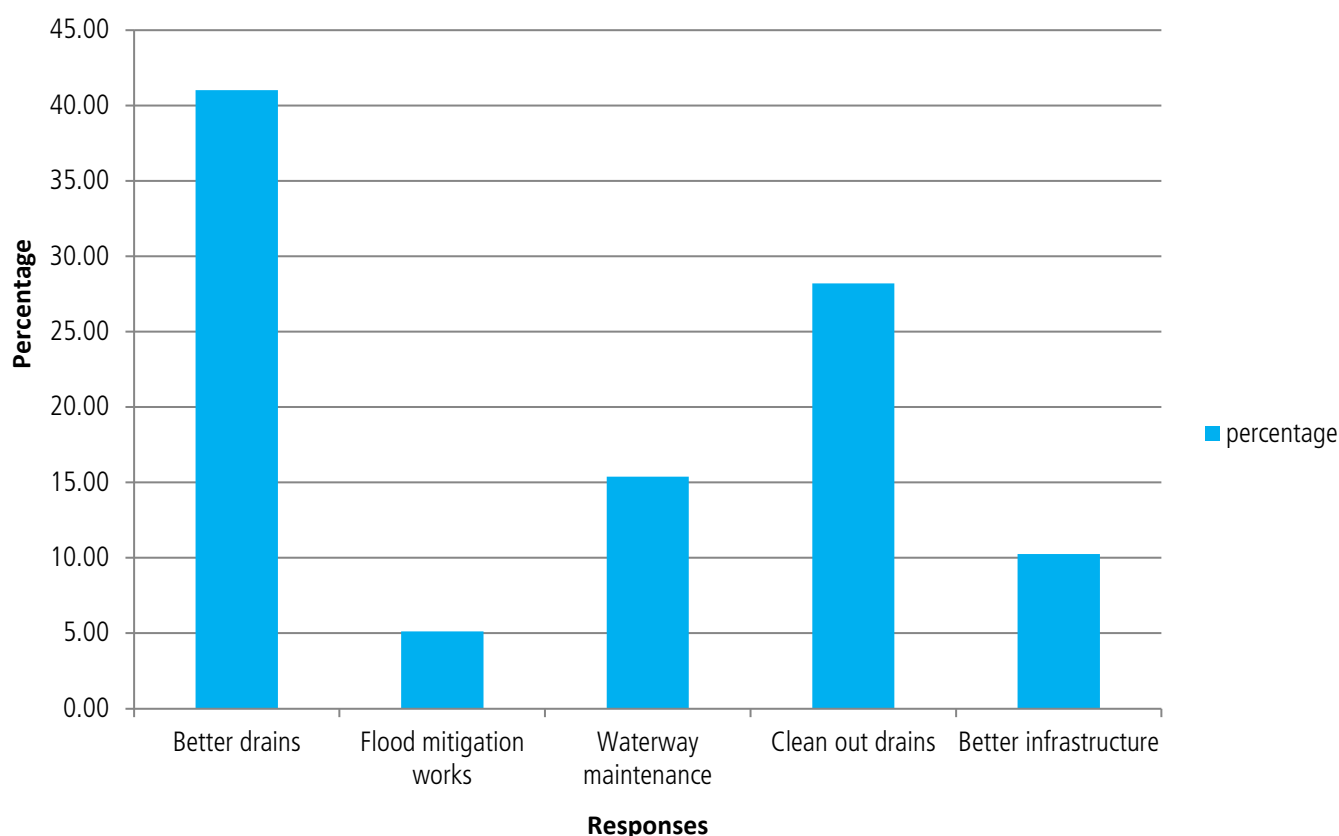
While planning policy has limited scope in how it can address existing infrastructure issues, design standards can be included in the *Infrastructure Design Manual (IDM) and Addendum*.

Amendment GC112 incorporated the IDM into the Latrobe Planning Scheme.

There are also other measures that are outside the planning scheme that can address infrastructure issues such as future Council budget bids, advocacy and special charge schemes.

Figure CS16: Flood mitigation

What changes would you like to see in relation to flooding or drainage issues?



2.5.3 WHAT CHANGES WOULD YOU LIKE TO SEE IN RELATION TO FLOODING OR DRAINAGE ISSUES?

There were 39 responses to this question. Of those answers, if it referred to improving drains or installing kerb and channelling, it was grouped under 'better drains'. Responses around flood mitigation and levies were included in 'flood mitigation works'. Reference to cleaning out drains or culverts were included under 'clean out drains', while reference to improved roads, footpaths, and raised bridges were included

under 'better infrastructure'.

41.03% of respondents stated that they would like to see better drains, a further 28.21% would like to see more maintenance on the drainage system.

2.5.4 WHAT MIGHT BE DONE TO REDUCE BUSHFIRE RISK?

A number of options were put to stakeholders for how the bushfire risk could be reduced in Toongabbie. Stakeholders were given the option to select multiple answers.

76.19% responded with more roadside maintenance, while 46.03% would like to see a safe neighbourhood centre provided and a further 41.27% would like to see open space located on the edge of town as a buffer.

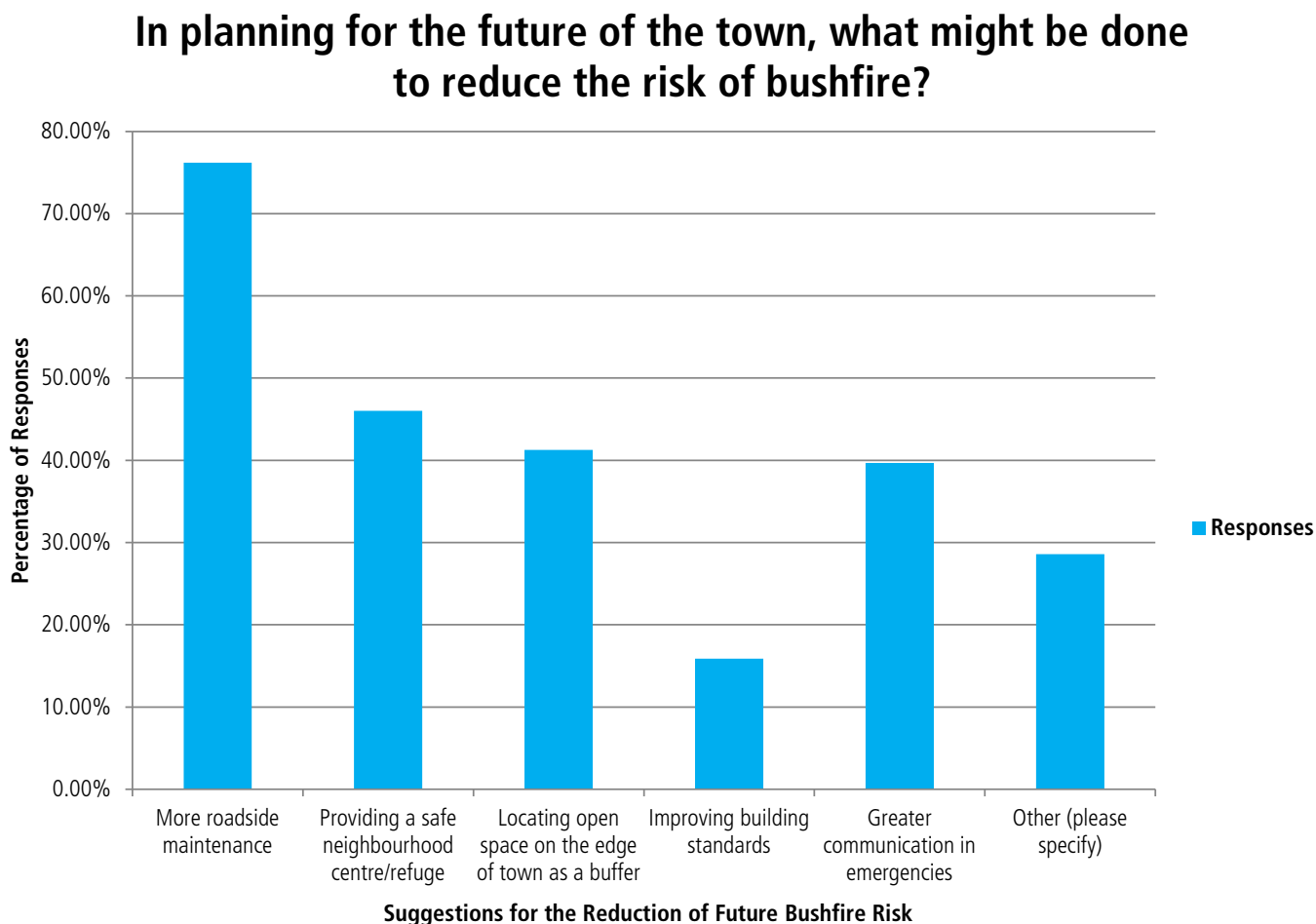
There were 18 responses in the 'other' category which included:

- Larger fire breaks between bush line and private property on bush side of fence lines;
- Greater knowledge on where to receive updates on the fire;
- Improved land management on private and public land;
- Education - some people living in the town really underestimate the power of fire and how erratic it can be;
- Improved mobile phone coverage;
- Track improvements on town boundaries. Harris Lane - North and South. Old Walhalla Road etc.;
- More controlled burn offs; and
- Better forest management.



Photo: Draft Bushfire Assessment and Rural Rezoning consultation in Toongabbie
Source: Misiurka, N., 2019.

Figure CS17: Bushfire mitigation



2.5.5 IMPLICATIONS

The responses to the natural disaster mitigation questions highlight that both bushfire and flooding do occur in town with some regularity.

For flooding, the majority of recent issues have been caused by stormwater runoff, and the pooling of rainwater due to the relatively flat topography of Toongabbie.

As there are a number of service agencies (West Gippsland Catchment Management Authority, Gippsland Water and Latrobe City Council) that service different systems that relate to flooding, an integrated water management plan is the most appropriate way to address flooding and drainage issues.

This is discussed further in the draft *Toongabbie Structure Plan Background Reports - Infrastructure and Servicing Assessment 2020*.

Flooding issues impact on rezonings of Low Density Residential and Rural Living areas, due to the limited infrastructure capacity in town which limits the ability to connect to sewer and the ability to have septic tanks under both the Low Density Residential and the Rural Living zone.

The septic systems should be placed in areas that are not affected by flooding issues. Possible flood areas are normally identified through the Land Subject to Inundation Overlay. However, this does not apply to areas affected by stormwater runoff. Further studies may also need to be undertaken to assess the extent and frequency of stormwater runoff causing damage to houses prior to rezonings to check whether development would be viable under the proposed zone.

Further consideration may also need to be given to whether a land capability assessment

is required for new dwellings in proposed low density residential areas. Although this would be considered at the subdivision stage if the proposed rezonings occur.

For bushfire risk mitigation, the majority of responses looked at land management as the primary response to reduce the risk. Land management actions along with a land use planning response is being prepared in the draft, *Municipal Bushfire Risk Assessment 2020*, while a Toongabbie specific response to state land use planning policy is addressed in the draft *Toongabbie Structure Plan Background Reports - Bushfire Risk Assessment 2020*.

3

Workshop Findings

1800



3.1 Workshop Overview

Based on the results of the surveys, initial discussions with servicing and referral agencies, and a review of background documents, four themes were explored in the workshops in greater detail:

1. What is the community's vision for Toongabbie?
2. What does rural character mean to the community?
3. Within town, what does the community's preferred streetscape look like (i.e., road treatments, drainage options)?
4. What zone best achieves the desired vision and character?

Bushfire mitigation measures were briefly discussed as well and what that might look like in the form of the extension of the Bushfire Management Overlay in high risk areas and the application of a Design and Development Overlay to some areas.

Two workshops were held on 12 September 2019 and 8 October 2019. A total of 33 residents participated in the workshops with 23 attending the workshop on 12 September and 10 attending on 8 October.

Each workshop was attended by four members of the Regional City Planning department, as well as members from the Development, Infrastructure Design and Infrastructure Planning teams from Latrobe City Council.

3.2 Setting a vision for Toongabbie

3.2.1 VISION EXERCISE

Within Clause 21.09 (Local Areas) of the Latrobe Planning Scheme, each town has a vision which the objectives and strategies that follow relate to. Other parts of the policy that relate to a structure plan include context, objectives and strategies and a related structure plan map.

As such, the community's vision for Toongabbie was sought to see what residents would like to retain, what they would like to promote and what they would like to see in the future. The results of which, will be used to define the town's vision within Clause 21.09 (Local Areas) in the Latrobe Planning Scheme.

Depending on whether land use policy could influence the desired outcomes will shape what content is used in the policy, while some of the other content that could not be defined as an objective or strategy within a planning context may be picked up in the context statement that sits at the front of the policy for each town.

Two activities were used to help discuss and shape what stakeholders wanted to see in the future in Toongabbie.

The first activity was to help stakeholders think about the things that they liked or didn't like about the town (see Figure CS18).

The second activity was to put those elements into a sentence, using words like 'retain', or 'promote' as prompts. The purpose was to find the common elements that stakeholders saw as important within the town (see Figure CS19). These statements will then be used to define the vision as set out in Clause 21.09.

Figure CS18: Vision elements



Figure CS19: Vision statements

<i>Close to hills and has many historic buildings and large blocks, nature and hills.</i>	<i>Encourage larger lots, space and rural atmosphere</i>
<i>Protect and respect environmental and cultural assets of the town.</i>	<i>A community that maintains a safe, friendly, rural atmosphere for all ages. Toongabbie provides this through great sporting facilities, a smaller school, proximity to bush, land and men's shed, while still providing access to larger town centres.</i>
<i>Encourage the use of our tourism assets for improved economic value.</i>	
<i>We value community involvement in Heritage, township group and sports.</i>	<i>Historic township of Toongabbie located close to Latrobe Valley. Larger centres offered total living.</i>
<i>Promote a safe and welcoming environment.</i>	<i>Toongabbie is a friendly historic rural town with lots of open space, good sporting facilities and still close enough to a larger country city.</i>
<i>If you're looking for pleasant, friendly people in an unrushed, non-stressful town that's close to the bush, fresh air and animal friendly, Toongabbie. 3856</i>	<i>Promote the beauty and cultural values of the town.</i>
<i>Good quality services in a rural community.</i>	<i>A quiet, historic, country town in a bush setting.</i>
<i>Maintain a quiet, rural atmosphere.</i>	<i>Support improvement of road infrastructure and protect historic buildings.</i>
<i>Support smaller allotments closer to town.</i>	<i>Protect agricultural land from further subdivision.</i>
<i>Provide an increased level of services.</i>	<i>Close to hills and has many historic buildings, large blocks, and access to nature.</i>

3.2.2 STRATEGIC DIRECTIONS FROM THE VISION

The vision sets the overall strategic direction for the Structure Plan. From the first two exercises, the strategic directions include, in no particular order:

- Maintain the historic, cultural, and environmental values within Toongabbie;
- Retain the quiet, rural atmosphere;
- Promote the tourism assets;
- Improve infrastructure within the town;
- Retain the larger block sizes within town;
- Support rural residential allotments on the outskirts of town;
- Support the community groups and associated infrastructure; and
- Protect productive agricultural land from further subdivision

town. Stakeholders were shown two different pictures and asked which one best represented rural character for them. This was repeated for each of the above mentioned categories.

The second activity was for each stakeholder to write down those elements that they thought epitomised 'rural character'. The collective outcome of which is shown on page 53 in Figure CS20. Each post-it represents one answer, if an answer has multiple post-its then it was stated multiple times.

3.3.1 RURAL CHARACTER IN TOONGABBIE

For the stakeholders, key elements that make up rural character included, in no particular order:

3.3 Understanding Rural Character

Protecting the rural character was highlighted as one of the key strategic directions. It was important to understand what that meant to the community, as the rural character of one town could be vastly different to the rural character of another town.

The exercises undertaken to understand what elements were important to the rural character of the town involved two activities.

The purpose of the first activity was to get stakeholders thinking about how different elements such as fences, space between dwellings, the distance from the front of the property, street plantings, and even road surfaces could create a different look and feel within the

- Large block sizes;
- Open spaces and a sense of openness;
- Access to and retention of environmental assets;
- Protection of the historic buildings;
- Road surfaces and the difference between the township and adjoining rural residential areas; and
- The retention of community facilities including the recreation facilities and the primary school.



Figure CS20: Rural character



3.4 Discussing an appropriate zone for the township

The exercise discussed what was an appropriate zone within the township boundary to achieve the vision and preferred rural character. Four zones were discussed as possibilities, these included:

- Neighbourhood Residential Zone - Schedule 4 (the current zoning of the land);
- Neighbourhood Residential Zone - Schedule 5;
- Low Density Residential Zone; and
- Another zone that residents would like to see.

Each of these zone possibilities was discussed with the stakeholders along with what the key elements of each zone were. Each zone possibility is outlined in Figure CS21.

The purpose of this exercise was twofold. Firstly, it was for the stakeholders to understand what a zone could do and what the implications were if a particular zone was applied to an area and how residential zoning has historically been applied within Latrobe City Council.

Secondly, it was for participants to collectively discuss where they thought the zones best applied. The results of which will be reviewed and analysed along with the outcomes of the background review, land supply analysis, and the outcomes of the infrastructure and servicing assessment.

The stakeholders were first asked to discuss what they thought the pros and cons of each zone option were (shown in Figure CS21). The notes in the 'pros' and 'cons' section are answers from stakeholders at the workshops. For the purpose of this report, only spelling has been adjusted in Figure CS21.

They were then asked to map as a small group where they would apply each zone, whether

that be one zone to the entire township or a combination of the zones was up to the group.

They were also asked about the importance of ageing in place and if people required smaller dwellings, where they would like to see those smaller lots within town. The compiled pros and cons are shown on page 55.

3.4.1 IMPLICATIONS FOR ZONING

While the results of the mapping exercise were varied there were a couple of key elements that were common across the majority of plans:

- Stakeholders agreed that some form of ageing in place whether that be aged care or smaller lots should be provided within town. It should be in close proximity to public transport and the shop.
- Most stakeholders thought larger blocks at a minimum of 1000 square metres was appropriate for the majority of the townships as it kept the larger blocks but allowed for some subdivision potential and future growth of the town.
- Most stakeholders were also happy to have the Low Density Residential Zone apply on the larger blocks within town.
- Some stakeholders applied the LDRZ across the entire town.

For all drawn up maps, refer to Appendix 2.

Figure CS21: Pro and cons of different zones

ZONE	KEY ELEMENTS	PROS (as stated by Stakeholders)	CONS (as stated by Stakeholders)
LOW DENSITY RESIDENTIAL ZONE (LDRZ)	<ul style="list-style-type: none"> Objective is to provide for low density residential development in the absence of reticulated sewerage. No permit trigger for a single dwelling. Any minimum subdivision area specified in the schedule to the LDRZ must be at least: <ul style="list-style-type: none"> 0.4 hectare for each lot where reticulated sewerage is not connected. 0.2 hectare for each lot with connected reticulated sewerage. Allows outbuilding exemptions. 	<ul style="list-style-type: none"> Look more rural. Keeps rural atmosphere. Keeps smaller township Allows for keeping of a small number of animals. If no improvement to current services then can only use this zone. Maintains current character. Ideal for larger lots outside of town. 	<ul style="list-style-type: none"> Nuisance, noises, unmaintained sometimes too large. Fire management risk. Run off – drainage. Limit aged care opportunity on downsizing.
NEIGHBOURHOOD RESIDENTIAL ZONE SCHEDULE 4 (NRZ4 Regional suburbs) Live work Latrobe Zone for Toongabbie	<ul style="list-style-type: none"> Objective is to provide large spacious neighbourhoods with generous setbacks. Can set min lot sizes for single dwellings – in the case lots under 500m². Ability to vary Rescode requirements – in this case 5 has been varied. Can set max building heights – in this case none. 	<ul style="list-style-type: none"> Preferred zone for in town. About ½ acre ok too!! Capacity for 40 lots Flexibility. Can designate a particular area: <ul style="list-style-type: none"> Aged and retirement rather units. Prepare to have some of these zones if improvements to services can be guaranteed. Ability to influence over house loveliness. 	<ul style="list-style-type: none"> Seems too much like towns i.e. Traralgon water pressure. Services in general. Allows changes to existing neighbourhoods. Don't want units scattered everywhere. Ability to limit height where this intrudes on a view to hills. (Not many cases – see King Street between Hazel and Scott Streets).
NEIGHBOURHOOD RESIDENTIAL SCHEDULE 5 (NRZ5) Possible new zone	<ul style="list-style-type: none"> Neighbourhood, heritage, environmental or landscape character objectives must be specified in the schedule. Can set min subdivision area. Can set min lot size for single dwellings. Ability to vary Rescode requirement. Can set max building heights. 	<ul style="list-style-type: none"> Can set lot sizes. Opportunity for something special (different to Traralgon). Village feel. 	<ul style="list-style-type: none"> Don't want to make it hard for people.
Other Zones?	<ul style="list-style-type: none"> Simplify lots for downsizing. 	<ul style="list-style-type: none"> Aged care facilities or retirement living is good close to town. A zone means that units are not scattered across town. 	

3.5 Infrastructure Design and Provision

Road surface treatments and drainage options were repeatedly brought up as an issue throughout the surveys. Furthermore, while undertaking the servicing and infrastructure provision, a gap was found to exist for the road standards for small towns as outlined in the infrastructure design manual.

In terms of the 'gap', the design standard for 'urban areas' for new streets is for the streets to be sealed, kerbed and channelled. While in low density and rural living areas, the design standard for new streets is to be sealed with a dry swale (a perforated pipe under the swale) drain. If the preferred character for small towns is to have a sealed road with a dry swale, then this could not happen as it would be inconsistent with the *Infrastructure Design Manual*. This is further discussed in the draft *Toongabbie Structure Plan Background Reports - Infrastructure and Servicing Assessment 2020*.

As such, it was important to discuss what the infrastructure issues were, where they occur and what the preferred design standard was, as well as understanding what the preferred options meant in terms of cost implications and timing.

For this exercise, members of the City Assets division facilitated the discussion.

The purpose of the exercise was threefold:

- To gain a deeper understanding of the issues within Toongabbie;
- To facilitate a discussion of different design standards for road treatments and drainage options; and
- To establish where priority movement corridors are.

Stakeholders were given an aerial map of

Toongabbie and asked to identify where the problem was, and what it was. Stakeholders were then asked, to prioritise where they would like to infrastructure either upgraded based on where they thought had the highest usage and greatest benefit to the community.

Thirdly, stakeholders were given a number of different drainage options, they were asked to consider what they thought the pros and cons are for each and whether an option fit with their preferred rural character (shown in Figure CS22).

For the purpose of this report, only spelling has been adjusted in the Figure CS22 from the answers provided by stakeholders at the workshop.

The options included:

- Sealed, kerbed and channelled;
- Sealed with a perforated pipe under the swale drain that allows water to drain away from the swale (this could include plantings within the drains for streetscape beautification);
- Sealed with an open swale; and
- Unsealed with an open swale.

Key outcomes of the exercise include:

- The preferred road treatment within town is a sealed road with no kerbing;
- The preferred drainage treatment within town is a perforated pipe under the swale drain;
- The preferred character for rural areas is a compacted gravel road;
- The preferred character for Victoria Street is that it should be kerbed, sealed and channelled as it deals with a higher level of traffic during school times and is part of the key movement network; and
- The key movement extends around the

school, down Victoria Street to the shop and along Traralgon-Maffra Road to the recreation reserve with an offshoot to the Toongabbie Mechanics Institute.

Some other comments included:




- There should be gravel paths or no paths.
- Deep swale drains are needed for capacity during larger storms.

The options for road and drains were discussed with the City Assets Division and is further outlined in the draft *Toongabbie Structure Plan Background Reports - Infrastructure and Servicing Assessment 2020*.



Photo: Footpath along Victoria Street
Source: McKenzie, T. 2020.

Figure CS22: Road and drain options

ROAD & DRAIN OPTION	KEY CONSIDERATIONS	PROS	CONS
SEALED, CURBED AND CHANNELLED 		Caters to higher traffic volumes – should be applied to Victoria Street	Costly Not a preference in a rural area/character
SEALED WITH PIPE UNDER SWALE DRAIN 	Cost effective	Would manage stormwater runoff better than the current spoon drains Preferred for other areas other than Victoria Street. Keeps rural atmosphere More achievable Allows for mowing Still allows for water to move through	
SEALED WITH OPEN SWALE 	Ensuring spoon drains are cleaned out on a regular basis		Can be deep
UNSEALED WITH OPEN SWALE 		Keeps a rural feel in areas outside the town	

4

Outcomes

Larger lots, and
space
atmosphere

4.1 Summary of Key Findings

The community value the rural character in Toongabbie, specifically:

- Large block sizes;
- Open spaces and a sense of openness;
- Access to and retention of environmental assets;
- Protection of the historic buildings;
- Road surfaces and the difference between the township and adjoining rural residential areas; and
- The retention of community facilities including the recreation facilities and the primary school.

The stakeholders aspire for Toongabbie to be more self-contained by having greater access to shops and to services such as childcare which will mean that the town plays more of a service centre role to the broader community.

The main perceived land use need is for more rural living zoned land. Within town, stakeholders would like to see a balanced approach to achieve an diverse mix that retains the larger blocks and rural character while allowing for ageing in place:

- Stakeholders agreed that some form of ageing in place whether that be aged care or smaller lots should be provided within town. It should be in close proximity to public transport and the shop.
- Most stakeholders thought that larger blocks at a minimum of 1000 square metres was appropriate for the majority of the townships as it kept the larger blocks but allowed for some subdivision potential and future growth of the town.
- Most stakeholders were also happy to have the Low Density Residential Zone apply on the larger residentially zoned blocks on the edge of the township.

There is a clear desire to have more connections around town and more defined footpaths, along with sealed roads and a better drainage system, however, in keeping the rural character, stakeholders discussed that:

- The preferred road treatment within town is a sealed road with no kerbing;
- The preferred drainage treatment within town is a pipe under the swale drain;
- The preferred character for rural areas is a compacted gravel road;
- The preferred character for Victoria Street is that it should be kerbed, sealed and channelled as it deals with a higher level of traffic during school times and is part of the key movement network; and
- The key movement extends around the school, down Victoria Street to the shop and along Traralgon-Maffra Road to the recreation reserve with an offshoot to the Toongabbie Mechanics Institute.

While planning policy has limited scope in how it can address existing infrastructure issues, design standards can be included in the *Infrastructure Design Manual* which has been incorporated into the Latrobe Planning Scheme through Amendment GC112. The key movement corridor can also be shown on the Structure Plan which guides future development outcomes.

For flooding issues, the majority of recent issues have been caused by stormwater runoff, and the pooling of rainwater due to the relatively flat topography of Toongabbie.

As there are a number of service agencies (West Gippsland Catchment Management Authority, Gippsland Water and Latrobe City Council) that service different systems that relate to flooding, an integrated water management plan is the

4.2 Strategic Directions

most appropriate way to address flooding and drainage issues. This is further discussed in the draft *Infrastructure and Servicing Assessment 2020*.

For bushfire risk mitigation, the majority of responses looked at land management as the primary response to reduce the risk.

Land management actions along with a land use planning response is being prepared in the draft *Municipal Bushfire Risk Assessment 2020*, while a Toongabbie specific response to state land use planning policy is addressed in the draft; *Toongabbie Structure Plan Background Reports - Bushfire Risk Assessment 2020*.

The vision sets the overall strategic direction for the Structure Plan. The strategic directions include, in no particular order:

- Maintain the historic, cultural and environmental values within Toongabbie;
- Retain the quiet, rural atmosphere;
- Promote the tourism assets;
- Improve infrastructure within the town;
- Retain the larger block sizes within the town;
- Support rural residential allotments on the outskirts of town;
- Support the community groups and associated infrastructure; and
- Protect productive agricultural land from further subdivision.

4.3 References

Maddern, I.T., 1967. *The History of Toongabbie Victoria*. Toongabbie, Victoria.

5

Appendices

[illegible]

Appendix 1

Survey questions

Toongabbie Town Evaluation

What matters to you? We would love to hear your thoughts on what you think is great about Toongabbie and what can be improved. Latrobe City wants you to help shape the future of Toongabbie.

Latrobe City will be developing a Structure Plan for Toongabbie in 2019. A Structure Plan is a map that sits in the Latrobe Planning Scheme and provides a vision for the town on how it grows in the future along with policy directions on residential, commercial and infrastructure provisions. This survey forms one part of the community consultation for the development of the Structure Plan.

A Toongabbie Town Plan is being undertaken at the same time by the Toongabbie Township Group. Some of the questions relate to your priorities around capital works improvements for this plan.

This information collected through this survey will be used to inform policy directions and the development of the report for the Latrobe City Toongabbie Structure Plan. All surveys will be de-identified.

The following questions apply to the Toongabbie Township and the immediate surrounds.

The collective results will form a part of the Toongabbie Structure Plan Background Report.

Please send all hard copy surveys to:

Strategic Planning Department
Latrobe City Council
PO Box 264
MORWELL VIC 3840

***Required**

1. Name (optional)

2. Contact details (if you would like to receive further updates about the Toongabbie Structure Plan and/or the Toongabbie Town Plan)

3. If you would like updates, please specify which plan you would like updates on

Mark only one oval.

☐

Toongabbie Structure Plan

☐

Toongabbie Town Plan

☐

Both

4. Age *

Mark only one oval.

- ☐ 15 years old or younger
- ☐ 16-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ 65-74
- ☐ 75 years old and older

5. How long have you lived in Toongabbie?

6. How would you describe the feel of Toongabbie?

7. What are your concerns or issues in Toongabbie? Please list in priority order.

8. What features would you like protected in the town?

9. What do you like about living in Toongabbie? *

Tick all that apply.

- ☐ Rural atmosphere
- ☐ Large block sizes
- ☐ Community facilities
- ☐ The people and community organisations
- ☐ Natural features
- ☐ Other: _____

10. If you could add something, what would it be? *

Tick all that apply.

- ☐ Different types of housing, i.e. units, townhouses
- ☐ Different Lot sizes
- ☐ More shops
- ☐ Other: _____

11. What would you like to see Toongabbie look like in 10 to 15 years?

12. Would you like to see more residential , commercial, farming and/or rural living in Toongabbie?

Tick all that apply.

- ☐ Residential (Housing on blocks up to 2000 square metres)
- ☐ Commercial (Shops)
- ☐ Rural Living (Rural Residential)
- ☐ Farming
- ☐ Other: _____

13. What features would you promote to visitors to Toongabbie?

14. Should there be greater opportunities to work in and around Toongabbie?

15. What sectors would you like to grow jobs in?

Tick all that apply.

- ☐ Retail
- ☐ Natural Environment
- ☐ Rural Tourism
- ☐ Agricultural Industries
- ☐ Other: _____

16. Would you like to see farmland protected?

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe

17. How easy is it to walk around Toongabbie?

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Easy

18. How easy is it to ride (bike or horse) around Toongabbie?

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Easy

19. How easy is it to drive around Toongabbie? *

Mark only one oval.

	1	2	3	4	5	6	7	8	9	10	
Difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Easy

20. What improvements could be made to increase movement within Toongabbie?

Tick all that apply.

- ☐ More footpaths
- ☐ Access to creeks and streams
- ☐ Tracks and trail management
- ☐ More connections and links around town
- ☐ Other: _____

21. Would you support different energy sources (E.g. micro-grids) for the town?

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Maybe
- ☐ Other: _____

22. Have you experienced any flooding/drainage issues?

23. When did this occur?

Example: 15 December 2012

24. What changes would you like to see in relation to the flooding/drainage issues?

25. In planning the future of the town, what might be done to reduce the risk of bushfire?

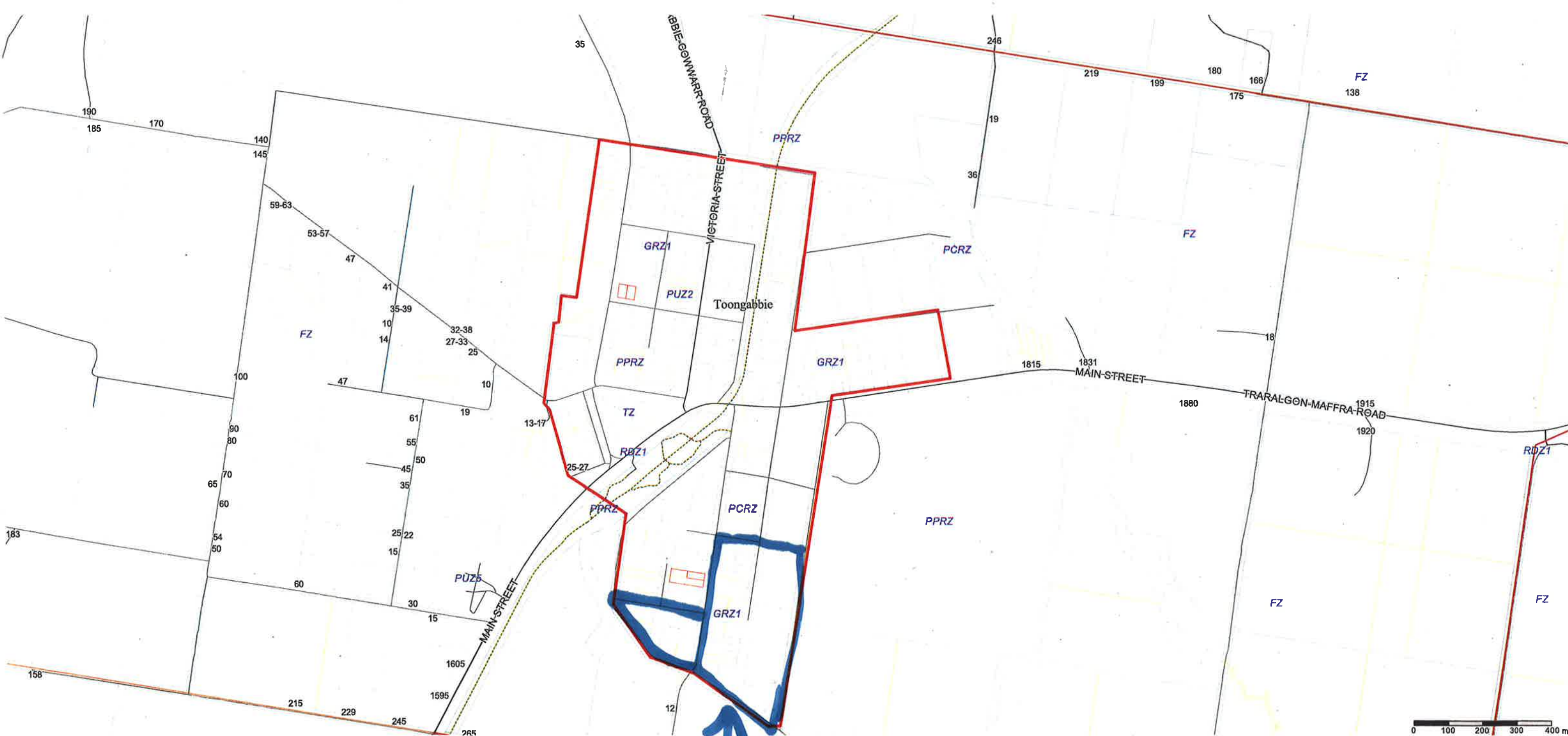
Tick all that apply.

- ☐ More roadside maintenance
- ☐ Providing a safe neighbourhood centre/refuge
- ☐ Locating open space on the edge of town as a buffer
- ☐ Improved building standards
- ☐ Communication in emergencies
- ☐ Other: _____

26. Are there any other comments that you would like to add?

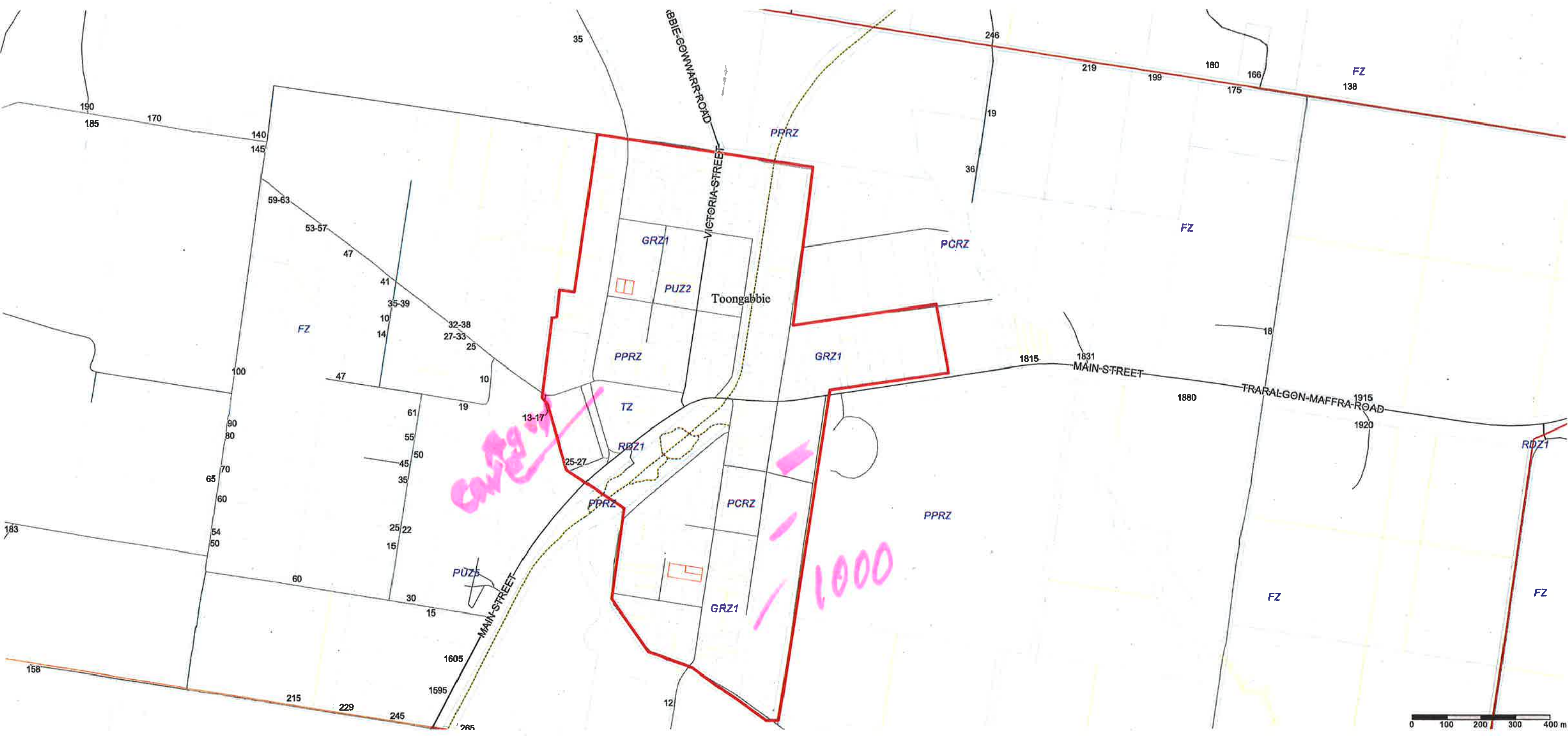
Appendix 2

Zone Map Mock-ups









MAIN STREET

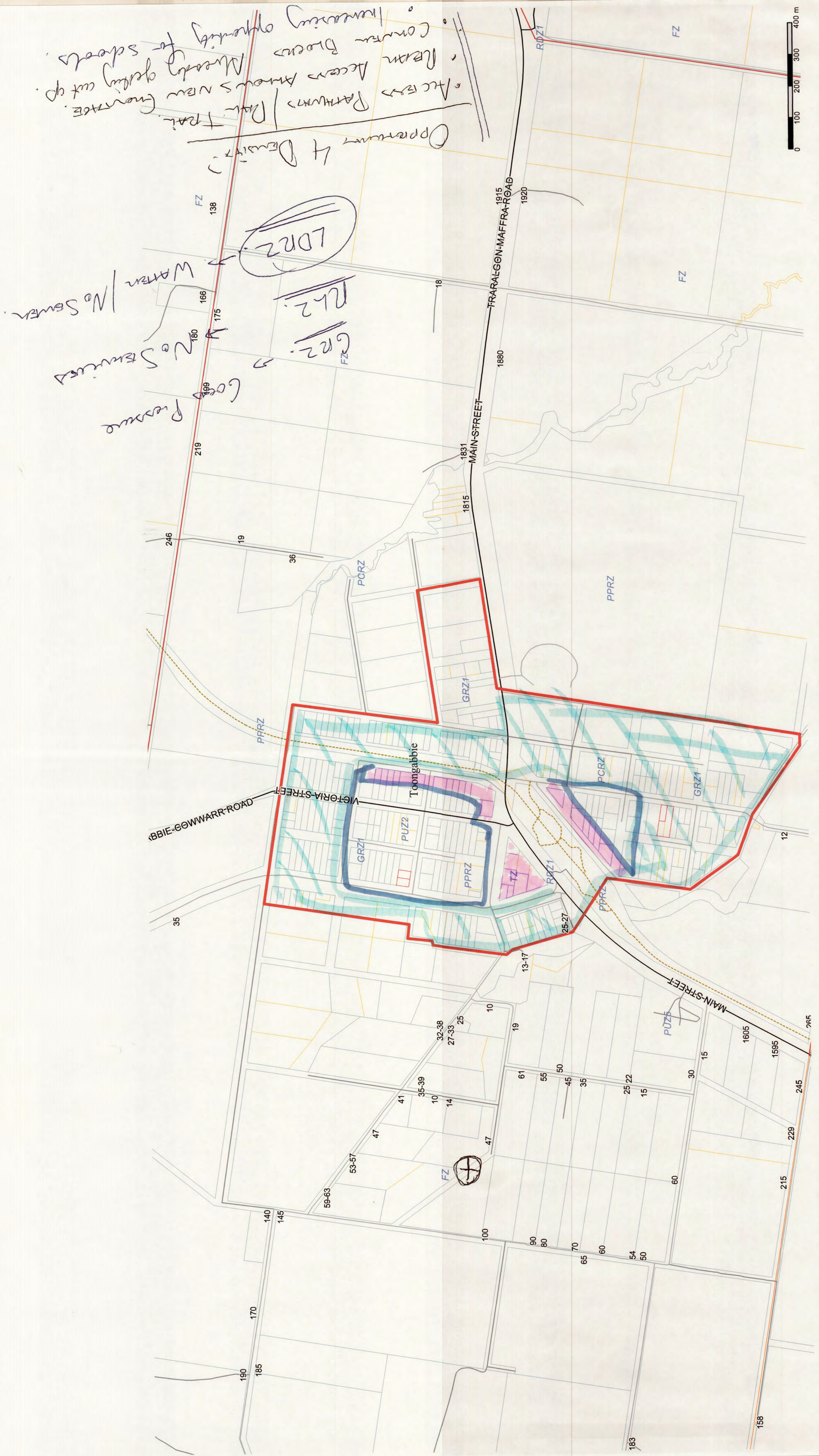
NR25

VICTORIA STREET

CDR2

MAIN STREET

Not interested
in side
setbacks
So much
front set
- road
and
drainage
for
us.



Opportunity 4 Density?
Access Partners / Rail Trail
Access Areas now generating cut up.
Access Blocks
Increasing opportunity for schools.
Water / No Sewer





Hill Street - narrow

DRAFT

Latrobe*City*

Context Report

Toongabbie Structure Plan
Background Report



<i>Name</i>	<i>No.</i>	<i>PM Approved</i>	<i>PD Approved</i>	<i>Date</i>
Draft Context Report	1	TM	LD	06.04.2020
Draft Context Report	2	TM	LD	05.06.2020

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ACKNOWLEDGEMENTS

The Study Team recognises that the State of Victoria has an ancient and proud Aboriginal history and complex ownership and land stewardship systems stretching back many thousands of years. We would like to acknowledge the Traditional Owners of this land, and offer our respect to the past and present Elders, and through them to all Aboriginal and Torres Strait Islander People.

Executive Summary

Latrobe City Council has prepared a Context Report for the Toongabbie township and surrounding areas, as identified in the study area on page 13 of the draft *Toongabbie Structure Plan Background Reports 2020*.

This report aims to inform the Toongabbie Structure Plan by identifying any planning policy directions that would inhibit any potential growth, as well as to identify any gaps that can improve the liveability of Toongabbie residents. The assessment aims to:

- Assess land supply and the need for more residential or rural residential land;
- Review and analyse any relevant strategic documents, state and local policy within the Latrobe Planning Scheme; and
- Assess the demographic and economic data to identify any gaps in policy that can be address through the Toongabbie Structure Plan.

This report will inform the appropriate planning scheme tools to use based off of planning scheme policy directions and strategic documents.

As a result of this context report, key recommendations for the Toongabbie Structure Plan include:

1. There is enough land to support infill development within Toongabbie over the next 20 years providing that further subdivision can occur on the larger parcels.
2. There is a need to allow residents to age in place through the provision of smaller parcels, close to the shop and public transport. The General Residential Zone - Schedule 4 which allows for incremental change could be applied to lots that are not affected by the Heritage Overlay or flood overlays. Consideration should be give to lots that are

only partially in the flood overlays (as the only constraint) and whether further subdivision would be supported.

3. Given the lot density in Toongabbie and the sewer capacity, the larger lots in the Toongabbie urban area should be rezoned to LDRZ unless subject to flooding constraints and cannot support septic. This would allow for continued growth within the town and cater to the demand for LDRZ.
4. Provision for Low Density Residential land should be made on the Toongabbie Structure Plan to allow for future growth. This is likely to be to the east of the township between Sparks Lane and Rosedale Creek, south of Hill Street, to Traralgon-Maffra Road for a first stage future release.
5. Any future urban expansion should be LDRZ unless the sewer system is substantially upgraded.
6. Rezone up between 58 Hectares of land to RLZ at a minimum subdivision size of 2 Hectares as there is an inadequate supply of rural residential land to meet forecast demand over the next 20 years
7. Review Township Zone provisions and policy provision that enable the continued growth of the commercial area.
8. Support home-based businesses through the continued advocacy for improvements to the telecommunications infrastructure and through access to business development and expansion opportunities.
9. Diversify the tourism offering by supporting the Toongabbie Township Group in the development of an event that captures a greater share of the visitor market.
10. Latrobe City to conduct a further analysis and undertake further community consultation into the need for childcare facilities in Toongabbie.
11. Continue to support the Committee of

Management in maintaining community recreation assets.



Photo: Skate Park
Source: McKenzie, T., 2020.

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1

Introduction

1.1 Purpose

The purpose of this report is to inform the development of the Toongabbie Structure Plan, by providing an overview of the planning policy framework and relevant strategic documents, analysing the land supply and demand, analysing the social infrastructure and recreation needs and analysing the economic context.

1.2 Methodology

A desktop assessment was carried out which included:

- A review and analysis of state and local planning policy.
- A review of relevant strategies and documents;
- A review of relevant Council documents;
- An assessment of the land supply;
- An assessment of the economic data; and
- An assessment of the demographic data.

2

Planning Context



2.1 Overview

Outlined is the key planning policies and strategic studies relevant to the Toongabbie Structure Plan.

The Latrobe Planning Scheme sets out policies and provisions for the use, development and protection of land. The sections outlined in Table CT1 are the relevant planning policies which relate to the future land use and development of Latrobe and more specifically, the preparation of the Toongabbie Structure Plan. It also includes tools that do not currently apply within the study area.

The strategies in Table CT2 outline the state, regional and local strategic documents that are relevant to Toongabbie.

Relevant Planning Practice Notes, Ministerial Advisory Notes and Ministerial Directions are outlined in Table CT3. Each documents gives guidance how specific planning tools or regulations should be applied. Details for each of these documents is found in Appendix 2.

A detailed description of each of these follows the overview.

Photo: Cows on Afflecks road.

Source: McKenzie, T., 2020.



Table CT1: Relevant planning policy considerations

Relevance	Policy
Planning Policy Framework	Clause 71.02-3 Integrated Decision Making Clause 11 Settlement Clause 12 Environmental and Landscape Values Clause 13 Environmental Risks Clause 14 Natural Resource Management Clause 15 Built Environment and Heritage Clause 16 Housing Clause 17 Economic Development Clause 18 transport Clause 19 Infrastructure
Municipal Strategic Statement	Clause 21.02 Housing and Settlement Clause 21.03 Natural Environment Sustainability Clause 21.04 Environmental Risks Clause 21.05 Natural Resource Management Clause 21.06 Built Environment and Heritage Clause 21.07 Economic Development Clause 21.08 Transport and Infrastructure Clause 21.09 Local Areas
Local Policies	Clause 22.02 Rural Subdivision and Dwellings Clause 22.03 Rural Tourism
Planning Zones	Clause 32.03 Low Density Residential Zone Clause 32.05 Township Zone Clause 32.08 General Residential Zone Clause 32.09 Neighbourhood Residential Zone Clause 35.03 Rural Living Zone Clause 35.07 Farming Zone Clause 36.01 Public Use Zone Clause 36.02 Public Park and Recreation Zone Clause 36.03 Public Conservation and Resource Zone Clause 36.04 Road Zone Category 1
Planning Overlays	Clause 42.02 Vegetation Protection Overlay Clause 43.01 Heritage Overlay Clause 43.02 Design and Development Overlay Clause 43.03 Development Plan Overlay Clause 44.03 Flood Overlay Clause 44.04 Land Subject to Inundation Overlay

Table CT2: Relevant strategic document

Relevance	Policy
State Relevance	<p>Plan Melbourne 2017-2050</p> <p>Ready for Tomorrow – A Blueprint for Regional and Rural Victoria 2010</p> <p>Homes for Victorians 2017</p> <p>Residential Zones State of Play Report 2016</p> <p>Victoria's 2020 Tourism Strategy 2013</p> <p>Victorian Visitor Economy Strategy 2016</p>
Regional Relevance	<p>Gippsland Regional Plan 2015-2020</p> <p>Gippsland Regional Growth Plan 2014</p> <p>Gippsland Tourism Strategic Direction 2013 – 2018</p> <p>Regional Forest Management Plan for Gippsland 2004</p>
Local Relevance	<p>Live Work Latrobe Housing Strategy 2019</p> <p>Live Work Latrobe Rural Land Use Strategy 2019</p> <p>Structure Plans for Toongabbie, Yallourn North and Yinnar 2002</p> <p>Latrobe City Public Open Space Strategy 2013</p> <p>Northern Towns Recreation Plan 2010</p> <p>Latrobe City Heritage Study 2010 (Vol. 1-3)</p> <p>Latrobe City Council Plan 2017 – 2021</p> <p>Latrobe 2026</p> <p>Latrobe City Municipal Public Health and Wellbeing Plan 2018-2022</p> <p>Latrobe Economic Development Strategy 2016 - 2020</p> <p>A Strength Led Transition 2016</p>

Table CT3: Relevant planning directions

	<i>Title</i>
Ministerial Direction	Ministerial Direction – The Form and Content of Planning Schemes Direction No. 1 - Potentially Contaminated Land Direction No. 11 – Strategic Assessment of Amendments Direction No. 15 – The Planning Scheme Amendment Process Direction No. 19 - The Preparation and Content of Amendments that may Significantly Impact the Environment, Amenity and Human Health
Advisory Notes	AN29: Amendment VC66 Regional Blueprint AN68: Bushfire State Planning Policy VC140 AN69: Amendment VC143
Planning Practice Notes	PPN01: Applying the Heritage Overlay PPN02: Public Land Zones PPN07: Vegetation Protection in Urban Areas PPN12: Applying Flood Provisions in Planning Schemes PPN23: Applying the Incorporated Plan and Development Plan Overlay PPN28: Using the Neighbourhood Character Provisions in Planning PPN30: Potentially Contaminated Land PPN37: Rural Residential Development PPN42: Applying the Rural Zones PPN43: Understanding Neighbourhood Character PPN45: Aboriginal Heritage Act 2006 and the Planning Permit Process PPN64: Local Planning for Bushfire Protection PPN84: Applying the Minimum Garden Area Requirement PPN90: Planning for Housing PPN91: Using the Residential Zones

2.2 Planning Policy Framework

The Planning Policy Framework (PPF) contains strategic issues of State and Regional importance that must be considered when planning decisions, including those related to future land use and development, are made. The PPF seeks to ensure that the objectives for planning in Victoria, as set out in the *Planning and Environment Act 1987*, are met and administered in each municipality. The clauses in Appendix 1 from the PPF may apply and frame the conversation around structure planning for Toongabbie.

The LPPF sets a local strategic policy context for a municipality. It comprises the MSS and specific local planning policies. The LPPF must be consistent with the PPF and should, where possible, demonstrate how broader state planning policies will be achieved or implemented in a local context. If there is an inconsistency between the PPF and the LPPF, the PPF prevails.

The Toongabbie Structure Plan should be consistent with the objectives and strategies in the Planning Policy Framework in the Latrobe Planning Scheme.

2.2.1 IMPLICATIONS

The following is a summary of the implications that the PPF has on the Toongabbie Structure Plan.

Settlement

Toongabbie is a 'small town' within the Latrobe Settlement Hierarchy where growth is supported, as such this plan aims to ensure that there is enough land supply over the next 15-20 years and that it responds to the needs of the community through the provision of housing, recreation, open space, commercial land, and community infrastructure.

Environmental and Landscape Values

Toongabbie has patches of significant native vegetation throughout the study area, it also has two waterways that flow through the study area. As such, there is an opportunity to protect the remnant vegetation and improve the landscape qualities through open space linkages and re-vegetation either through the application of vegetation protection overlays and/or through waterway management plans undertaken in conjunction with West Gippsland Catchment Management Authority (WGCMA).

Environmental Risks and Amenity

Toongabbie has both a bushfire risk and a flood-risk that should be mitigated. Planning scheme tools such as appropriate overlays can help mitigate the risk for both bushfire and flooding. A hotter, drier climate has seen more intense and more frequent bushfires in recent years.

Agriculture

Toongabbie has identified productive agricultural land to the south west of the study area and sits on the edge of the Macalister Irrigation District to the east, as such, any further growth should limit the impact on the ability of these areas to continue commercial farming operations. There is an identified timber haulage route along Humphrey Road west of Harris Lane which means any abutting properties are discouraged from going to a rural living zone.

Built Environment and Heritage

Toongabbie has identified a preferred rural character for the township's identity. Low scale housing and a sense of space between dwellings will help retain this sense of character. Toongabbie has an identified heritage precinct including the Village Green and Toongabbie Mechanic's Institute.



Housing

Toongabbie has identified 'limited' housing change areas and 'minimal' housing change areas as defined in *Live Work Latrobe Housing Strategy 2019* which encourages single dwellings or dual occupancies housing typologies only except within 200m of an activity centre where units and townhouses are encouraged. There is scope to encourage urban infill with Toongabbie.

Economic Development

Toongabbie has an opportunity to leverage its natural assets and build upon the Gippsland Plains Rail Trail that runs through the middle of the town whether this be through rural tourism opportunities or the provision of more shops.

Transport

There is an opportunity to advocate for greater provision of public transport within Toongabbie and build upon existing links within town to create a core movement network for pedestrians and cyclists. The Gippsland Plains Rail Trail is a key inter-regional cycling and pedestrian route.

Infrastructure

Toongabbie has significant infrastructure constraints including the provision of sewer and water infrastructure, and a lack of telecommunications towers. There is also a need for further childcare and day care facilities. These will need to be addressed in order to develop in a sustainable manner.

Implementation

For Toongabbie, a combination of zones, overlays and policy have been considered to address the preferred rural character and land use, identification of additional land requirements, and appropriate mitigation responses to the identified constraints in order to have a sustainable, liveable community while prioritising human life above all else.

Photo: VLine bus stop next to General Store.
Source: McKenzie, T., 2020.



2.3 Planning Scheme Amendments and Projects

2.3.1 AMENDMENT C119 RETAIL STRATEGY (CURRENTLY AWAITING APPROVAL FROM THE MINISTER FOR PLANNING)

The Amendment applies to all land within the municipality, in particular areas identified for commercial development in Primary, Neighbourhood and Local Activity Centres.

The draft Strategy provides a foundation to co-ordinate the future planning and development of retail developments within Latrobe City into the future (to 2033). It provides guidance on the appropriate location, format and timing of future retail developments, while considering competition, need and necessities for success to assist in creating ongoing employment opportunities.

This Amendment therefore gives effect to the principles and recommendations contained within the draft Strategy.

In the *Latrobe City Council Retail Strategy - Background Research and Analysis 2019* it states:

The sole retailer in the township is a general store comprising built floorspace of approximately 120m² (the general store also contains fuel and post office). The continuation of a retail presence in Toongabbie is important in order to provide day-to-day convenience items and services, as well to retain a community focal point within the town.

Non-retail land uses of note in Toongabbie include a golf course, primary school and recreation reserve.

The idyllic Toongabbie Village Green, the Gippsland Plains Rail Trail and the nearby Conwarr Weir may present opportunities to generate

additional retail trade associated with visitation to the town. It is understood that the provision of appropriate water/sewage infrastructure is a barrier to development on some sites.

In the retail hierarchy, Toongabbie is identified as a small town centre which states that “*in addition to convenience retail, town centres also provide a limited range of commercial, community (e.g. community hall/centre), and personal services (e.g. post office).*”

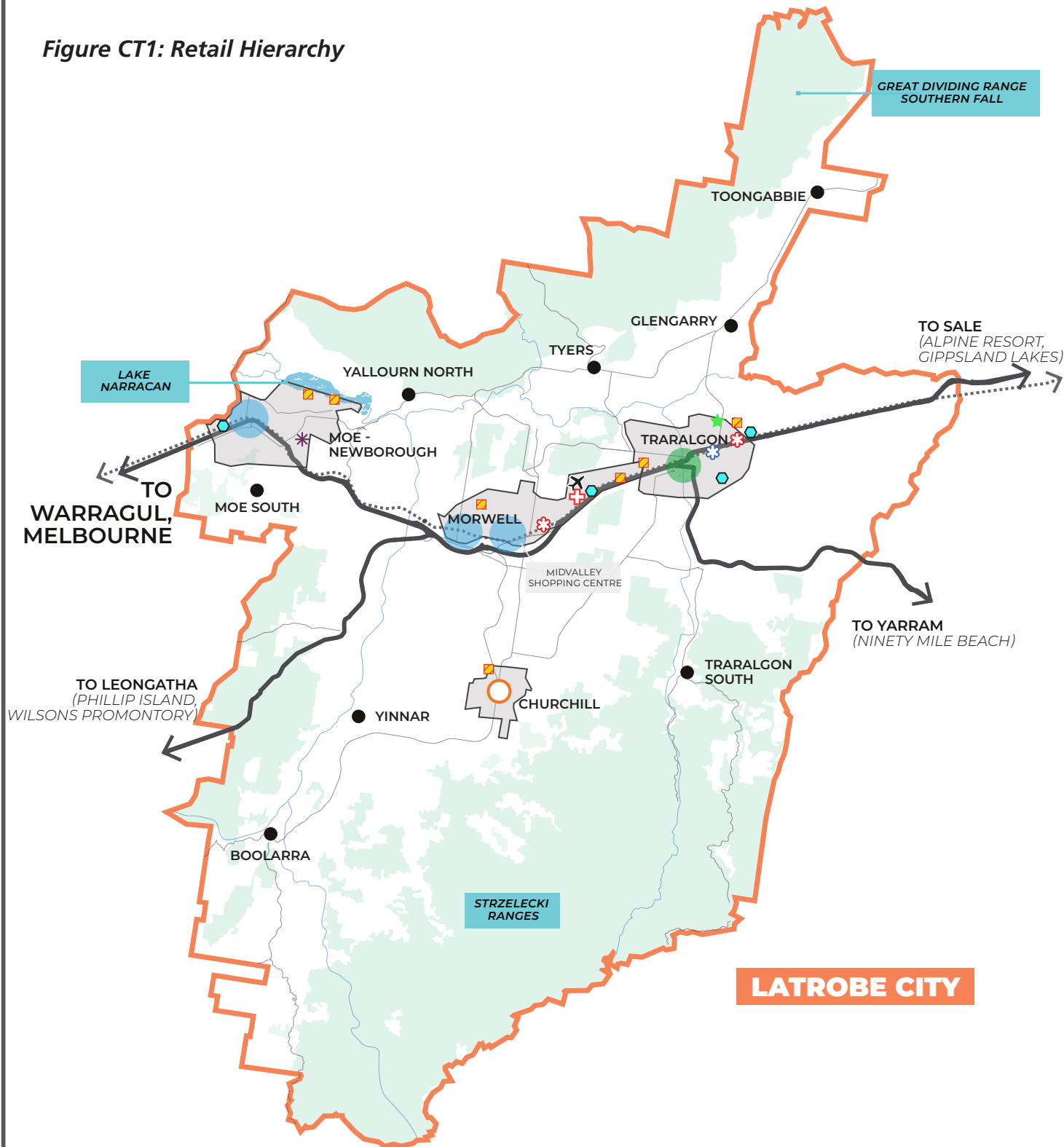
One of the objectives of the retail strategy is to:

Ensure convenient and accessible retail services through viable neighbourhood centres, small town centres and local centres by:

- Support retail uses that attract visitor spending and support the integration of destination retail uses (e.g. cafes, restaurants, gift shops).
- Support small towns in the preparation and implementation of community plans to capture the voice and vision of the community and to document a list of local priority projects that the community would like to work towards achieving.
- Explore opportunities to attract increased visitation to each small town centre, acknowledging each town's unique features and attractions. This may involve creating a small town trail, promoting local food, produce, arts and holding festivals and events.



Figure CT1: Retail Hierarchy



DRAWING KEY

LATROBE CITY BOUNDARY

RETAIL HIERARCHY

- REGIONAL RETAIL CENTRE
- SUB REGIONAL RETAIL CENTRE
- ✱ NEIGHBOURHOOD CENTRE (EXISTING)
- ★ NEIGHBOURHOOD CENTRE (APPROVED)
- ⬡ NEIGHBOURHOOD CENTRE (POTENTIAL)
- ◻ LOCAL CENTRE (POTENTIAL)
- ⬡ HOMEMAKER PRECINCT (EXISTING)
- ⬡ HOMEMAKER PRECINCT (PLANNED)
- LARGE TOWN CENTRE
- SMALL TOWN CENTRE

ECONOMIC ASSETS

- ✈ LATROBE REGIONAL AIRPORT
- WATERWAY
- + LATROBE REGIONAL HOSPITAL
- ⬢ LAKE NARRACAN

MOVEMENT NETWORK

- FREEWAYS/HIGHWAYS
- MAJOR ROADS
- ⋯ RAIL CONNECTION

OTHERS

- BUILT UP AREAS

0 2.5 5km
N
January 2020

*Local Activity Centres (existing) are shown on individual town Structure Plans

2.3.2 MUNICIPAL BUSHFIRE ASSESSMENT AND RURAL REZONING STRATEGY (PROPOSED AMENDMENT)

In Amendment C105 Live Work Latrobe, recently gazetted on 21 November 2019 and now forms part of the Latrobe Planning Scheme, rural living precincts were proposed to the east and west of Toongabbie. However, Amendment VC140 was introduced while the amendment was being finalised. As such, further work around bushfire risk was needed before any rural living rezonings could proceed. The draft *Municipal Bushfire Risk Assessment* and *Rural Living Strategy* is the result of that further work. It proposes to introduce local policy in relation to Clause 13.02-1. It proposes to introduce a 'traffic light' map which indicates where new rural living precincts can go:

- Green - without the need for further bushfire risk mitigation tools;
- Yellow - further bushfire risk mitigation tools need to be considered to reduce the risk to an acceptable level.
- Red - No new rural living precincts can be proposed in these areas due to the extreme bushfire risk.

It proposes to introduce new bushfire risk mitigation tools through appropriate planning scheme tools. Further details around this amendment and the implications for Toongabbie are discussed in the draft *Toongabbie Structure Plan Background Reports - Bushfire Risk Assessment 2020*.

2.3.3 PLANNING POLICY FRAMEWORK TRANSLATION AND PLANNING SCHEME REVIEW (PROPOSED AMENDMENT)

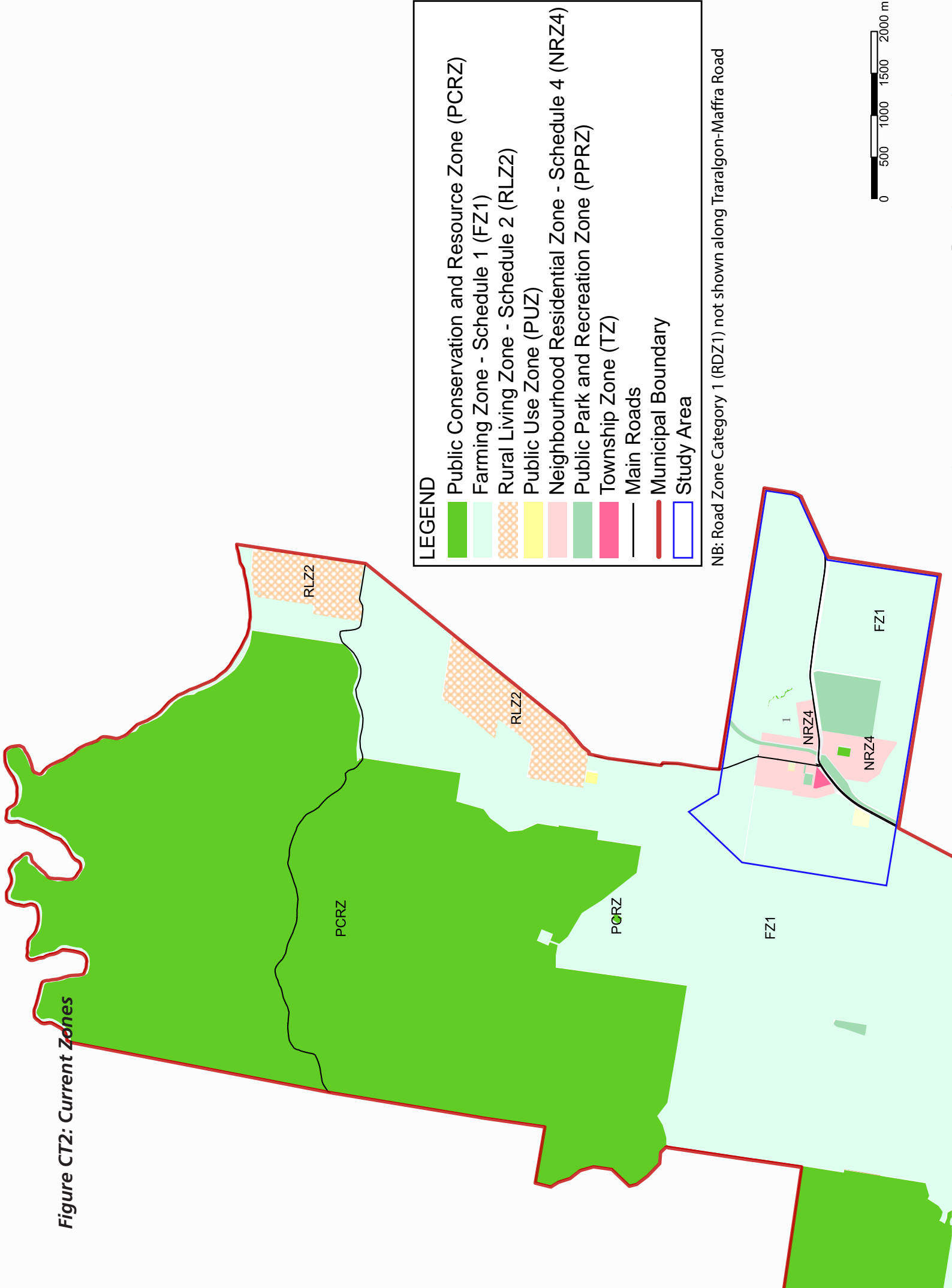
Currently the Latrobe Planning Scheme consists of state and regional policy under Clause

numbers 10 - 19 and local policy sits under Clause 21 and 22. The Planning Policy Framework Translation seeks to move the local policy from Clause 21 and 22 and move them under the state and regional policy sections so that all related policies sit together. It also seeks to remove any duplication between state and local policy. For example, Clause 14.03-1S denotes a statewide policy on resource exploration and extraction, while Clause 14.03-1R denotes a regional policy on resource exploration and extraction for the Gippsland Coal Resource. Any policy that appears in Clause 21.05 Natural Resource Management that relates to resource exploration and extraction that is not already mentioned in the state or regional policy will appear as Clause 14.03-1L.

2.3.4 FLOOD DATA (PROPOSED AMENDMENT)

West Gippsland Catchment Management Authority (WGCMA) is proposing to update the flood overlays through an amendment in the 2020/2021 financial year in line with the Floodplain Management Strategy actions. This Amendment has not started but has informed WGCMA's advice to Latrobe City Council in the preparation of the draft *Toongabbie Structure Plan Background Reports - Infrastructure and Servicing Assessment 2020*. The Amendment related to the Toongabbie Structure Plan is likely to include the proposed flood overlays.

Figure CT2: Current Zones



2.4 Planning Zones

Figure CT2 shows the existing land use zoning within the Toongabbie study area and surrounding catchment within Latrobe City Council which includes:

- Farming Zone – Schedule 1 (FZ1),
- Neighbourhood Residential Zone – Schedule 4 (NRZ4)
- Township Zone (TZ);
- Public Use Zone 2 (PUZ2 - Education);
- Public Use Zone 5 (PUZ5 - Cemetery);
- Public Park and Recreation Zone (PPRZ);
- Public Conservation and Resource Zone (PCRZ); and
- Road Zone 1 (RDZ1 - VicRoads managed road)
- Rural Living Zone - Schedule 2 (RLZ2)

Within Latrobe City, prior to Amendment C105, small towns that had access to sewer infrastructure had the residential areas zoned General Residential Zone - Schedule 1 (GRZ1), while towns without sewer provision (Tyers and Traralgon South) are entirely zoned Township Zone. The zone affects servicing provisions as standard residential zones, like the General Residential Zone, Neighbourhood Residential Zone, and Residential Growth Zone, require new dwellings to be connected to reticulated services whereas Rural Living Zone does not have this requirement and the Low Density Residential Zone allows for alternatives if reticulated services are not available. Given the average lot size within the residentially zoned land is 2000 square metres; there is the potential to explore the application of the LDRZ within the town and possible growth precincts if land supply dictates that it is needed, while the RLZ option could be explored in other precincts within the study area. Any change in zone that encourages a greater density in housing is also likely to affect the infrastructure provision.

As such, any additional provision of residential growth should be alongside the provision of infrastructure, if there is limited capacity and limited capability in being able to provide additional infrastructure, then this will impact on the types of growth that can occur. A way to manage this growth could be through the application of zones.

The road network is also affected by the zone as there are different road standards for a RLZ and LDRZ area compared to an urban area as stated within the *Infrastructure Design Manual*. While residential zones require new substantial developments to be fully kerbed, sealed and channelled. This would not affect the current road network but if new access roads needed to be built as a part of that development then these standards would come into effect. There is currently no different standard design for roads between large and small towns within Latrobe City.

Due to the existing land fragmentation and the potential for agricultural production being lost as a result of this fragmentation; along with the settlement pattern and the ability to apply for a permit for a dwelling under the Farming Zone 1, it is likely that Precinct C and Precinct H will continue to develop as rural lifestyle precincts with or without the rezoning to a Rural Living Zone.

Below is a description on both existing zones and proposed zones which have been considered could be appropriate for the Toongabbie township and surrounds. The following descriptions are extracted from Using Victoria's Planning System to describe each zone, for more information please see <https://www.planning.vic.gov.au/guide-home/using-victorias-planning-system>:



2.4.1 LOW DENSITY RESIDENTIAL ZONE (CLAUSE 32.03 AND SCHEDULE)

This zone is intended for land on the fringe of urban areas and townships where sewerage may not be available. It is applied to areas that are shown to be appropriate for subdivision into lots which are both large enough (in the absence of reticulated sewerage) to contain all wastewater on site and small enough to be maintained without the need for agricultural techniques or equipment. The zone provides a minimum lot size of 0.4 hectare for a lot not connected to reticulated sewerage or 0.2 hectares for a lot connected to reticulated sewerage unless an alternative is specified in a schedule to the zone. The creation of smaller lots is prohibited unless the subdivision is the re-subdivision of existing lots or the creation of a small lot for a utility installation.

This zone does not currently appear in Toongabbie but is being considered due to infrastructure constraints. See draft *Infrastructure and Servicing Assessment 2020* for further details.

2.4.2 TOWNSHIP ZONE (CLAUSE 32.05 AND SCHEDULE)

This zone is intended to apply to small towns, to provide for residential development and a range of commercial, industrial and other uses. A schedule to the zone can be used to change the permit requirement for a dwelling, based on lot size, and to change certain siting requirements. The schedule can also specify maximum building heights for dwellings or residential buildings and local requirements for specified Clause 54 and Clause 55 dwelling standards.

The Township Zone (TZ) applies to the area abounded by Main Street, Cowen Street and King Street.

Figure CT3: TZ in Toongabbie



2.4.3 GENERAL RESIDENTIAL ZONE (CLAUSE 32.08 AND SCHEDULES)

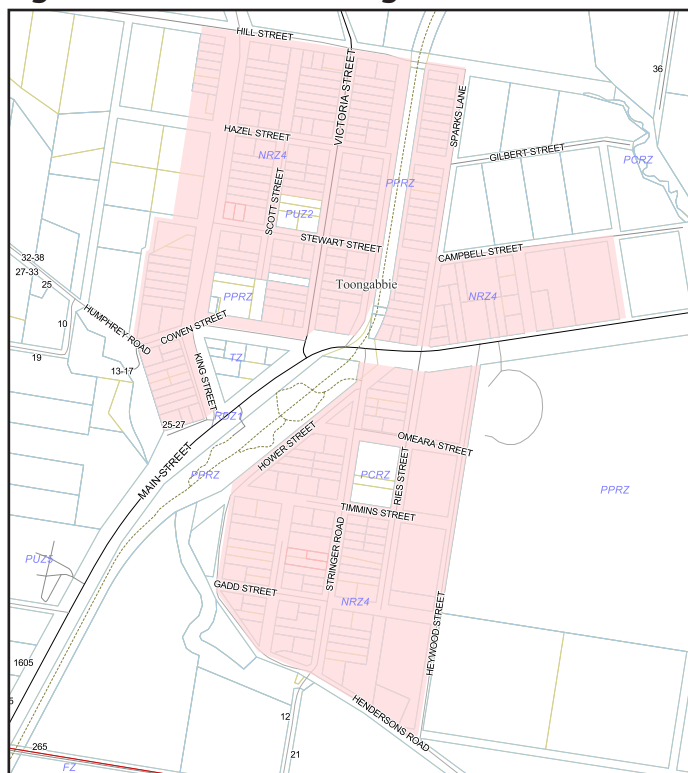
The General Residential Zone applies in 'Incremental' housing change areas in small towns across the municipality. It does not currently apply in Toongabbie as work undertaken in this structure plan needed to be considered before the application of the zone. The *Live Work Latrobe Housing Strategy 2019* recommends rezoning the unconstrained land within 200m of the defined centre to a General Residential Zone. This may have to be a new schedule to apply only to 'small towns' or may amend the existing GRZ4. Up to 11 metres building height is allowed in this zone for dwellings and residential buildings, unless a schedule to the zone specifies an alternative maximum building height. A permit cannot be granted to exceed any maximum building height if specified in a schedule. Local requirements for specified Clause 54 and Clause 55 dwelling standards can also be set out in the schedule.

2.4.4 NEIGHBOURHOOD RESIDENTIAL ZONE (CLAUSE 32.09 AND SCHEDULES)

This zone is intended for areas where single dwellings prevail and change is not proposed, such as areas of recognised neighbourhood character or environmental or landscape significance. Up to 9 metres building height is allowed, unless a schedule to the zone specifies an alternative maximum building height. A permit cannot be granted to exceed the maximum building height specified in either the zone or the schedule.

The residential areas in Toongabbie are currently zoned Neighbourhood Residential Zone - Schedule 4 (NRZ4). This is the main residential zone across the four major towns and five of the district and small towns. It does not specify a minimum lot size or a maximum building height. In order to retain the rural character a new schedule specifically for Toongabbie could be considered.

Figure CT4: NRZ4 in Toongabbie



2.4.5 RURAL LIVING ZONE (CLAUSE 35.03 AND SCHEDULES)

This zone provides for predominantly residential use in a rural environment provided appropriate land management is exercised. This zone should only be used where this type of use exists, or where such a use can be strategically justified. The zone also allows agricultural activities, provided that the amenity of residential living is protected. A schedule to the zone allows the lot size and a number of other matters to be specified.

2.4.6 FARMING ZONE (CLAUSE 35.07 AND SCHEDULES)

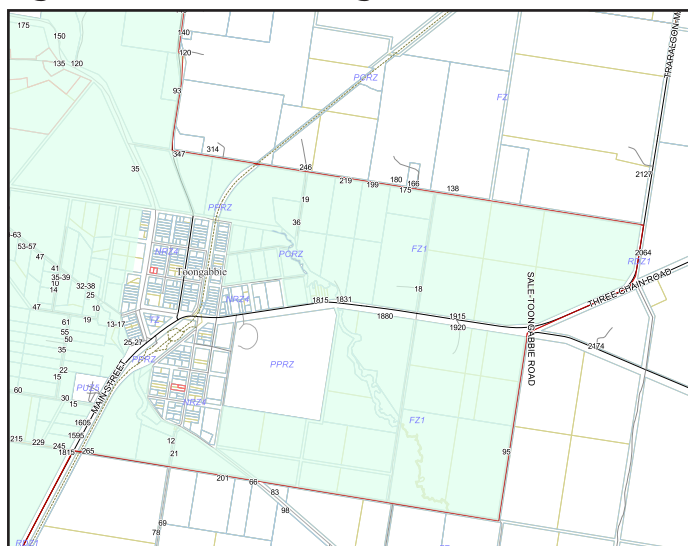
This zone encourages the retention of productive agricultural land and encourages the retention of employment and population to support rural

communities.

The Farming Zone - Schedule 1 applies to areas, hectares outside of King Street, Hill Street, Hower Street, Sparks Lane and Heywood Street, it has a higher minimum subdivision size of 80.

The creation of smaller lots is allowed under particular circumstances, if it meets the criteria for a house excision under Clause 22.02 of the Latrobe Planning Scheme.

Figure CT5: FZ1 in Toongabbie



2.4.7 PUBLIC USE ZONE (CLAUSE 36.01 AND SCHEDULES)

This zone recognises the use of land for a public purpose and prescribes a number of categories of public use which can be shown on the planning scheme map. This is the main zone for public land used for utility or community service provision. A schedule allows specified uses or managers of public land to be exempted from specified requirements. Alternative advertising sign categories may be specified if required.

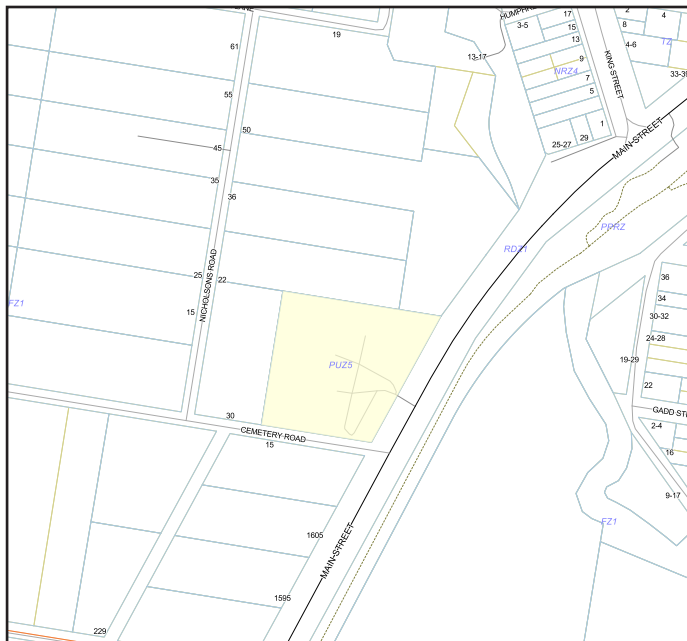
Two schedules to the zone apply in Toongabbie, Public Use Zone - Schedule 2 (Education) at the Toongabbie Primary School and Public Use Zone - Schedule 5 (Cemeteries) at the Toongabbie Cemetery. The Primary School is currently split zoned, as the northern title is zone Neighbourhood Residential Schedule 4.

Figure CT6: PUZ2 in Toongabbie



Note: the above aerial is used to show the split zoning of Toongabbie Primary School.

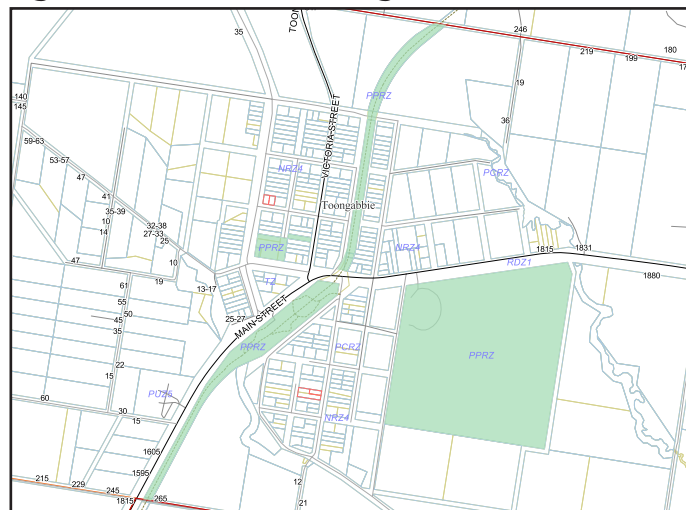
Figure CT7: PUZ5 in Toongabbie



2.4.8 PUBLIC PARK AND RECREATION ZONE (CLAUSE 36.02 AND SCHEDULE)

This is the main zone for public open space and public recreation areas. A schedule allows specified uses or managers of public land to be exempted from specified requirements. It also allows an exemption for buildings and works specified in an Incorporated Plan. Alternative advertising sign categories may be specified if required.

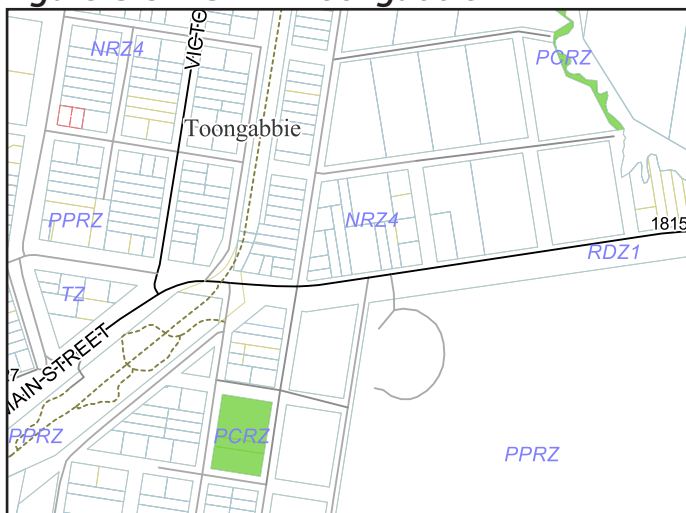
Figure CT8: PPRZ in Toongabbie



2.4.9 PUBLIC CONSERVATION AND RESOURCE ZONE (CLAUSE 36.03 AND SCHEDULE)

This zone provides for places where the primary intention is to conserve and protect the natural environment or resources. It also allows associated educational activities and resource-based uses. A schedule allows specified uses or managers of public land to be exempted from specified requirements. It also allows an exemption for buildings and works specified in an Incorporated plan. Alternative advertising sign categories may be specified if required.

Figure CT9: PCRZ in Toongabbie



2.4.10 ROAD ZONE (CLAUSE 36.04)

This zone enables declared roads and other important roads or proposed roads to be designated on the planning scheme map. A road designated as a declared road under the *Road Management Act 2004* must be included in a Road Zone – Category 1. Other roads (or proposed roads where the land has been acquired) may be included as Category 1 or Category 2 roads if appropriate. VicRoads can provide information about declared roads in each municipality.

Figure CT10: RD1Z in Toongabbie

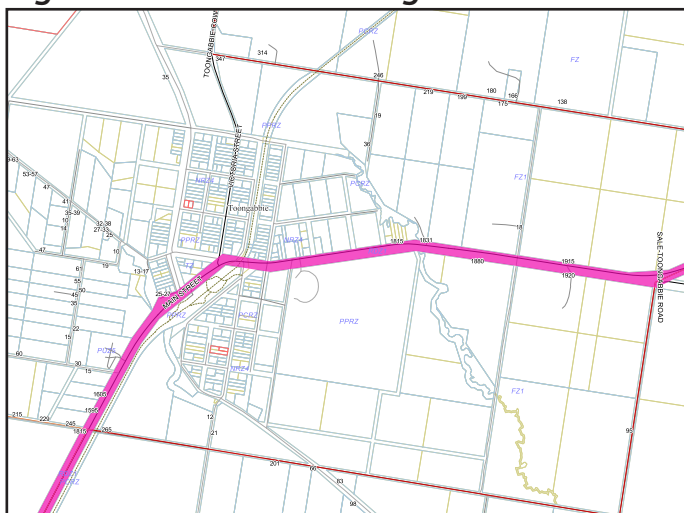
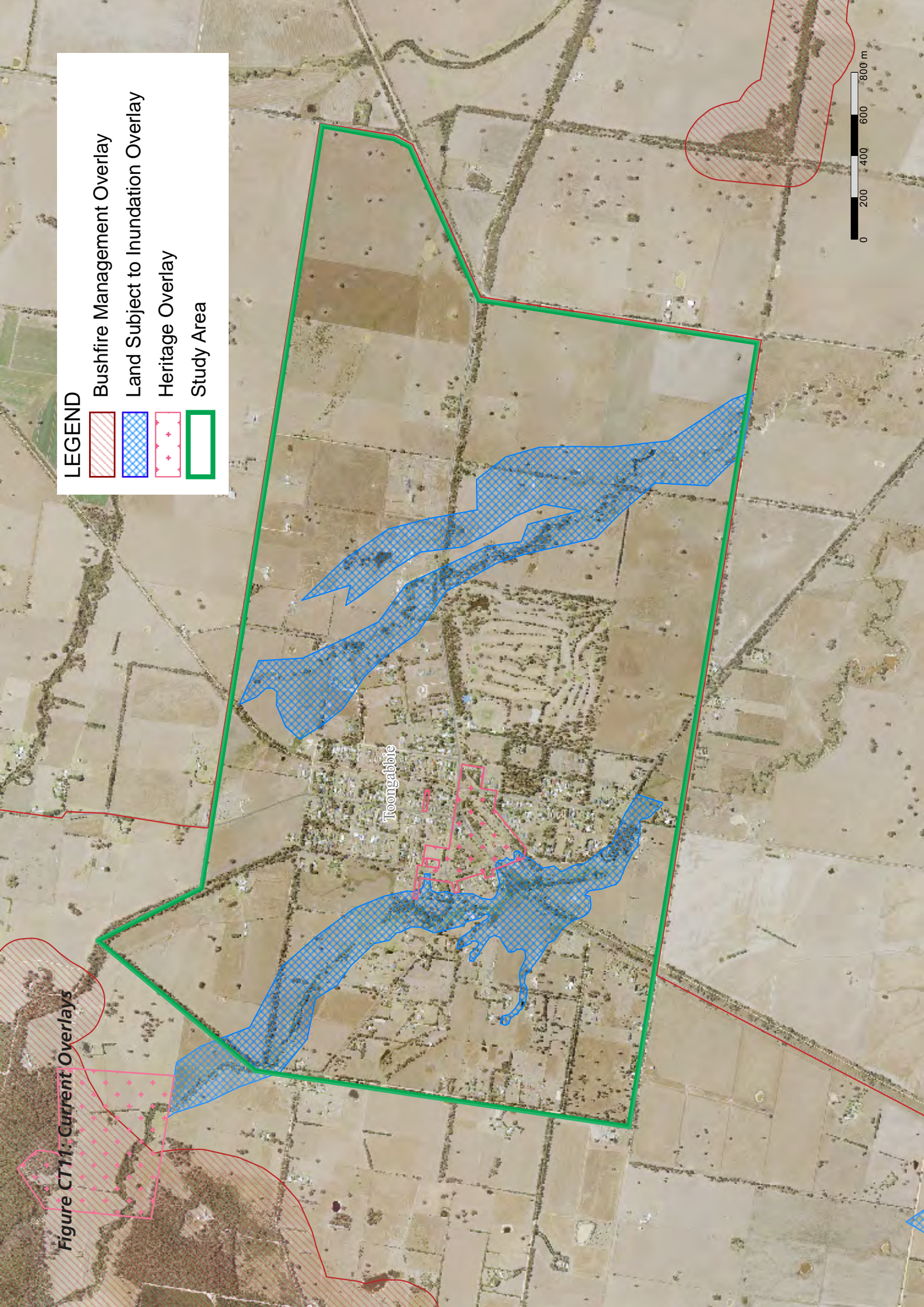
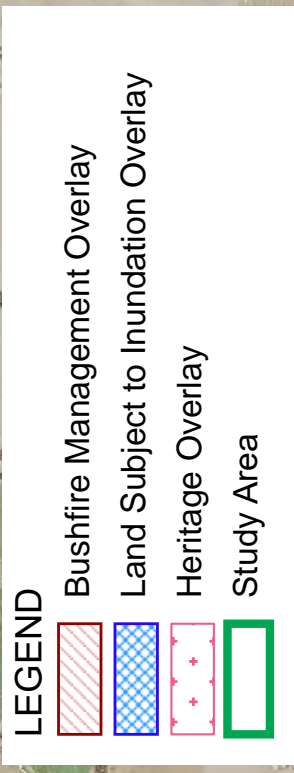
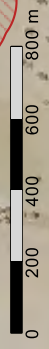


Figure CT11: Current Overlays



Toongabbie



2.5 Planning Overlays

Figure CT11 shows the existing overlays within the Toongabbie study area and includes:

- Land Subject to Inundation Overlay (LSIO)
- Heritage Overlay (HO)

The Bushfire Management Overlay (BMO) sits outside the study area, so it does not directly impact on, however, the bushfire risk does impact on possible rezonings in accordance with Clause 13.02-1S of the Latrobe Planning Scheme, this is further discussed in the draft *Bushfire Risk Assessment 2020*. It is noted that biodiversity needs to be considered in relation to the bushfire risk. If the waterways were re-vegetated within the study area it would need to consider the bushfire risk that this poses to the adjacent properties and the community at large.

Considering this, Clause 13.02 Bushfire Planning states:

In areas of high biodiversity value ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.

Following is a description on both existing overlays and proposed overlays which have been considered could be appropriate for the Toongabbie township and surrounds. The following descriptions are extracted from Using Victoria's Planning System to describe each zone, for more information please see <https://www.planning.vic.gov.au/guide-home/using-victorias-planning-system>:

2.5.1 VEGETATION PROTECTION OVERLAY (CLAUSE 42.01 AND SCHEDULE)

This overlay focuses on the protection of significant vegetation, including native and introduced vegetation. It can be applied to individual trees, stands of trees or areas of significant vegetation. The significance of identifying the vegetation must be stated, together with the intended outcomes of the imposed requirements. *Planning Practice Note 7 – Vegetation Protection in Urban Areas* explains the function of this overlay and other relevant vegetation provisions in more detail. This could be applied to areas of significant vegetation within Toongabbie, as discussed in the draft *Toongabbie Structure Plan Background Reports - Flora and Fauna Assessments 2020*.

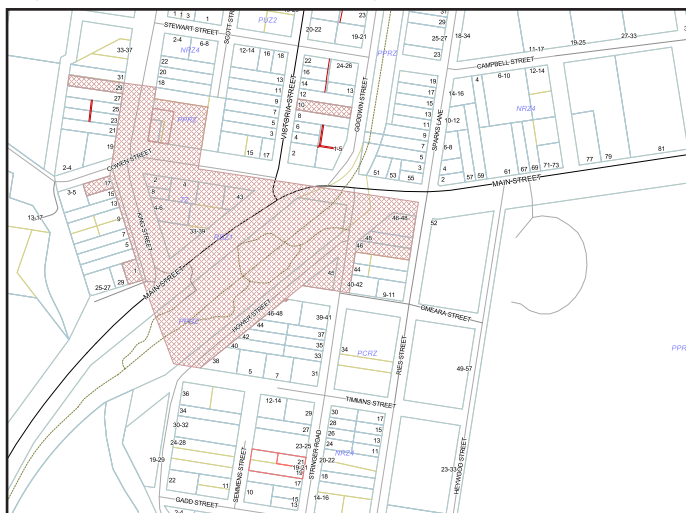
2.5.2 HERITAGE OVERLAY (CLAUSE 43.01 AND SCHEDULE)

Any heritage place with a recognised citation should be included in the schedule to this overlay. In addition, any heritage place identified in local heritage studies can also be included. A heritage place can have a wide definition and may include a single object or an area. There should be a rigorous heritage assessment process leading to the identification of the place. The documentation for each place should include a Statement of Significance which establishes the importance of the place. For guidance on applying heritage provisions see Planning Practice Note 1 – Applying the Heritage Overlay and the Victorian Heritage Register Criteria and Threshold Guidelines 2012.

This currently applies to the Toongabbie Township precinct as Heritage Overlay citation 79 (HO79) and to St David's Church of England at 10 Victoria Street, Toongabbie (HO81), the Ned

Stringer Memorial (HO2) and the Toongabbie Mechanics' Institute (HO1).

Figure CT12: HO in Toongabbie



2.5.3 DESIGN AND DEVELOPMENT OVERLAY (CLAUSE 43.02 AND SCHEDULE)

This overlay is principally intended to implement requirements based on a demonstrated need to control built form and the built environment. The intended built form outcome must be clearly stated, as must the way in which the imposed requirements will bring this about. Where possible, performance-based requirements should be used rather than prescriptive requirements. This overlay does not currently apply to the study area but is a tool being considered for bushfire and/or flood risk mitigation.

2.5.4 DEVELOPMENT PLAN OVERLAY (CLAUSE 43.04 AND SCHEDULE)

This overlay is used where the form of development is appropriately controlled by a plan that satisfies the responsible authority. Development plans are consulted on with the public by Latrobe City Council.

A planning scheme amendment is not required to approve a development plan under a Development Plan Overlay.

For more information on the operation of this overlay see *Planning Practice Note 23 – Applying the Incorporated Plan and Development Plan Overlay*.

This overlay does not currently apply to the study area but is a tool being considered for bushfire and/or flood risk mitigation.

2.5.5 FLOODWAY OVERLAY (CLAUSE 44.03 AND SCHEDULE)

This overlay is applied to urban and rural land identified as part of an active floodway, or to a high hazard area with high flow velocities, where impediment of flood water can cause significant changes in flood flows and adversely affect other areas. The identification of these areas should be established in consultation with the relevant floodplain management authority. *Planning Practice Note 12 – Applying the flood provisions in planning schemes* explains the function of this overlay and other relevant flood provisions in more detail.

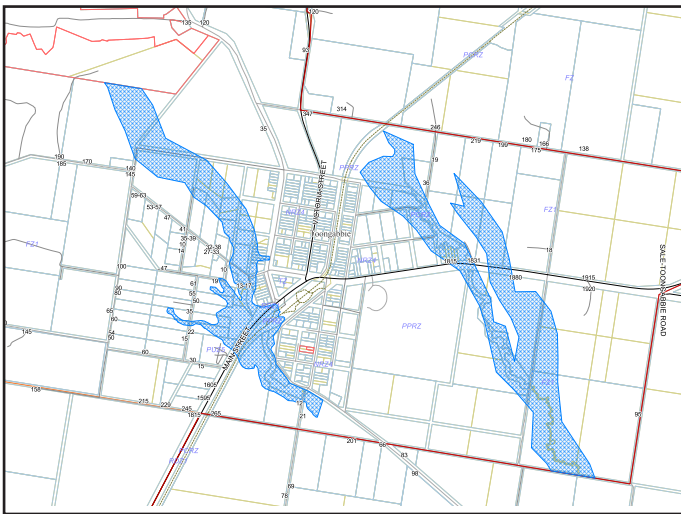
This overlay does not currently apply to the study area but may be applied when the flood amendment is undertaken in the 2020/2021 financial year.

2.5.6 LAND SUBJECT TO INUNDATION OVERLAY (CLAUSE 44.04 AND SCHEDULE)

This overlay applies to land in either rural or urban areas that is subject to inundation, but is not part of the primary floodway. The identification of these areas should be established

in consultation with the relevant floodplain management authority. *Planning Practice Note 12 – Applying the flood provisions in planning schemes* explains this overlay and other relevant flood provisions in more detail.

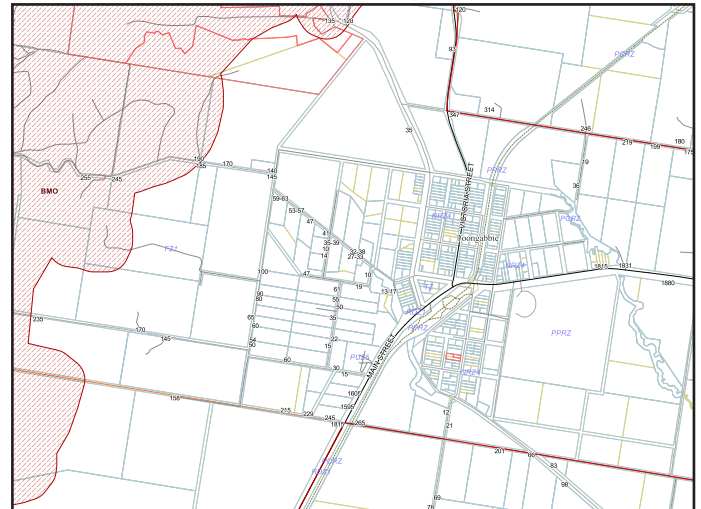
Figure CT13: LSIO in Toongabbie



2.5.7 BUSHFIRE MANAGEMENT OVERLAY (CLAUSE 44.06 AND SCHEDULE)

This overlay is applied to areas identified as having high bushfire hazard. Together with the planning requirements for bushfire protection in Clause 52.47, this overlay controls development in order to mitigate risk to life, property and community infrastructure. *Planning Practice Note 64 – Local Planning for Bushfire Protection* explains the use of this overlay in more detail.

Figure CT14: BMO in Toongabbie



2.6 Strategy Review

For the purpose of this review, strategies that relate to infrastructure, bushfire risk and flora and fauna have not been included as they are discussed in the other relevant background reports.

2.6.1 STATE-WIDE RELEVANT STRATEGIES

Plan Melbourne 2017-2050

Several of the themes relate to Latrobe City Council through the implementation of new or updated state-wide planning provisions, and investment in strategic initiatives for the area. These include:

- Environmental sustainability
- Housing
- Economic development
- Transport links and investment in regional Victoria

(Outcome 7 refers to Investment in Regional Victoria and states that it aims to stimulate employment and growth in regional cities (Policy 7.1.1)

Plan Melbourne places greater emphasis on:

- Environmental sustainability and embedding this principle into the state planning provisions.
- Continuing to invest in Regional Victoria to encourage economic development through council growth frameworks.
- Identifying infrastructure as key to providing sustained regional growth, this is to be achieved by smart investment in locally driven infrastructure plans and by committing to the Regional Network Development Plan (refers to the rail network).
- Aiming to invest in housing which will facilitate growth in regional towns.

These will be undertaken through the following actions:

- Greater emphasis on bushfire and flood management (Action 85 and 88)
- Protect sand and stone resources for future extraction (Action 18)
- Establish growth frameworks for regional cities to support housing and employment, including, implementing township boundaries (Action 102)
- Boosting jobs by investing \$13.8 million as a part of the 2016-17 budget for the Latrobe Valley Regional Rehabilitation Strategy (Outcome 7)
- Provide high quality freight and passenger transport connections to regional cities (Action 104 and 106)
- VicRoads will integrate place-making practices into road space management (4.1.2)
- Improve the telecommunications network to improve 'digital connectivity' (7.2.1 and Action 105)
- Trial local transport forums in regional Victoria to identify innovative and flexible ways to improve local transport options and enhance local mobility (Action 45)
- Review the residential development provisions in the Victorian Planning Provisions to increase housing in established areas (Action 28)
- Develop a tool to share value uplift when land is rezoned (Action 27)
- Streamline planning approval process for specific housing types (Action 31 and 32)
- Include mandatory height provisions (applies to NRZ) and site coverage requirements in zone schedules (Outcome 2)

Ready for Tomorrow – A Blueprint for Regional and Rural Victoria 2010

Ready for Tomorrow delivers a vision, backed by funding, to support the increasing number of

families and businesses choosing to live and work in our State's regional and rural regions.

A \$50 million package of support to assist small towns to increase sustainability, improve amenities, invest in new infrastructure and adapt to change while retaining their unique character and identities.

This has now morphed into the Stronger Regional Communities Program which aims to support rural and regional towns in attracting families and young people to live and work in regional Victoria. It will do so by investing in community-led initiatives and partnerships that create or enhance the conditions for economic growth and build resilient, diversified and sustainable economies.

Other priorities outlined in the document include investing in better transport and access in regional Victoria and building resilience of regional communities in the face of natural disasters.

Homes for Victorians 2017

Homes for Victorians provides a coordinated approach across government, and across our state. It includes:

- Abolishing stamp duty for first time buyers on homes up to \$600 000, and cuts to stamp duty on homes valued up to \$750 000;
- Doubling the First Home Owner Grant to \$20 000 in regional Victoria to make it easier for people to build and stay in their community;
- Creating the opportunity for first home buyers to co-purchase their home with the Victorian Government;
- Making long-term leases a reality; and
- Building and redeveloping more social housing – supporting vulnerable Victorians while creating thousands of extra jobs in the

construction industry.

It builds on existing work being done, including the soon to be released Plan Melbourne 2017-2050, reform of the Residential Tenancies Act 1997, the Better Apartment guidelines and the Family Violence Housing Blitz.

It lists five priorities:

- Supporting people to buy their own home;
- Increasing the supply of housing through faster planning;
- Promoting stability and affordability for renters;
- Increasing and renewing social housing stock; and
- Improving housing services for Victorians in need.

Regional Cities Residential Zones State of Play Report 2016

In July 2013, new residential zones were introduced into the Victorian Planning Provisions. The new residential zones comprise the Residential Growth Zone (RGZ), General Residential Zone (GRZ) and the Neighbourhood Residential Zone (NRZ).

The zones were implemented into the Latrobe Planning Scheme through Amendment VC116. It was further amended by Amendment C84. The Amendment translated land in the former Residential 1, 2 and 3 Zones to GRZ.

At the time of this report 0.5% of all residential land, including rural residential, was zoned NRZ, 33% was GRZ, 0.8% was RGZ and 56.9% was in a Rural Living Zone. A further 8.9% was in a Township Zone (TZ), Mixed Use Zone (MUZ), Low Density Residential Zone (LDRZ), or Urban Growth Zone (UGZ).

Victoria's 2020 Tourism Strategy 2013

Victoria's 2020 Tourism Strategy (the Strategy) is a whole of government document providing a clear vision for how the tourism industry can increase its economic and social contributions to the State. This vision is for:

- Victoria to be a leading tourism destination in the Asia Pacific region;
- Tourism to be a leading contributor to the Victorian economy; and
- Victoria to provide a range of experiences and an environment that supports the aspirations and culture of strong growth economies such as China, India and Indonesia.

Consistent with regional Australia, Victoria's regional tourism industry faces a number of ongoing challenges, including: low international visitor dispersal; low awareness of regional experiences in the domestic visitor market; a growing preference for international travel; a lack of investment in regional areas; and the distance and travel time from the city to a regional destination. The increase in the availability of low cost airfares and strong Australian dollar has also impacted upon regional tourism.

It has seven priorities stated to build the tourism sector, which include:

- Digital excellence;
- International marketing;
- Domestic marketing;
- Major events and business events;
- Air services attraction;
- Investment attraction and infrastructure support; and
- Skills and workforce development.

Victorian Visitor Economy Strategy 2016

This Strategy sets a goal of increasing visitor

spending to \$36.5 billion by 2025 and identifies nine priorities to achieve this ambitious goal:

- More private sector investment;
- Build on the potential of regional and rural Victoria;
- Improved branding and marketing;
- Maximising the benefits of events;
- Improved experiences for visitors from Asia;
- Better tourism infrastructure;
- Improved access into and around Victoria;
- Skilled and capable sector; and
- More effective coordination.

2.6.2 REGIONALLY RELEVANT STRATEGIES

Gippsland Regional Plan 2015-2020

The Gippsland Regional Plan outlines four strategic themes which include:

- Economic Prosperity;
- Education and Community Wellbeing;
- Natural Environment Stewardship; and
- Connectivity.

A number of strategies to achieve this are outlined throughout the document. Of particular interest to Toongabbie are:

- Increasing the level of visitation and number of visitor overnight stays.

Gippsland Regional Growth Plan 2014

The Gippsland Regional Growth Plan provides broad direction for land use and development across the region. The Plan maps areas of strategic significance for agriculture and forestry and sets out the following principles, objectives and strategies:

Principle 1:

Strengthen economic resilience by growing a

more diverse economy that is supported by new investment, innovation and value-adding in traditional strengths

Objective:

Advance productive and innovative agriculture, forestry and fisheries sectors with a focus on export markets and local food processing

Strategies:

- Support the implementation of state policy by protecting the identified areas of strategic significance (agriculture and forestry) and irrigation assets to help grow Gippsland and the state as an important food bowl for Australia and Asia;
- Ensure rural housing and subdivision is for an agricultural or forestry purpose, and critically assess other proposals for non-agricultural uses within the areas of strategic significance (agriculture and forestry) for their comparative economic, social and environmental benefits;
- When considering development applications, recognise the importance that preservation and management of productive agricultural and forestry land make to the rural character of Gippsland; and
- Encourage the development of suitable production and processing plants that add value to local agricultural, forestry and fishery products.

Gippsland Tourism Strategic Direction 2013 – 2018

The strategic direction aims to increase overnight visitation, visitor expenditure, increase length of stay, increase dispersal and visitor satisfaction through product and destination development, improving visitor services and marketing. Priorities for infrastructure improvement in Latrobe include the Latrobe Performing Arts and Convention Centre, and Lake Narracan's Strategic Direction.

Forest Management Plan for Gippsland 2004

The Gippsland Forest Management Plan area covers over 2.6 million hectares in mid Gippsland. The planning area extends from the coast to the Great Dividing Range and from the Timbarra and Murray Rivers in the east, to Aberfeldy, Moe and Inverloch in the west

The Plan aims to provide a framework for stewardship on public land where forest ecosystems are maintained or enhanced, water supplies and sensitive environmental and cultural values are protected, while timber production, recreation and other forest uses can continue to benefit Victorian communities.

Toongabbie has a Special Protection Zone to the north west of the township and has timber plantation and State Forest to the west of the study area.

2.6.3 LOCALLY RELEVANT STRATEGIES

Live Work Latrobe Housing Strategy 2019

Latrobe City contains a variety of residential settings, ranging from compact urban areas to conventional Australian suburbs and expansive rural acreages. The Housing Strategy provides a framework to guide the growth and change of residential areas in Latrobe City over the next twenty years.

It contains a range of initiatives and actions to ensure that the municipality is well positioned to provide a diverse range of dwelling opportunities for its growing and changing population. It seeks to ensure that the 'right' type of development occurs in the 'right' locations, through addressing key issues of housing affordability, design and sustainability. In particular, it develops a settlement hierarchy that identifies Toongabbie as a small town that supports a small population of

400-1000 people that provides a focal point for the surrounding rural community. A small town has limited access to services such as education, retail, and recreation reserves. Access to reticulated water, sewerage and public transport vary. It sets out direction to support growth consistent with Structure Plans and/or settlement boundaries for the area in small towns.

The Toongabbie Housing Framework Plan shows the township has limited change areas, while the areas protected by a heritage overlay are shown as minimal change. This is shown in Table CT4.

Live Work Latrobe Rural Land Use Strategy 2019

This Rural Land Use Strategy is the first of its kind for Latrobe City. The Strategy seeks to protect and promote economic, environmental and landscape values associated with rural land as well as respond to competing demands and legacy issues.

The Strategy responds to the City's diverse rural circumstances, supports established rural industries such as agriculture and forestry, promotes emerging opportunities in rural tourism and addresses policy gaps recognising important environmental and landscape values. In particular, the Rural Land Use Strategy proposed two new rural living precincts in the Toongabbie township surrounds with the potential for between 34-91 new lots. However, these did not proceed as a part of Amendment C105 due to further strategic work being required in assessing the bushfire risk.

The broader Toongabbie area also sits within the most productive agricultural land within the municipality to the south west of Toongabbie, (see Figure CT15). Further west is land that borders the Great Dividing Ranges that is used for forestry.

Lastly, the strategy also supports rural tourism, given that Toongabbie has historical links to Walhalla, this could be further leveraged in the area which is further supported by the desire to protect the rural township character.

Structure Plans for Toongabbie, Yallourn North and Yinnar 2002

Structure Plans were prepared for Toongabbie, Yallourn North and Yinnar that sought to measure-up key activity areas and the preparation of base plans for key activity areas; prepare broad design guidelines for the central activity area of each town; prepare strategic action area schedules; and prepare draft structure plan and discussion paper.

In the strategy it outlined that the vision for Toongabbie was that it is:

- A retreat town that provides an idyllic place to live, away from the bustle of Latrobe's larger towns. Toongabbie's semi-rural atmosphere is preserved, and enhanced by an extended parkland area around the centre of town.
- A historic town that draws on its rich links to the Walhalla gold rush and which interprets its role and subsequent development since that time. Historic sites are identified and explained so that visitors can trace various "layers of time."
- A character town that builds on the theme set by the restored community hall and grand stand reflects these themes in all new community buildings and infrastructure around the "central" triangle of Toongabbie. These themes are complimented by a sub-theme of gardening and roses, which are prominent in the public areas and are the focus of events in the town.

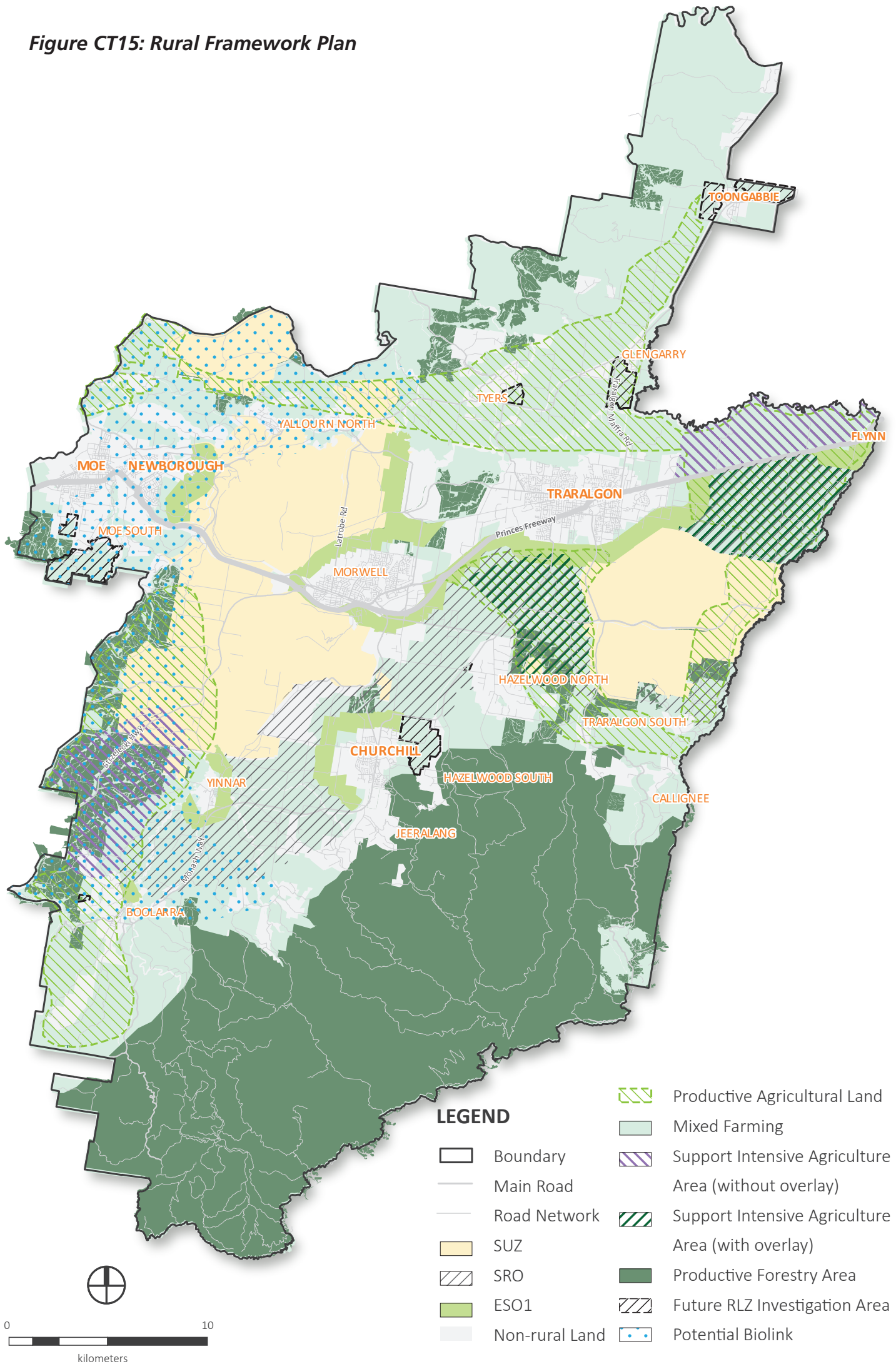
Several objectives are still relevant to this structure



Table CT4: Housing change areas

Change Area	Residential Zone	Design/ Neighbourhood Character Objectives	Variations to Rescode Standards
Incremental	GRZ4	Encourage setbacks from at least one side boundary to provide sufficient space for trees and other vegetation. Ensure upper levels of buildings are setback to minimise dominance in the streetscape.	Provide minimum side setback on one side to provide building separation and landscaping.
Limited	NRZ4	Maintain the spacious character of the area through appropriate front and side setbacks. Encourage landscaping within front and side setbacks to reinforce the landscape character of the area. Encourage the siting of garages and carports behind the line of the dwelling. Ensure upper levels of buildings are setback to minimise dominance in the streetscape.	Lower site coverage and increased permeability requirements to provide building separation and landscaping. Side setback requirements to reinforce spaciousness
Minimal	NRZ4 TZ LDRZ	Maintain the open, spacious siting of dwellings. Require large side setbacks and landscaping within setback areas. Ensure buildings and hard surfaces occupy a low proportion of the site area. Encourage low or open style front fences.	Lower site coverage and increased permeability requirements to provide building separation and landscaping. Increased front setbacks to reflect neighbourhood character values. Side setback requirements to allow for landscaping and sense of openness to the street.

Figure CT15: Rural Framework Plan



plan process including:

- Reinforce the lifestyle of rural living within a community setting;
- Encourage residential development within existing vacant allotments perhaps allowing a limited number of smaller lots, thereby utilising infrastructure and services in an efficient and sustainable manner;
- Recognise the benefits of visual permeability offered by virtue of the low density settlement pattern;
- Enhance access to medical facilities and aged care, child care and bus services;
- Improve the three main township entry points;
- Retain the informal character of the wide residential streets;
- Encourage commercial opportunities adjacent to the General Store, e.g. cafe, to contribute to the village green character and link to the nearby railway land;
- Provide visual definition of intersections; and
- Establish a safer environment for residents, traders and visitors.

Latrobe City Heritage Study (Vol. 1-3) 2010

The Latrobe City Heritage Study consists of three volumes which are:

- Volume 1: Thematic Environmental History
- Volume 2: Key Findings and Recommendations
- Volume 3: Heritage Place and Precinct Citations

There is also an associated incorporated plan *Latrobe City Heritage Overlay Planning Permit Exemptions and Application Requirements Incorporated Plan 2010*.

Key findings of the Latrobe City Heritage Study 2010 include:

- A list of the places of local or State heritage significance, which are recommended for inclusion in the Heritage Overlay or the Victorian Heritage Register.
- A list of places of potential local heritage significance that require further assessment.
- A list of the places found to be not significant. For most of these sites there no further action is required, but interpretation (by signage or other means of recording) of some public sites may be desirable.

Those found places and precincts found to have local or state significance have had a Heritage Overlay applied to the land through Amendment C14.

Latrobe City Public Open Space Strategy 2013

Effective open space provision is integral to the promotion of healthy communities. Specific objectives of the strategy include:

- Define what is Public Open Space;
- Evaluate usage, capacity and distribution of existing public open space;
- Assess indicative demand and supply of open space across the City;
- Consider opportunities for additional provision (where appropriate), including possible regional or district open space;
- Consider opportunities for rationalisation of underutilised or surplus open space;
- Enhance linear linkages and connections; and
- Strengthen Council's Planning Scheme provisions for open space contributions and acquisition.

It defines a hierarchy for public open space. The hierarchy and desired distribution for residential areas is defined as follows:

- **Local** - The majority of houses in residential

areas should have access to a minimum of 0.5 hectares of public open space within a 500 metre radius.

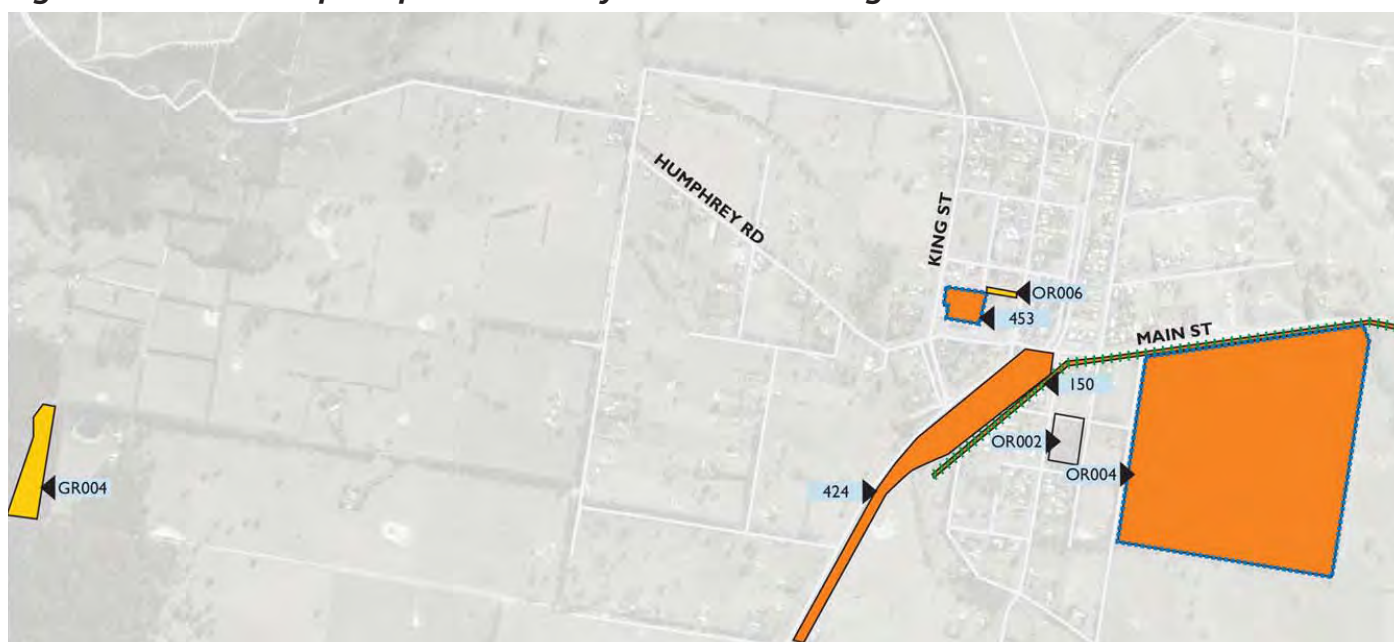
- **District** - The majority of houses in residential areas should have access to district level public open space within a 3 km radius.
- **Regional** - Each town with a population of over 10,000 people should have access to regional standard public open space venue/s.

The strategy states that the recreation reserve, Village Green, and Gippsland Plains Rail Trail have a medium level of usage, while the playground on Victoria Street and Mavis Whateley Reserve on Cemetery Road have a low level of use. The Toongabbie Recreation Reserve and the Village Green serves as District Open Space, and the Gippsland Plains Rail Trail serves as Regional Open Space, although this appears to be mapped incorrectly in the Strategy. The Toongabbie Water Reserve is not considered in this strategy and is incorrectly labelled as the Edward Stringer Memorial Site.

Table CT5: Public Open Space in Toongabbie

Code	Reserve	Hierarchy	Primary Function
150 and 424	Gippsland Plains Rail Trail	Regional	Parkland - Special Use
453	Toongabbie Village Green	District	Sport/ Parkland
OR004	Toongabbie Recreation Reserve	District	Sport/ Parkland
GR004	Mavis Whateley Reserve	Local	Parkland - Special Use
OR006	9 Victoria Street	Local	Parkland
OR002	Toongabbie Water Reserve	Local	Conservation/ Environment

Figure CT16: Public open space hierarchy and level of usage



Northern Towns Outdoor Recreation Plan 2010

The Northern Towns Outdoor Recreation Plan provides a policy position and clear directions for the provision of outdoor recreation facilities in the northern towns of Latrobe City.

The plan focuses on planning for sporting facilities (i.e., sports fields, outdoor courts) and also informal recreation facilities (i.e., paths / trails, playgrounds and picnic facilities) located at the following reserves in the northern towns:

- Glengarry Recreation Reserve
- Toongabbie Recreation Reserve
- Toongabbie Village Green
- Tyers Recreation Reserve
- George Bates Reserve, Yallourn North
- Yallourn North Town Oval

Toongabbie has a number of clubs and associations that use the Toongabbie Recreation Reserve and the Village Green including five horse or pony riding clubs, and the cricket club.

Latrobe City Council Plan 2017 – 2021

The 2017-2021 Council Plan reflects the clear understanding that Latrobe City's community is in significant economic and social transition. The plan has 7 objectives that include:

1. Support job creation and industry diversification to enable economic growth in Latrobe City;
2. Encourage improved education and training outcomes in Latrobe City;
3. Improve the liveability and connectedness of Latrobe City;
4. Improve the amenity and accessibility of Council services;
5. Provide a connected, engaged and safe community environment, which is improving the well-being of all Latrobe City citizens;

6. Ensure Council operates, openly, transparently and responsibly; and
7. Grow the civic pride of our municipality and solidify Latrobe City's image as a key regional city.

The structure plan process meets objectives 3, 5 and 7.

Latrobe 2026

3 key themes outlined in Latrobe 2026 include:

1. Liveable and Vibrant
2. Sustainable and Enterprising
3. Committed to collaborative and inclusive leadership

The community supports a lifestyle that is focused on high quality recreational and cultural facilities and a natural environment that is nurtured and respected, and where the heritage and cultural diversity is respected. Nine objectives are set out to meet these goals, which include:

1. Economy
2. Natural Environment
3. Built Environment
4. Community
5. Culture
6. Recreation
7. Governance
8. Advocacy and Partnerships
9. Regulation and Accountability

The role of strategic land use planning is essential to ensure future development is properly considered and able to meet the aspirations of a growing community. Within the Latrobe Valley, 82% of land is effectively unsuitable for urban development due to restrictions related to wildfire and flood prone areas, coal resources and significant state infrastructure.

The structure plan can address the economy, natural environment, built environment, and community to ensure that future development is sensitive to natural resources, that the community has accessibility of community services are preserved and enhanced, that remnant native vegetation is retained, that economic growth is supported and that a relaxed country lifestyle is retained.

It can also ensure that key elements relating to the town's culture and the recreation assets are retained.

Latrobe City Municipal Public Health and Wellbeing Plan 2018-2022

The *Municipal Public Health and Wellbeing Plan* is more than a collection and analysis of data, it is a capture of the thoughts, hopes and aspirations of our community. The plan seeks to ensure that the community is:

- Informed, connected and supportive;
- Enjoys being active in an engaging and inclusive environment;
- Has a strong sense of wellbeing and are equipped to make healthy choices in an environment that supports wellness;
- Feels safe and supported in their homes;
- Cultivates respectful relationships and feels safe in their environment; and
- Equipped with the skills to maximise work opportunities in an environment that supported lifelong learning.

The structure plan links to ensuring that the environment supports wellness through improving the liveability and connectedness of the community. It also seeks to 'future proof' growth in a way that is sustainable and retains the rural character.

Latrobe Economic Development Strategy 2016-2020

The Strategy aims to promote and support the development and economic return of the tourism and events sector. Key directions include:

- Implementing of the adopted Events Strategy 2013- 2017 which recommends significant further investment in attracting events for increased visitation and yield;
- Implementing the recommendations of the Tourism Product Audit and Review of Visitor Information Centre Service;
- Leverage 'hub and spoke' touring (where you base yourself in a town or campsite and do loop rides, returning to the same point at end of every day). Latrobe City is well recognised as a central location from which to appreciate Gippsland's attractions;
- Enhanced facilities at Lake Narracan and Hazelwood Pondage;
- Completion of the Gippsland Plains Rail Trail to Traralgon; and
- Converting the day-trip market to overnight

Toongabbie can leverage opportunities relating to the completion of the Gippsland Plains Rail Trail and capitalising on the day-trip market.

A Strength Led Transition 2016

In relation to Toongabbie, Latrobe seeks to:

- Enhance liveability by including attractive streetscaping, more bicycle and walking tracks, community gardens, enhancement of infrastructure that facilitates community connectedness, health and wellbeing.
- Tourism is a key economic driver which creates jobs and injects funds into regional economies. Tourism development has greater opportunities to the connect Latrobe's natural features and assets of our community.



2.7 Key Planning Themes

On review of all of the above influences, the following are key considerations in developing the Toongabbie Structure Plan:

- The role and character of Toongabbie within the municipality
- Identify where flooding and bushfire constrains development on the land
- Water and sewerage infrastructure constraints
- Retaining biodiversity and open space and connecting those assets;
- Protecting the social and aboriginal heritage;
- Providing a diversity of housing choice including rural residential development in appropriate locations;
- Ensuring that productive agricultural land is protected;
- Leveraging tourism opportunities to diversify the local economy; and
- Supporting the local shops and home-based businesses in the area.



*Photo: St. David's Uniting Church
Source: McKenzie, T., 2020.*

3

Toongabbie

Land Supply and Demand

3.1 Approach

A land supply and demand assessment has been undertaken for Toongabbie. It includes rural residential land and residential land. This includes lots within:

- Township Zone (TZ);
- Neighbourhood Residential Zone - Schedule 4 (NRZ4);
- Rural Living Zone - Schedule 2 (RLZ2); and
- Small Farming Zone - Schedule 1 (FZ1) lots that are under six hectares.

This assessment does not include Low Density Residential Zone lots as there are none that appear in or around Toongabbie.

The approach to assessing the land supply and demand includes:

- A review of residential property trends in Latrobe and Toongabbie;
- An analysis of historic population growth and its relationship to forecast population;
- An analysis of socio-economic data;
- An analysis of recent activity relating to building approvals;
- An analysis of residential land supply and demand; and
- Forecast additional land requirements.

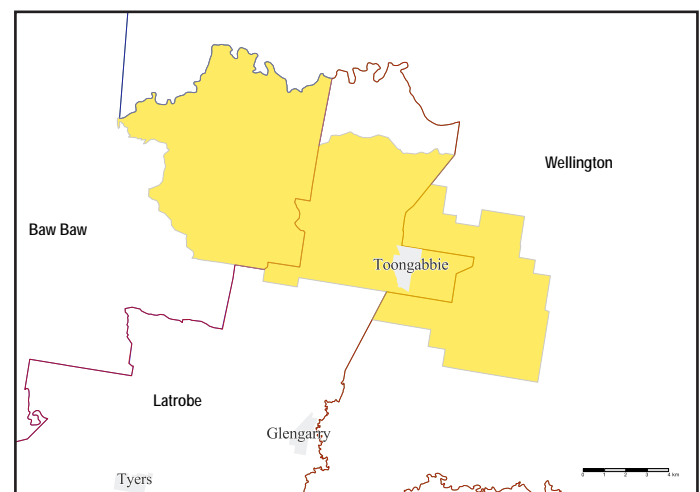
3.2 Overview

Toongabbie is a small settlement with an estimated population in 2016 (ABSb, 2019) of 500 people in the urban centre and an estimated 992 people in the locality. It is located in the north-east of Latrobe City Council and borders with Wellington Shire to the east, north and south of the township. Toongabbie provides a mix of large residential allotments in the township, and rural living allotments to the north. It offers a rural lifestyle choice while still being in close proximity to services that are offered in other major towns such as Traralgon.

Only limited services are available in Toongabbie (General Store which includes petrol pumps) and as such, residents need to travel to towns such as Traralgon for groceries, other services, and for employment for those who do not work in the surrounding rural area.

It is important to note that there is a variation in data when looking at locality boundaries versus the statistical areas, as shown in Figures CT17 and CT18. The Toongabbie locality is spread across three municipalities including Baw Baw Shire, Latrobe City and Wellington Shire.

Figure CT17: Toongabbie locality



Source: Latrobe City Council, 2020.

3.3 Residential Property Trends

3.3.1 LATROBE RESIDENTIAL CONTEXT

Latrobe City offers a diverse range of lifestyles, with rural living offering a popular and attractive lifestyle choice. Low density residential allotments at 4000 square metres and rural residential allotments at two hectares are popular choices across the municipality.

Traralgon is the fastest growing town within Latrobe City and has a number of development fronts that offer standard residential allotments at an average of approximately 720 square metres per lot. By comparison, the small towns offer a rural lifestyle with low density and rural residential allotments, often on the fringes of the townships. However, there is a shortage of rural residential land available within Latrobe, which means that it is in high demand.

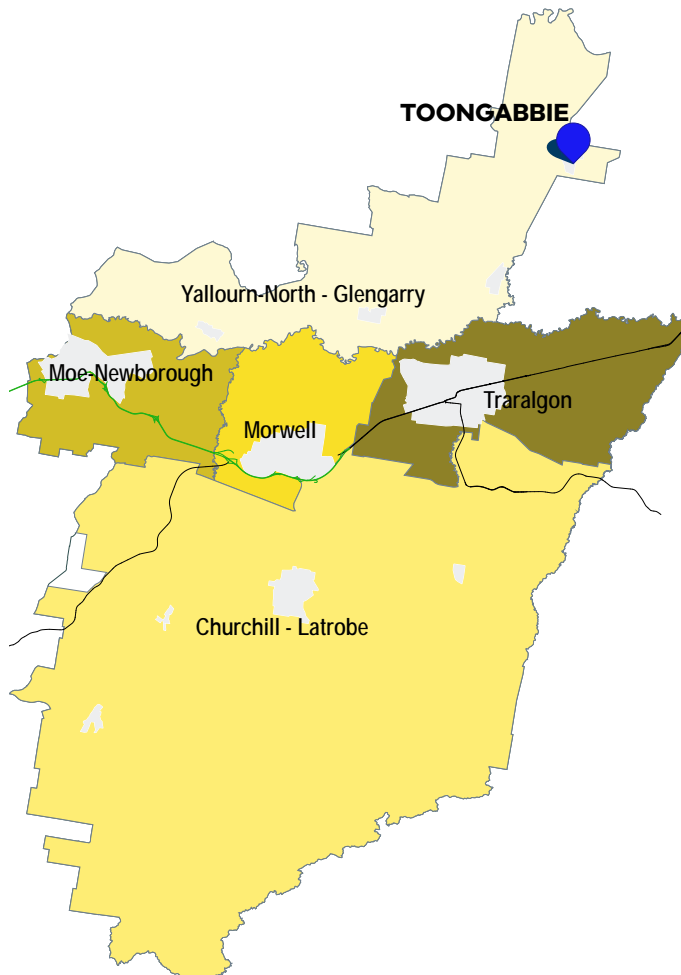
3.3.2 DRIVERS OF TRENDS

Residential allotments within Toongabbie Township are considered to be affordable in comparison to Glengarry or Tyers, this is regarded as a key driver of people, particularly for young families moving to Toongabbie.

According to the results from interviews with Real Estate agents, people are generally seeking larger house blocks of 1000+ square metres.

The recent growth in Toongabbie can also be partially attributed to the availability of large, vacant allotments within the town when compared to the other nearby small townships. This is currently reflected in the higher growth rate of Toongabbie at 1.63% between 2011 and 2016 when compared to Latrobe's rate of growth of 0.24% over the same time period. The growth in Toongabbie may decline as land becomes less available.

Figure CT18: Latrobe SA2 map



Source: Remplan, 2020.

It is noted that Toongabbie's higher growth rate of 1.63% per annum is proportionally higher because the population growth (in numbers) comes from a lower base figure compared with the larger Latrobe municipality figure.

People are moving from the south eastern suburbs such as Pakenham, Narre Warren and Hampton Park as they seek an alternative lifestyle to metropolitan Melbourne.

A large number of families are choosing to live in Toongabbie for a quieter, rural lifestyle while still being in close proximity to major services, as such 3-4 bedrooms dwellings which are still a highly sought after commodity in Toongabbie. Glengarry, which is a short 8 minute drive south, offers convenience shopping such as an IGA supermarket, a bakery and hairdresser, making living in Toongabbie an attractive lifestyle choice with large rural allotments and the convenience of shops nearby.

People who are seeking a standard residential allotment of 700 square metres are more likely to choose Traralgon to live in compared with Toongabbie.

3.3.3 TOONGABBIE RESIDENTIAL LAND TRENDS

Only minimal residential activity has taken place in Toongabbie in recent years, with an annual development rate of 5.4 dwellings per annum occurring between 2006 and 2019.

Median house prices are shown in Table CT6 and Figure CT19, both of which illustrate that process in Toongabbie has traditionally been above the Latrobe City median. The 2017 median house price for Toongabbie was \$286,500 compared to \$223,000 for Latrobe. Since 2007 average median house prices have grown at a rate of

55%; however, there was a severe downturn between 2010 and 2012 before the median price started to climb again. Prices have also fallen in 2015 and 2017, with 2017 experiencing a 9% downturn when compared to 2016.

Toongabbie's median house price has varied greatly when compared to Latrobe City as a whole. The reasons for this could include that demand for lots with acreage that are not readily available is increasing the prices due to the low supply. Lot prices may also vary depending on what has been sold that year as Toongabbie includes broadhectare farms, rural residential properties and residential land, and the small volume of properties that are sold in the locality relative to the volume of total number of sales within the municipality. Toongabbie sells less than 10 properties per quarter. Of those properties sold, approximately a fifth of each of the rural residential properties and residential properties comprised of vacant land (see 3.6.3 for details).

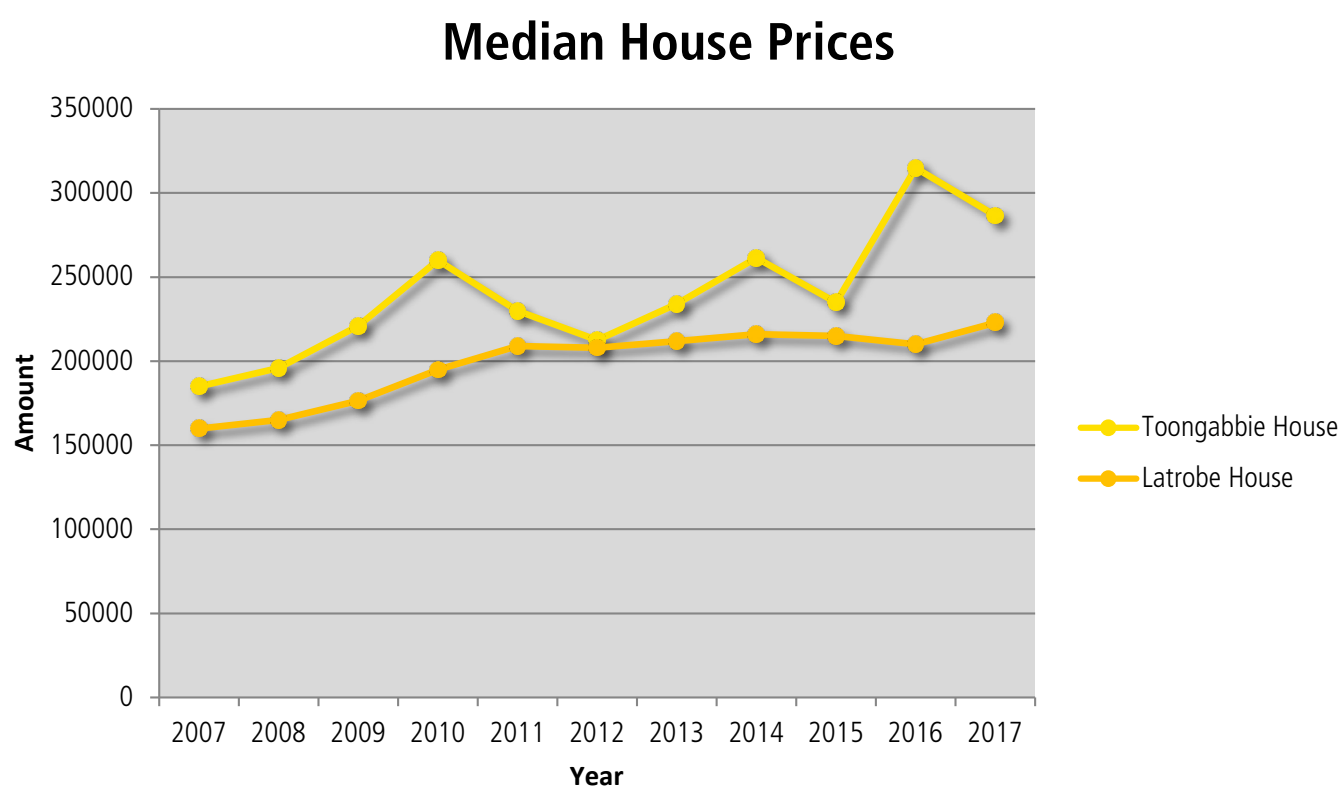
There has been a low rate of land that has been released through subdivisions over the past year with seven subdivision applications for two lot subdivisions occurring between 2015 - 2019. This equates to an average of 1.2 lots per year. This indicates that development is more likely to occur on lots that are currently vacant rather than through subdivision potential.

Table CT6: Median house prices between 2007 and 2017 (in '000s)

Property	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Toongabbie House	185	196	221	260	230	212.5	234	261.5	235	315	286.5
Latrobe House	160	165	176.5	195	209	208	212	216	215	210	223

Source: DELWP, 2019a.

Figure CT19: Median house prices - Toongabbie compared to Latrobe



Source: DELWP, 2019a.

3.4 Population Trends and Projections

3.4.1 HISTORIC POPULATION TRENDS FOR LATROBE

Over the past ten years from 2009 to 2019 Latrobe's City population increased by approximately +3255 persons, equating to an average growth rate of +326 persons or 0.44% per annum as shown in Table CT7. In contrast, regional Victoria's average annual population growth was significantly higher at 1.25% for the same period.

The growth for Latrobe City can be broadly broken up into five statistical areas - category 2 (SA2) which includes Traralgon, Morwell, Moe-Newborough, Yallourn North-Glengarry, and Churchill-Latrobe areas.

In 2019, the Traralgon region's population was 28,207 and was the largest of the five regions. Moe-Newborough had a population of 16,821 persons, Morwell had a population of 14,042 persons, Churchill-Latrobe had a population of 11,628 persons and Yallourn North-Glengarry had a population of 4,692 persons.

An excerpt from the *Latrobe City Retail Strategy - Background and Analysis Report 2018* (p. 30) states that:

While Traralgon is considered to be the centre for population growth within Latrobe City, the average rate of population growth between 2007 and 2017 of 1.3% per annum is broadly in line with the rate of population growth experienced throughout regional Victoria of 1.2% per annum.

Beyond market demand, a range of factors have contributed Traralgon's population growth relative to other study regions, including large land releases (due to Ministerial Amendments) and availability of trunk infrastructure (water,

sewage etc.,) in developing areas of the town. In contrast, it is understood that approved growth areas in other major towns (e.g. Morwell) have not progressed due to infrastructure issues.

The populations of Moe-Newborough Region, Morwell Region and the Northern and Southern Regions remained relatively stable over the 10-year period to 2017.

This growth has appeared to have slowed down from 2017 with the average annual growth for Traralgon from 2009 to 2019 decreasing to 1.06%.

3.4.2 HISTORIC POPULATION TRENDS FOR TOONGABBIE

Estimated Residential Populations per year are only provided at a SA2 level; as such, Toongabbie is calculated as a percentage of the Yallourn North-Glengarry SA2. Toongabbie falls into the Yallourn North-Glengarry SA2. As of 2016, it has an estimated residential population of 996 people or approximately 21.45% of the SA2. This reference point has been used when calculating estimated residential population for Toongabbie in 2019. It assumes linear growth. It is noted that in 2009, Toongabbie accounted for 20.44% of the population and as such there is likely to be a variation between the actual population numbers and the estimated population due to not taking this variation in growth into account.

Over the past ten years Toongabbie's population increased by approximately +90 persons, equating to an average growth rate of +9 persons or 0.95% per annum, as shown in Table CT8. In contrast, this growth rate is significantly

higher than Latrobe's annual growth rate of 0.44%, but lower than Regional Victoria's annual growth rate of 1.25% for the same period.

Table CT7: Historic population trends for SA2s in Latrobe

Category	2009	2014	2019	Ave. Annual Change 2009 - 2019 (No.)	Ave. Annual Change 2009 - 2019 (%)
Yallourn North-Glengarry	4,478	4,547	4,692	+21	0.47%
Moe-Newborough	16,771	16,843	16,821	+5	0.03%
Morwell	14,108	14,111	14,042	-7	-0.05%
Traralgon	25,381	26,888	28,207	+283	1.06%
Churchill-Latrobe	11,385	11,576	11,628	+24	0.21%
Total	72,123	73,965	75,390	+327	0.44%
Latrobe City	72,306	74,134	75,561	+326	0.44%
Regional Victoria	1,340,147	1,418,887	1,517,846	+17,770	1.25%

Source: ABS, 2019.

Table CT8: Historic population trends for Toongabbie

Category	2009	2014	2019	Ave. Annual Change 2009 - 2019 (No.)	Ave. Annual Change 2009 - 2019 (%)
Toongabbie	915	975	1,006	+9	0.95%
Yallourn North-Glengarry	4,478	4,547	4,692	+21	0.47%
Latrobe City	72,306	74,134	75,561	+326	0.44%
Regional Victoria	1,340,147	1,418,887	1,517,846	+17,770	1.25%

Source: ABS, 2019.

3.4.3 AVERAGE NUMBER OF PERSONS PER DWELLING

Toongabbie has an average of 2.7 persons per dwelling in 2016, which has increased marginally from 2.6 persons in 2011. This compares with the Victorian average of 2.6 persons per dwelling for both 2011 and 2016. However, the Toongabbie average is higher than the regional Victorian and Latrobe average number of persons per dwelling which is 2.4 persons and 2.3 persons respectively. The Latrobe average number of persons per dwelling has decreased marginally from 2.4 persons in 2011. This is shown in Table CT9.

Table CT9: Average number of persons per dwelling

Category	2011	2016	Change
Toongabbie	2.6	2.7	+0.1
Latrobe	2.4	2.3	-0.1
Regional Victoria	2.4	2.4	0.0
Victoria	2.6	2.6	0.0

Source: ABS, 2018a and ABS, 2018b; Remplan, 2020.

Note: The Toongabbie average number of persons per dwelling has been calculated using the 'counted in region (persons)' divided by the 'counted in region (dwellings)' to average the number of persons per dwelling for the two SA1 areas together.

3.4.4 POPULATION FORECASTS

Broader Toongabbie-Cowwarr Area

Based on the increase from 915 persons in Toongabbie in 2011 to 992 people in 2016, Toongabbie is increasing by 15.4 persons per year at an average annual growth rate of 1.63%; this growth rate has been used to predict a high population growth scenario. This growth rate is well above the Latrobe average predicted growth rate of 0.7%, as specified in the *Victoria in Futures* population change in Table CT10 (DELWP, 2019). It is noted that Toongabbie's growth is off

a lower base.

The growth rate over the past ten years of 0.95% has been applied as a medium growth rate scenario.

If the *Victoria in Future* predictions (VIFSA) are used for the Yallourn North - Glengarry District which covers Toongabbie, then Toongabbie would account for 21.45 percent of the total growth in that area from 2016 to 2036; this growth would equate to an average annual growth rate of 0.45%. This growth rate has been used to calculate a low growth scenario. These scenarios are shown in Table CT11.

The forecasts show that the population of Toongabbie will grow between 95 to 378 people over the next 15 - 20 years.

Toongabbie Township

In the 2016 census (ABSa, 2019) Toongabbie Township, or the residentially zoned area, had a population of 500 persons. This equates to 10.21% of the Yallourn North-Glengarry SA2. In 2011, the census data (ABSb, 2019) shows that Toongabbie Township had a population of 443 persons. Based on these figures, the average annual growth rate is 2.45%. If the percentage of the VIFSA (VIF, 2019) is used between 2016 and 2036, then the average annual growth rate is 0.26%. However, if the average annual growth rate between 2009 and 2019 is used then this equates to 0.79%. These can be used as the low, medium and high growth rates for the township. These scenarios are shown in Table CT12. The forecasts show that the population of Toongabbie Township will grow between 25 to 310 people over the next 15 - 20 years.

Table CT10: VIFSA predicted population change by SA2

VIFSA SA2 Areas	2016	2021	2026	2031	Change	AAGR
VIFSA Churchill District	11,660	12,040	12,550	12,910	+1,250	+0.7%
VIFSA Glengarry North - Tyers District	4,650	4,710	4,740	4,730	+80	+0.1%
VIFSA Moe Town	16,500	16,580	16,870	17,690	+1,190	+0.5%
VIFSA Morwell Town	14,100	14,270	14,560	14,590	+850	+0.4%
VIFSA Traralgon Town	26,990	28,720	30,440	32,170	+5,180	+1.2%
Latrobe	73,900	76,320	79,160	82,460	+8,560	+0.7%
Victoria	6,053,350	6,598,360	7,147,980	7,701,110	+1,647,760	+1.6%

Source: DELWP, 2019.

Table CT11: Population growth scenarios for broader Toongabbie area

Pop. Growth Rate	Data Set	2011	2016	2021	2026	2031	2036	Total Change between 2016 and 2036 (No. of people)	Average Annual Growth
High	Toongabbie ABS Census Data	915	992	1075	1170	1265	1370	+378	1.63%
Medium	Average annual growth rate between 2009 and 2019 (21.45% of Yallourn North -Glengarry SA2)	915	996	1045	1095	1150	1205	+209	0.95%
Low	Toongabbie Estimated Residential Population (21.45% of Yallourn North -Glengarry SA2)	915	996	1045	1060	1075	1090	+94	0.45%

Source: DELWP, 2019. Remplan, 2020.

Table CT12: Population growth scenarios for Toongabbie Township

Pop. Growth Rate	Data Set	2011	2016	2021	2026	2031	2036	Total Change between 2016 and 2036 (No. of people)	Average Annual Growth
High	Toongabbie ABS Census Data	443	500	565	635	720	810	+310	2.45%
Medium	Average annual growth rate between 2009 and 2019 (21.45% of Yallourn North -Glengarry SA2)	443	500	520	540	565	585	+85	0.79%
Low	Toongabbie Estimated Residential Population (21.45% of Yallourn North -Glengarry SA2)	443	500	505	515	520	525	+25	0.26%

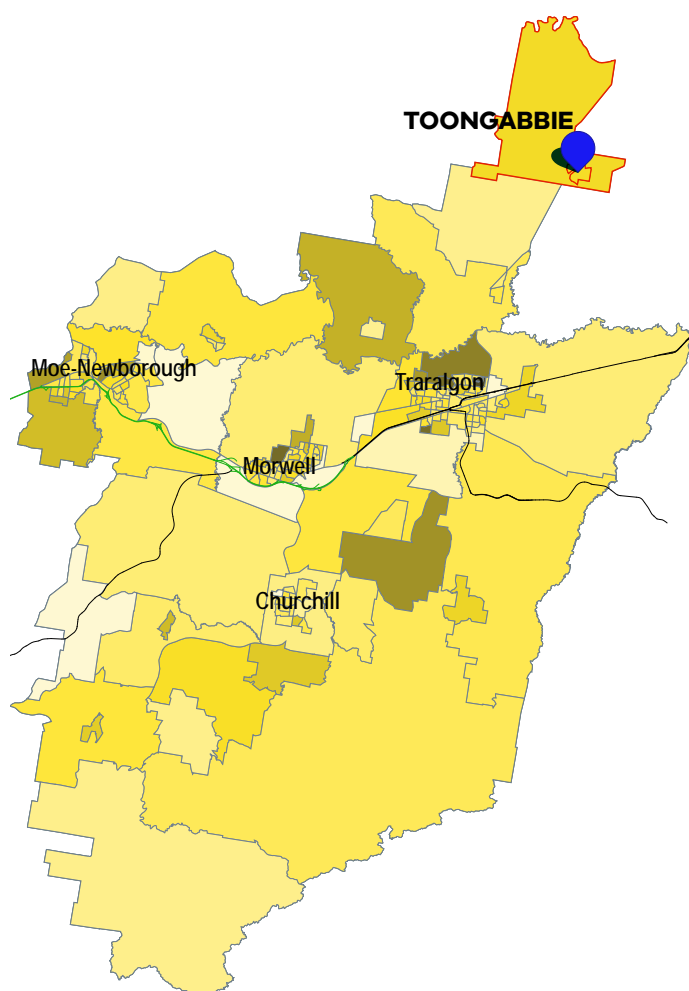
Source: DELWP, 2019. Remplan, 2020

3.5 Socio-economic Analysis

The following data is taken from Remplan which uses Australian Bureau of Statistics Data for 2011 and 2016. For consistency the SA1 areas for Toongabbie-Cowwarr and Toongabbie urban centre have been used in this analysis; this area equates to approximately 21.45% of the Yallourn North-Glengarry SA2. As such, the data presented does not align with the area considered as a part of the Toongabbie Structure Plan.

However, these areas outside of the study area are likely to use Toongabbie as a service centre and are still considered relevant when reviewing land supply.

Figure CT20: Toongabbie and Cowwarr statistical areas level 1 (SA1)



Source: Remplan, 2020. Latrobe City Council, 2020.

3.5.1 AGE STRUCTURE

Toongabbie has a median age of 35 years old. 17.94% of residents are aged between 0 and 14 years old compared to 18.1% for Latrobe.

There are three age ranges where a higher percentage rate in Toongabbie is noted when compared to Latrobe, Gippsland and Victoria. Toongabbie has a higher percentage of 25-34 year olds at 16.35% than the state average (15.01%) and Latrobe (12.7%).

Secondly, Toongabbie has a higher percentage of 0-9 year olds (14.76%), compared with Latrobe (12.07%), and Victoria (12.48%). These two age groups combined imply a large number of young families are choosing to live in Toongabbie.

Thirdly, the 55-64 year age range is significantly higher than the comparison areas with a percentage of 17.54%, compared with Gippsland (14.83%), Latrobe (13.94%) and Victoria (11.43%). This is consistent with the trend for this age group to seek a 'tree change' and the stated reasons for moving to Toongabbie from stakeholders at the community workshops.

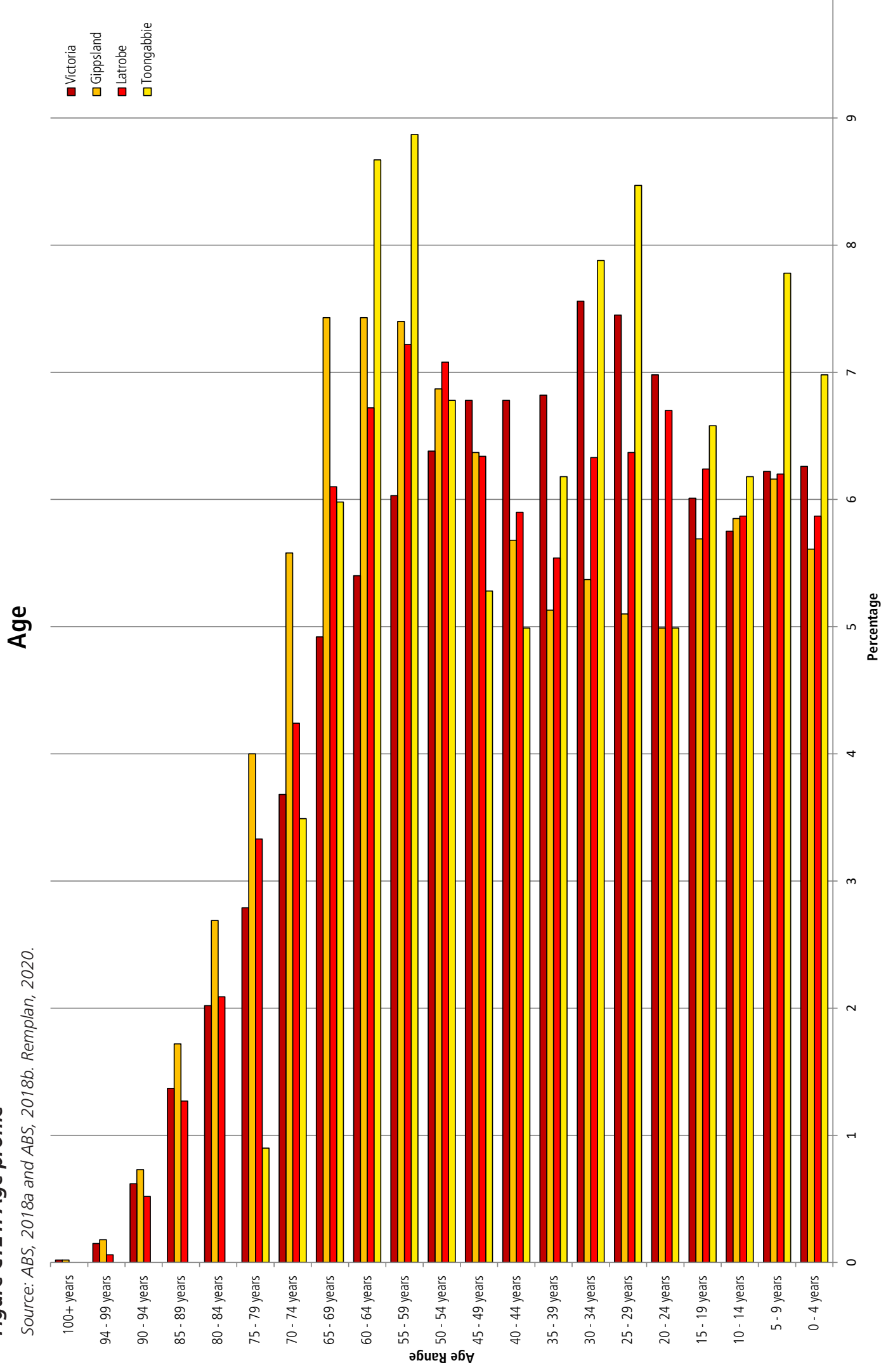
Table CT13: Age breakdown (2016)

Age (years)	Toon. (Vic.)	%	Latrobe	%	Gippsland Region	%	Victoria	%
0 - 4	70	6.98	4,300	5.87	15,231	5.61	371,212	6.26
5 - 9	78	7.78	4,544	6.20	16,712	6.16	368,640	6.22
10 - 14	62	6.18	4,302	5.87	15,858	5.85	341,061	5.75
15 - 19	66	6.58	4,574	6.24	15,428	5.69	356,334	6.01
20 - 24	50	4.99	4,906	6.70	13,524	4.99	413,797	6.98
25 - 29	85	8.47	4,663	6.37	13,835	5.10	441,274	7.45
30 - 34	79	7.88	4,640	6.33	14,568	5.37	447,929	7.56
35 - 39	62	6.18	4,061	5.54	13,907	5.13	404,029	6.82
40 - 44	50	4.99	4,322	5.90	15,412	5.68	401,894	6.78
45 - 49	53	5.28	4,646	6.34	17,280	6.37	402,042	6.78
50 - 54	68	6.78	5,188	7.08	18,641	6.87	378,368	6.38
55 - 59	89	8.87	5,288	7.22	20,077	7.40	357,615	6.03
60 - 64	87	8.67	4,926	6.72	20,156	7.43	319,835	5.40
65 - 69	60	5.98	4,468	6.10	20,154	7.43	291,392	4.92
70 - 74	35	3.49	3,103	4.24	15,131	5.58	218,202	3.68
75 - 79	9	0.90	2,440	3.33	10,845	4.00	165,109	2.79
80 - 84	0	0.00	1,530	2.09	7,284	2.69	119,898	2.02
85 - 89	0	0.00	930	1.27	4,677	1.72	81,261	1.37
90 - 94	0	0.00	381	0.52	1,993	0.73	36,723	0.62
94 - 99	0	0.00	46	0.06	501	0.18	8,858	0.15
100+	0	0.00	0	0.00	53	0.02	1,151	0.02
Total	1003	100.00	73,258	100.00	271,267	100.00	5,926,624	100.00

Source: ABS, 2018a and ABS, 2018b. Remplan, 2020.

Figure CT21: Age profile

Source: ABS, 2018a and ABS, 2018b. Remplan, 2020.



3.5.2 INCOME

The median weekly personal income for a Toongabbie resident aged over 15 years of age in 2016 was \$651.00. However, the average weekly family median personal income was \$1838.00 which indicates that a large number of families have dual incomes. The average weekly income for personal (\$651), family (\$1838) and household (\$1609) income is slightly higher than the state average (\$644, \$1,715 and \$1,419). It is much higher than the Latrobe (\$544, \$1,415, and \$1,078) and Regional Victorian (\$576, \$1,418 and \$1,124) for personal, family and household income per week in 2016. While the median weekly personal income is growing at a rate slightly less than the municipal average between 2011 and 2016, it is still well above the Latrobe City average weekly personal income. Family and Household income has vastly outgrown the Latrobe City median by 26.50% and 29.86%, respectively compared, to 14.48% and 14.44%.

The broader Toongabbie area has a SEIFA index score of 1,023 out of 1,186; while the township has a score of 979 which indicates a relative lack of disadvantage in the area.

These statistics are shown in Table CT14.

3.5.3 HOUSEHOLD STRUCTURE

In Toongabbie, 78.9% of all the households were family households, 19.4% were single person households and 1.7% were group households. Family households are marginally higher than Victoria (72.5%) and much higher than Regional Victoria (68.9%), and Latrobe (66.3%). A lower percentage of lone person households is noted in comparison to Victoria (24.7%), Regional Victoria (29.0%) and Latrobe (31.1%).

There are 277 families living in Toongabbie in 2016 with an average of 1.9 children per family with children at home. This pattern has increased from 2011, where there were 268 families with the same average of 1.9 children per family.

Of the families in Toongabbie, 48.4% were couple families with children, 37.6% were couple families without children and 14.0% were one parent families. The number of couples with children has increased by 5.5% since 2011, indicating that there are a number of younger couples living in Toongabbie who have gone on to have children. 48.4% of couples with children have a higher average than Latrobe.

In Toongabbie, of the couple families with children, 16.5% had both partners employed full-time, 2.1% had both employed part-time and 30.9% had one employed full-time and the other part-time.

3.5.4 HOME OWNERSHIP

All 352 dwellings in Toongabbie are detached dwellings. This number of dwellings has increased by 20 dwellings up from 333 dwellings in 2011.

Toongabbie comprises a high share of dwellings being purchased and a low share of rentals. Of the occupied private dwellings in Toongabbie, 32.4% were owned outright, 57.1% were owned with a mortgage, and 7.7% were rented. This pattern has remained relatively stable since 2011 with 35.2% per cent being owned outright, 54.3% owned with a mortgage, and 8.1% being rented. It is noted that the number of properties being rented has not changed since 2011.

In comparison, for 2016, Toongabbie has a

marginally lower percentage of properties owned outright (32.4%) with Latrobe at 35.6% and Regional Victoria at 37.8% but is on par with Victoria at 32.3%. Toongabbie has a higher rate of owned with a mortgage (57.1%) in comparison to Latrobe at 34.0%, Regional Victoria at 37.8%, and Victoria at 35.3%.

Toongabbie also has a significantly lower share of the rental market (7.7%) when compared to Latrobe which has 26.4% of properties rented. Regional Victoria and Victoria are similar to Latrobe at 25.1% and 28.7% respectively.

Table CT14: Weekly median incomes in Toongabbie (2016)

Median Weekly Incomes People aged 15 years and over	Toongabbie 2016 (\$)	Toongabbie 2011 (\$)	Change %	Latrobe 2016 (\$)	Latrobe 2011 (\$)	Change %	Regional Victoria 2016 (\$)	Victoria 2016 (\$)
Personal	651	561	16.04	544	468	16.24	576	644
Family	1,838	1,453	26.50	1,415	1,236	14.48	1,418	1,715
Household	1,609	1,239	29.89	1,078	942	14.44	1,124	1,419

Source: ABS, 2018a and ABS, 2018b. Remplan, 2019.

Table CT15: Household structure in Toongabbie (2016)

Family Composition	Toon. 2016	%	Toon. 2011	%	Latrobe 2016	%	Latrobe 2011	%	Regional Victoria 2016	%	Victoria 2016	%
Couple family without children	105	30.4	116	34.4	7,651	26.9	7,663	27.4	159,025	29.6	559,717	26.5
Couple family with children	135	39.0	113	33.5	7,223	25.4	7,699	27.5	146,809	27.3	709,965	33.6
One parent family	39	11.3	37	11.0	3,744	13.2	3,670	13.5	59,832	11.1	234,596	11.1
Other family	0	0.0	3	0.9	239	0.8	261	0.9	4,770	0.9	27,800	1.3
Lone person household	67	19.4	64	19.0	8,776	31.1	8,103	29.0	155,827	29.0	521,828	24.7
Group household	6	1.7	9	2.7	794	2.8	781	2.8	16,673	3.1	95,588	4.5

Source: ABS, 2018a and ABS, 2018b.

Note: Percentages are rounded to the nearest tenth of a decimal. Percentages may not equate to 100%. Toongabbie State Suburb is used for the 2011 and 2016 figures, however, the area has changed between 2011 and 2016.

Table CT16: Housing tenure in Toongabbie (2016)

Tenure	Toon. 2016	%	Toon. 2011	%	Latrobe 2016	%	Latrobe 2011	%	Regional Victoria 2016	%	Victoria 2016	%
Owned outright	114	32.4	118	35.2	10,045	35.6	10,017	35.8	203,317	37.8	682,685	32.3
Owned with a mortgage	201	57.1	182	54.3	9,562	34.0	9,740	34.9	178,924	33.2	746,502	35.3
Rented	27	7.7	27	8.1	7,460	26.4	7,135	25.5	134,890	25.1	607,354	28.7
Other tenure type	3	0.9	0	0.0	172	0.6	187	0.7	4,406	0.8	17,178	0.8
Tenure type not stated	7	2.0	8	2.4	939	3.3	869	3.1	16,693	3.1	58,983	2.8

Source: ABS, 2018a and ABS, 2018b.

3.5.5 HOUSING COSTS

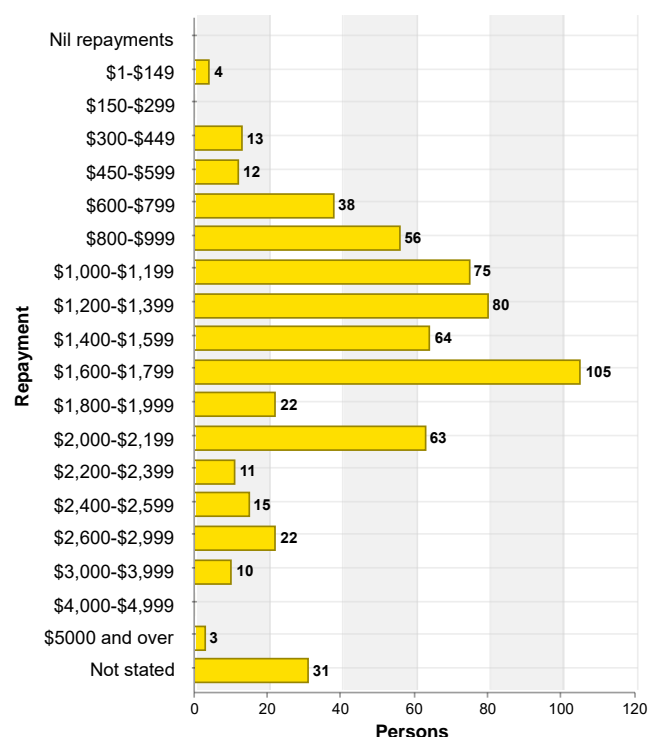
The median housing costs are calculated for the Toongabbie township and the Toongabbie-Cowwarr statistical areas (SA1) as shown below. The data has been collected from Remplan which uses the Australian Bureau of Statistics 2016 Census data.

The average monthly mortgage repayment for Toongabbie is \$1419 which is lower than the Victoria median of \$1728. A total of 91.5% of Toongabbie households pay less than 30% of their household incomes. Indicating that 8.5% of home owners may experience some housing stress. This share is higher than the other areas, with Victoria the closest at 7.5%, Regional Victoria at 5.8% and Latrobe at 4.8%. Numbers are shown in Table CT17.

Figure CT22 shows the breakdown of monthly mortgage repayments and the number of persons in each category for Toongabbie only.

Figure CT22: Mortgage repayments per month in Toongabbie

Mortgage Repayment - Toongabbie - Cowwarr Statistical Area 1 (2016)

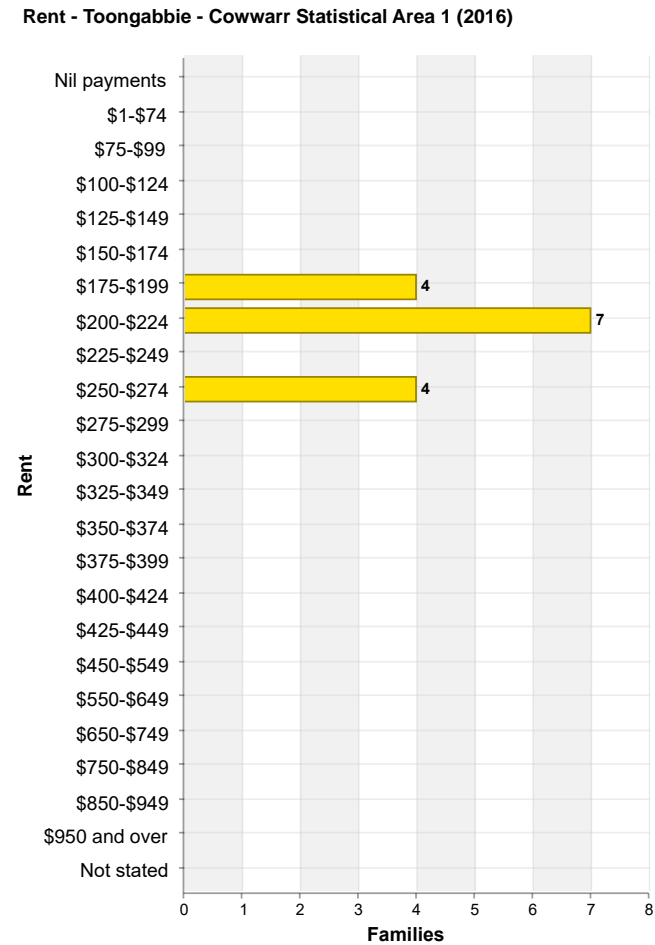


Source: Remplan, 2020.

The median rent in 2016 was \$210, compared to the Latrobe median rent of \$200. 98.5% of renters in Toongabbie spend less than 30% of their household income, indicating that very few renters in Toongabbie experience housing stress. This is consistent with the higher incomes of the area when compared to the Latrobe average. Figures are shown in Table CT18.

Figure CT23 shows the breakdown of weekly rent payments and the number of families in each category for Toongabbie only.

Figure CT23: Rent payments per week in Toongabbie



Source: Remplan, 2020.



Photo: Aerial of Toongabbie between King St and Victoria St



Table CT17: Average Mortgage Repayments per Month

Mortgage monthly payments	Toongabbie 2016		Latrobe 2016		Regional Victoria 2016		Victoria 2016	
	\$	%	\$	%	\$	%	\$	%
Median Rent	1419		1,200		1,300		1,728	
Households where mortgage payments are less than 30% of household income		91.5		95.2		94.2		92.5
Households where mortgage payments are greater than 30% of household income		8.5		4.8		5.8		7.5

Source: ABS, 2018a and ABS, 2018b.

Table CT18: Median Rent per Week

Rent weekly payments	Toongabbie 2016		Latrobe 2016		Regional Victoria 2016		Victoria 2016	
	\$	%	\$	%	\$	%	\$	%
Median Rent	210		200		231		325	
Households where rent payments are less than 30% of household income		98.5		90.5		91.4		89.6
Households where rent payments are greater than 30% of household income		1.5		9.5		8.6		10.4

Source: ABS, 2018a and ABS, 2018b.

3.6 Recent Activity

This section details the recent activity of dwelling approvals achieved across Toongabbie in recent years.

Residential building permits are measured from 2006 to 2019, and this data is presented across the part of the Toongabbie locality that is located within the municipality. Farming Zone lots have been split into lots under six hectares (the largest subdivision size under a rural living zone), and lots between six and 40 hectares. There are no lots within the locality that are larger than 40 Hectares.

3.6.1 ANALYSIS OF BUILDING PERMITS

Only a limited number of building permits for dwellings have been issued in Toongabbie over the past 13 years, 2006 to 2019. The total number of dwelling building permit approvals has declined from a peak of 14 in 2007 and 2009 to 4 in 2017 and 2018, while it has picked up to 7 in 2019.

Figure CT24 summarises the number of new dwellings involving domestic building permits, as sourced from the Building department of Latrobe City Council. This data can be further broken down in to four categories which include:

- Dwelling Approvals
- Dwelling Extensions
- Dwelling Re-erections
- Other building approvals (i.e. school buildings, CFA building)

These categories are summarised in Figure CT25. All of the dwelling building permits have been for a single house on a lot.

Photo: Aerial of Toongabbie between Hower St and Ries St



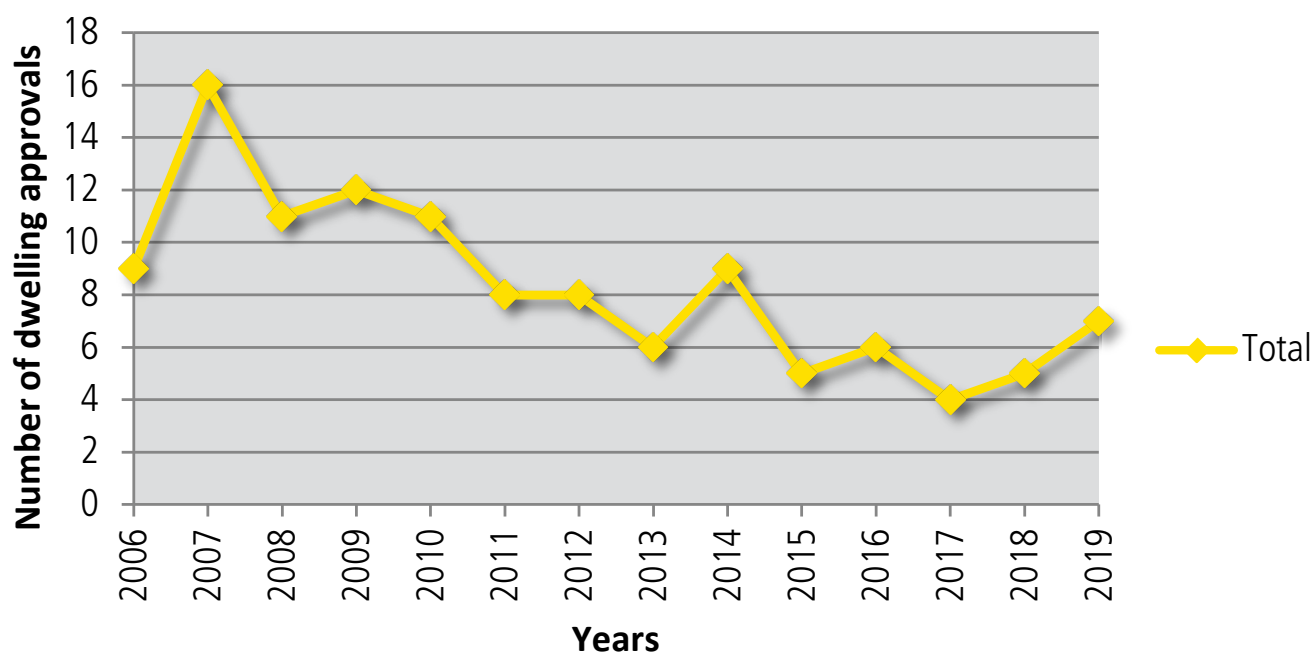
Table CT19: Dwelling approvals per year

Dwelling Approval by Type	Year													
	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19
Total Dwelling Approvals	9	16	11	14	12	8	8	6	9	5	6	4	5	7
Dwelling Approvals	9	10	6	9	6	5	5	4	8	4	6	4	5	7
Dwelling Extensions	0	5	2	3	1	3	2	2	0	1	0	0	0	0
Dwelling Re-erection	0	0	2	0	1	0	0	0	0	0	0	0	0	0
Other Building Approvals	0	1	1	0	3	0	1	0	1	0	0	0	0	0

Source: Latrobe City Council, 2020a.

Figure CT24: Total dwelling approvals

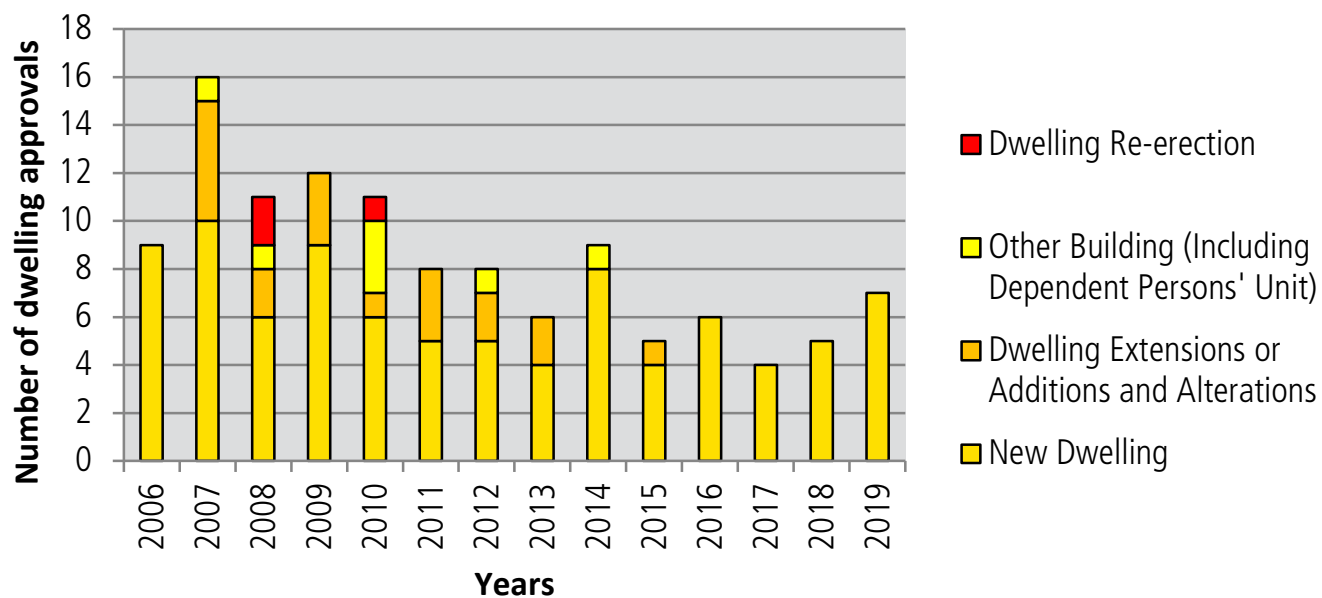
Total Dwelling Approvals



Source: Latrobe City Council, 2020a.

Figure CT25: Dwelling approvals by type

Dwelling Approvals by Type



Source: Latrobe City Council, 2020a.

3.6.2 RECENT SALES ACTIVITY

Over the past five years 2015 to 2019, A total of 86 property sales have been recorded within the Toongabbie locality. Of these 34 sales were residential allotments with houses, 25 sales were rural residential allotments with houses, 10 sales were rural (larger than 6 hectares) allotments with houses, nine sales were vacant residential allotments, seven sales were vacant rural residential allotments and one sale was a vacant rural allotment. Total vacant land sales account for approximately 19.76% of the sales activity within Toongabbie. Total vacant land accounts for 20.93% of all residential property sales, while it accounts for 21.88% of rural residential land sales.

Table CT20: Property sales

Category	No. of properties sold	Percentage of sales (%)
Residential allotment with house	34	39.53
Vacant residential allotment	9	10.47
Rural residential allotment with house	25	29.07
Vacant rural residential allotment	7	8.14
Rural allotment with house	10	11.63
Vacant Rural allotment	1	1.16

Source: Domain, 2020.

3.6.3 RECENT DEVELOPMENT RATES

Annual dwelling approvals have varied between 4 approvals in 2018 and 7 approvals in 2019. Over the past 10 years, there has been an average

approval of 7.10 dwellings; it has dropped to 5.4 dwellings over the past five years since January 2015. A total of 68% are within the residential area, while a further 24% are in a rural residential type situation. A summary of recent development of residential land in Toongabbie is presented in Table CT21.

Between January 2014 and December 2019, 27 dwellings were developed in Toongabbie, including 18 in Neighbourhood Residential Zone 4, one in Rural Living Zone 2 to the north of the Toongabbie township, six in Farming Zone which is less than six hectares in size, and two in Farming Zone where the size of the land is between six and 32 hectares and within 1.5 kilometres of the township.

The majority of development has occurred on blocks that average 2,617m² within the General Residential Zone 1 (now Neighbourhood Residential Zone - Schedule 4); the smallest block is 876m² and the largest is 14, 446m². The development that has occurred in Toongabbie over the past five years is vastly different from the *Residential and Rural Residential Land Assessment 2009* which stated that:

There appears to be a demand for large lifestyle lots in Toongabbie compared with smaller standard residential lots, as evidenced by the combined development rate of RLZ and FZ lots being greater than the development rate of R1Z [now NRZ4] land

A number of reasons account for this change which include the Rural Living precincts to the north being largely developed and the relatively large size of the residential blocks lends itself to low density type situation when compared to the neighbouring town of Glengarry.

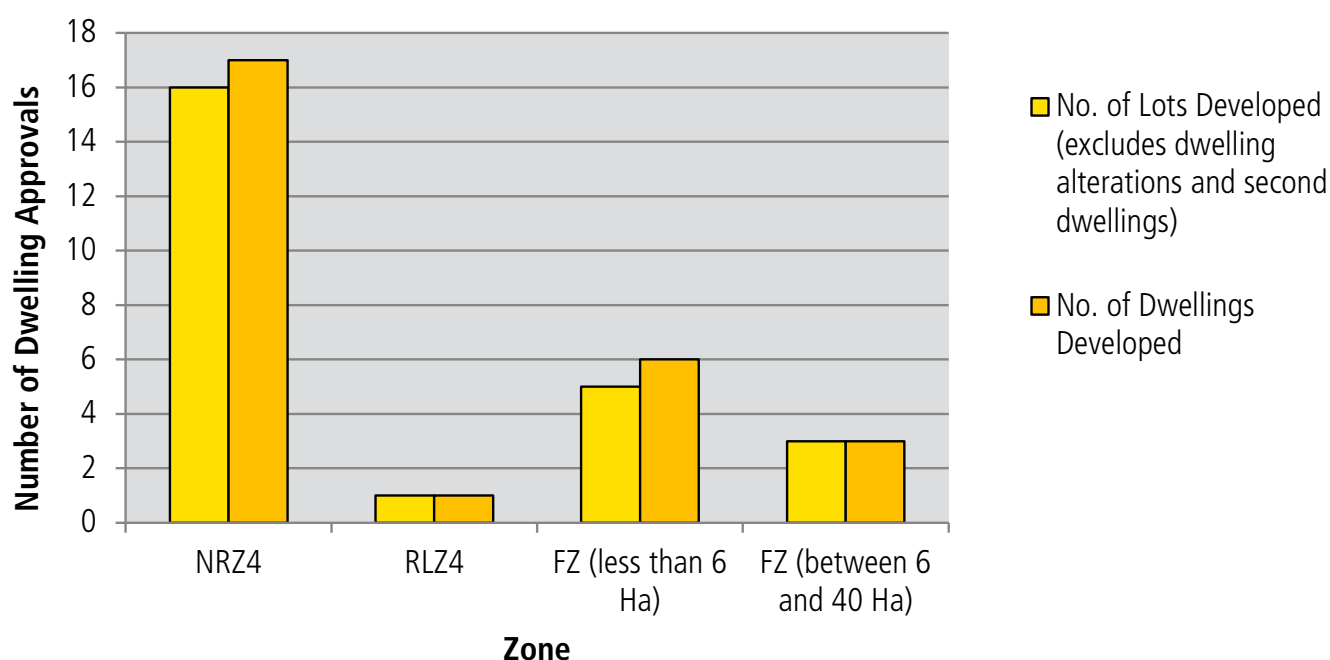
Table CT21: Dwellings approvals by zone 2015-2019

Zone	No. of Lots Developed (excludes dwelling alterations and second dwellings)	No. of Dwellings Developed	Annual Development Rate	Percentage of Dwellings Developed	Percentage of Dwellings Developed in the Study Precinct	Median lot size (m ²)	Median lot size in Study Area (m ²)
NRZ4	16	17	3.4	63%	68%	2,579	2,617
RLZ4	1	1	0.2	4%	0%	15,459	0
FZ (less than 6 Ha)	5	6	1.2	22%	24%	21,771	24,634
FZ (between 6 and 40 Ha)	3	3	0.6	11%	8%	185,003	120,514
Total	25	27	5.4	100%	100%	63,286	59,494

Source: Latrobe City Council, 2020a.

Figure CT26: Dwelling approvals by zone 2015-2019

Dwelling Approvals by Zone



Source: Latrobe City Council, 2020a.

3.7 Land Supply

This section details the supply (measured in the number of lots) of residential and rural residential land as of March 2020. This covers the Toongabbie township for residential supply and the Toongabbie and Cowwarr localities that are located within the border of the municipality.

3.7.1 SUPPLY OF RESIDENTIAL LAND

The assessment of the supply of residential and rural residential land lots does not take into account a number of factors that could limit the number of actual developable lots, such as environmental constraints (e.g. floodway constraints) or infrastructure constraints. These are further considered in section 3.9 Limitations and other Considerations. It is likely that the number of lots which could eventually be developed is considerably lower than the estimates in this analysis.

Land zoned for residential development in the Toongabbie precinct comprises NRZ4 and TZ. The rural residential comprises of RLZ2 zoned land located to the north of Toongabbie in Toongabbie North and Cowwarr, and a number of FZ1 lots that are less than 6 Hectares. No Low Density Residential Zoned land (LDRZ) is located in Toongabbie. A summary of the rural residential and residential land is provided in Table 15 and further discussed in the following sections.

Supply of Neighbourhood Residential Zone Lots

The supply of residential land is made on the assumption that lots are at 1000 square metres as this is the stated preferred minimum from interviews conducted with real estate agents.

In the Toongabbie study area this consists of:

Lots available for development: Approximately 10 NRZ4 lots are available for development in

Toongabbie.

Total vacant lot potential: Total vacant lot potential in Toongabbie is estimated at approximately 80 lots, which includes 10 vacant lots available for development and approximately 70 lots which could be generated through subdivision. This figure is based on an estimate of 1000 square metres per lot and in keeping with the existing land use pattern. A number of these properties considered to be vacant do have sheds or outbuildings on them and may be unlikely to be developed in the near future.

Occupied Lots with Subdivision Potential: An additional 241 lots could be provided from occupied lots that are 2000 square metres or more or have vacant titles. This is assuming that the subdivision would be consistent with the surrounding land use pattern and would be subdivided at 1000 square metres.

However, the residential zoning in Toongabbie allows for lots down to 500 square metres without the need for a planning permit for a dwelling. 1000 or 2000 square metres is not considered to be a standard density, as such Table CT22 outlines the number of lots under a number of different scenarios that could result because of the current zoning. These scenarios are calculated on lot size and whether a lot is developed or not. As such, it varies from calculations in Tables CT24 and CT25, particularly for lots at 2000 square metres as that calculation includes titles that may be less than the minimum lot size and when placed with the parent lot may not be calculated as large enough to subdivide to a particular size under the following scenarios. These include:

- All lots developing to the minimum lot size under the zone that does not trigger a planning permit for a dwelling (500 square

metres);

- All lots develop to a minimum of 1000 square metres; and
- All lots develop to a minimum of 2000 square metres.

Table CT22: Lot yield based on different scenarios

	NRZ4	TZ	Total Lots
No. of lots at 500 square metres	883	22	905
No. of lots at 1000 square metres	315	9	324
No. of lots at 2000 square metres	86	3	89

Source: Latrobe City Council, 2020.

Supply of Township Zone Land

Lots available for development: Three parcels of vacant land in the Township Zone exist. These vacant parcels could either contribute to the residential land supply or provide opportunities for further commercial opportunities.

It is preferred that these vacant lots provide further commercial opportunity; however, it is a residential zone and allows for a dwelling without a planning permit currently. As such, it has been included in the land supply analysis as potential residential lots.

Total vacant lot potential: These three lots have a further potential for an additional four lots at 1000 square metres per lot.

Occupied lots with subdivisional potential:

Two lots that could potentially be subdivided create an additional two lots.

3.7.2 SUPPLY OF RURAL RESIDENTIAL LAND

The supply of rural residential land in Toongabbie consists of rural living zoned land and lots in the Farming Zone under 6 Hectares.

Supply of Rural Living lots

The RLZ to the north of Toongabbie consists of:

Lots available for development: Two vacant lots are available for development. There are no approved subdivisions.

Occupied lots with subdivision potential:

Seven potential lots are located in the RLZ and these consist of three vacant titles and approximately four lots that can be created through subdivision of one larger lot based on the minimum lot size of 4 Hectares.

Supply of Farming Zone lots

Lots available for development: Eight lots are available on lots under six hectares in the Farming Zone 1. These lots currently need a planning permit for any development associated with a dwelling.

Occupied Lots with Subdivision Potential:

Currently, 19 vacant titles on lots under six hectares are located in the FZ1 that form part of a larger property. This includes titles where a waterway runs through them. This analysis has not assessed whether these lots can be developed or not. However, it is noted that residential development is unlikely on these parcels. Subdivision potential has not been considered as a part of this assessment due to the minimum subdivision being 80 Hectares.

Tables CT24 and CT25 consolidates all of this information.



Figure CT27 shows the vacant properties, vacant titles, occupied lots with subdivision potential and vacant lots with subdivision potential. There are no lots in approved subdivisions. All vacant titles in the Farming Zone within the study have been shown, although they all will trigger a planning permit as they are below 80 Ha and have no subdivision potential. Although, they sit outside the study area, Figures CT28 and CT29 also show the Toongabbie and Cowwarr rural living precincts and their lot potential as they contribute to available lifestyle options in the area.



*Photo: Toongabbie Men's Shed.
Source: McKenzie, T., 2020.*

Table CT23: Lot yield category descriptions

	Land Type	Description	Composition of Categories
A	Vacant Lots	Vacant GRZ1 and TZ lots which are less than 1000m ² ; vacant FZ lots which are less than 5Ha; and vacant RLZ which cannot be further subdivided according to relevant minimum subdivision sizes.	-
B	Lots in approved subdivisions	Lots which have planning approval to be subdivided.	-
C	Lots available for development	An estimate of the number of lots which could be developed with no further subdivision approval required by Latrobe City Council.	A+B
D	Vacant land with subdivision potential	Vacant lots which could be potentially subdivided into at least two lots based on an average lot size of 1000 square metres to correspond with the surrounding land use pattern. For NRZ4 and TZ land this consists of vacant lots which are at least 2000m ² .	
E	Total vacant lot potential	An estimate of the total lot potential on land which is currently vacant and which has the potential to be developed in the near future.	C+D
F	Vacant parcels of land that are part of a larger occupied allotment	Vacant land titles which form part of a larger property which contains a dwelling.	-
G	Occupied lots with subdivision potential	Lots which are occupied by a dwelling but are large enough to be subdivided into at least two lots based on an average lot size of between 1000 square metres to correspond with the surrounding land use pattern. Including a lot for the existing dwelling or in NRZ4 and TZ zone where the lot can create at least two lots of 1000m ² .	-
H	Additional lot potential on occupied allotments	Land which is currently occupied but has the potential to accommodate additional lots in the future.	F+G

Source: *Essential Economics*, 2009.



Table CT24: Lot yield categories by zone

Zone	A	B	C	D	E	F	G	H	Total (E+H)
NRZ4	10	0	10	70	80	20	222	242	322
TZ	1	0	1	4	5	2	2	4	9
RLZ	2	0	2	0	2	3	4	7	9
FZ	8	0	8	0	8	19	0	19	27

Source: Latrobe City Council Field Survey, March 2020. Aerial photos: Latrobe City Council, January 2020.

Table CT25: Lot yield by zone

Zone	Lots available for development (C)	Total vacant lot potential (E)	Total occupied lots with subdivision potential (H)	Total lot potential
NRZ4	10	80	242	322
TZ	1	5	4	9
LDRZ	N/A	N/A	N/A	N/A
<i>Total Residential Zoned Land</i>	<i>11</i>	<i>85</i>	<i>246</i>	<i>331</i>
RLZ	2	2	7	9
FZ (less than 6 Ha)	8	8	19	27
<i>Total Rural Residential Land</i>	<i>10</i>	<i>10</i>	<i>26</i>	<i>36</i>

Source: Latrobe City Council Field Survey, March 2020. Aerial photos: Latrobe City Council, January 2020.

Figure CT27: Vacant and developable lots within the study area

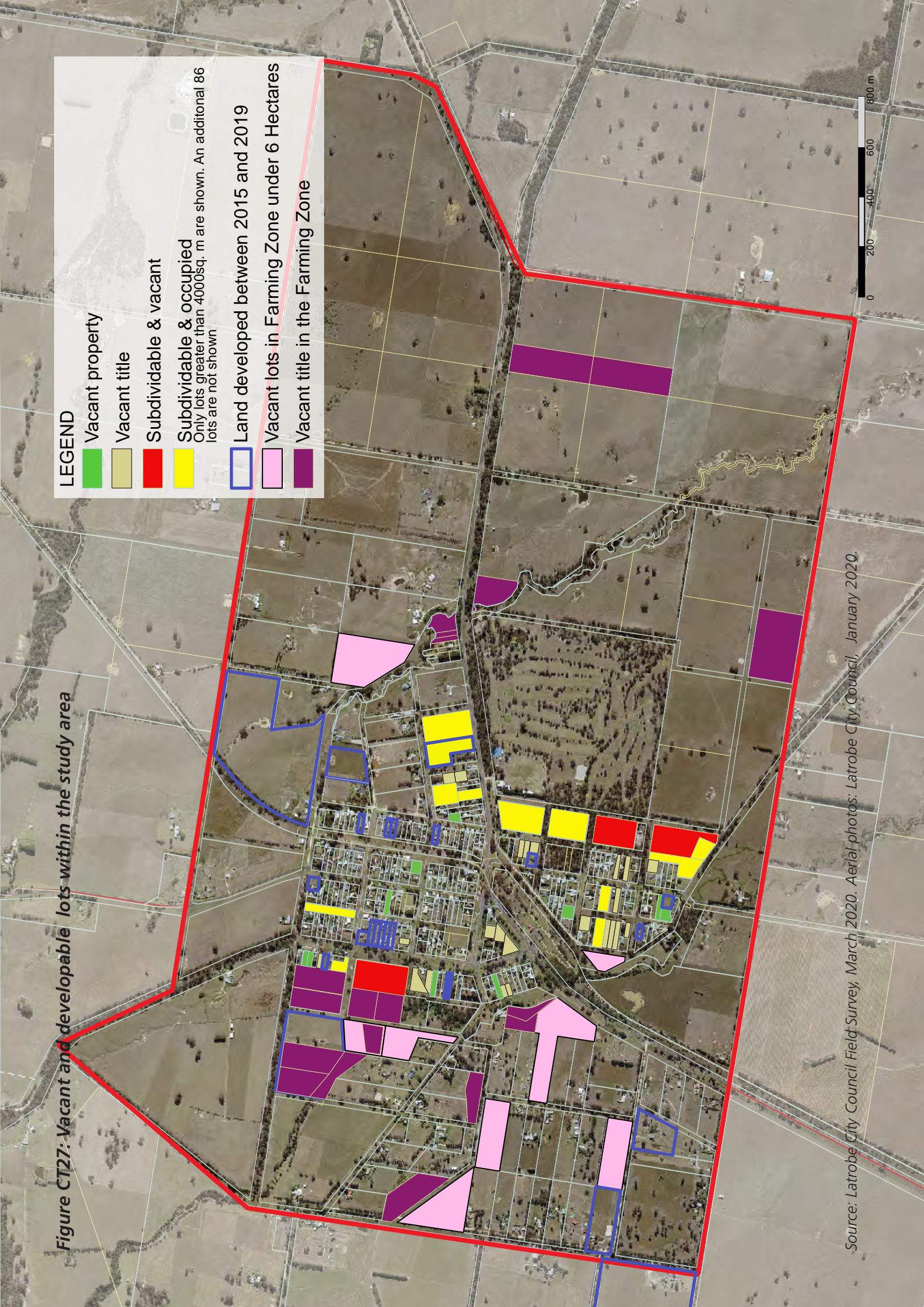
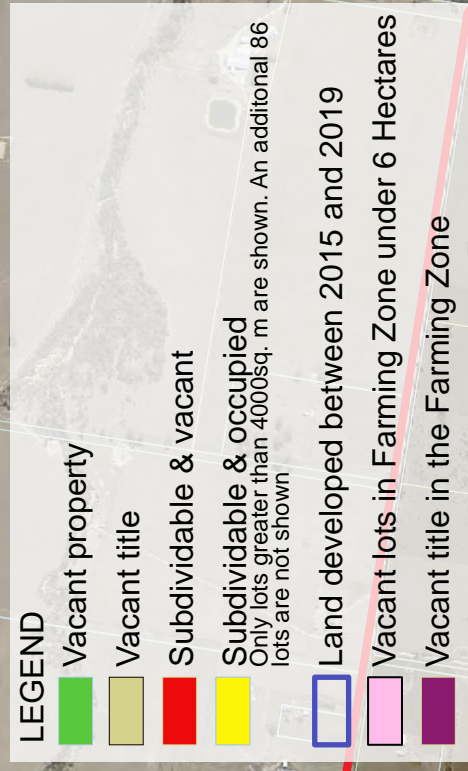


Figure CT28: Vacant and developable lots within Tonngabbie north rural living precinct

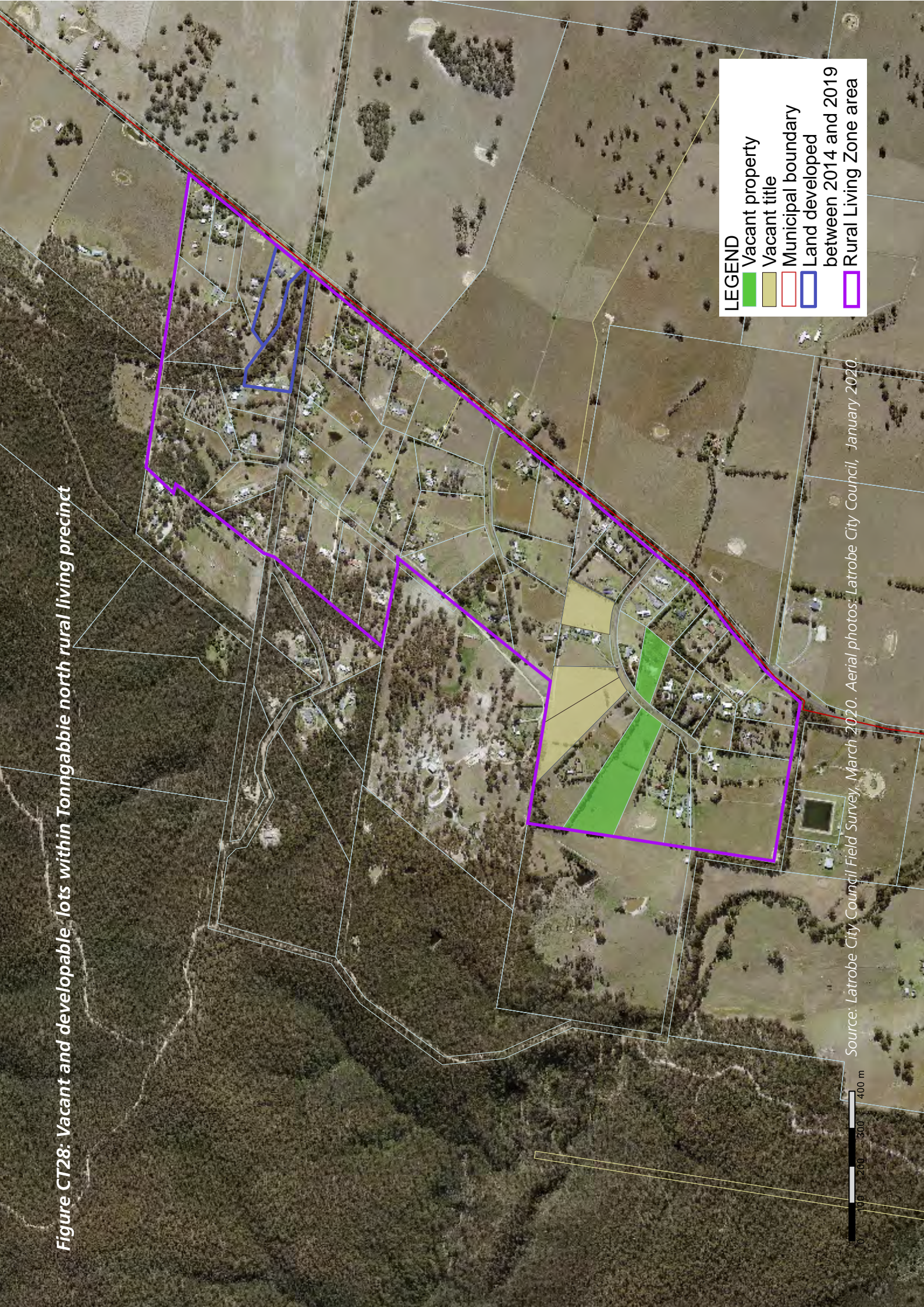
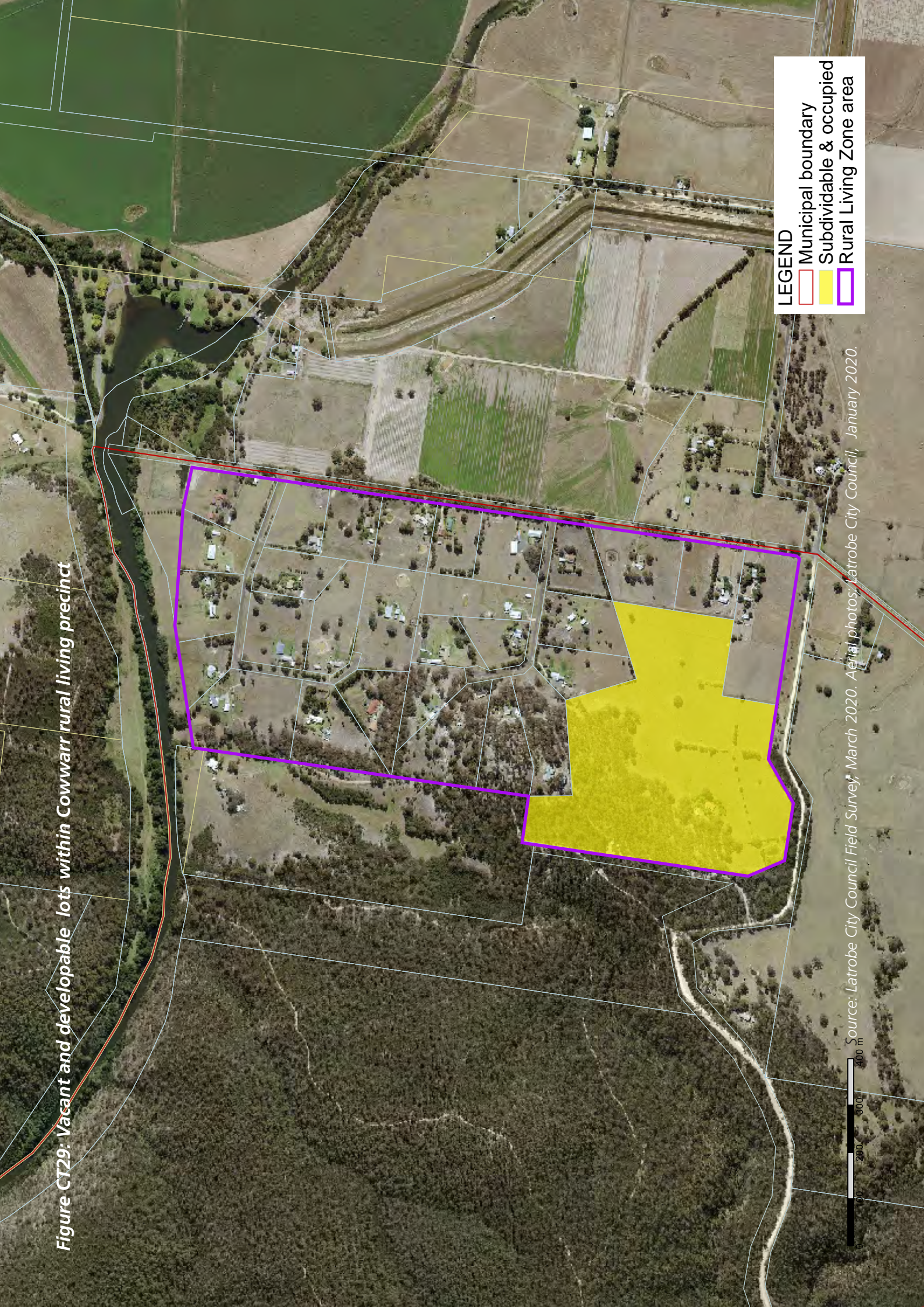


Figure CT29: Vacant and developable lots within Cowwarr rural living precinct



Source: Latrobe City Council Field Survey, March 2020. Aerial photos: Latrobe City Council, January 2020.



3.8 Identification of Additional Land Requirements

3.8.1 DWELLING FORECASTS

An estimate of dwelling demand over the next 15 years has been based on the percentage of the Yallourn North-Glengarry SA2 for the broader Toongabbie area.

Using the high growth scenario of an increase of 1.63%, an additional 134 dwellings will be required by 2036, while the moderate growth scenario will result in an additional 73 dwellings needed by 2036. Lastly, if the low growth scenario was applied then an additional 31 dwellings would be required by 2036.

The results of each of these calculations is shown in Tables CT26 to CT29. The average number of persons per dwelling is assumed to remain at 2.7 persons per dwelling over the next 15 years.

It would be prudent to plan for the high growth scenario to ensure that all demand is catered for in terms of ensuring adequate land supply in planning terms.



Photo: Aerial of Toongabbie corner of Guyatts Rd and Harris Ln

Table CT26: Dwelling forecast demand - high growth scenario

Forecast dwelling demand	2016	2021	2026	2031	2036	Additional Dwellings Required
Forecast population - High growth scenario	992	1075	1170	1265	1370	
Average number per household	2.7	2.7	2.7	2.7	2.7	
Number of Dwellings	373	398	433	469	507	+134

Source: DELWP, 2019. Remplan, 2020. Latrobe City Council, 2020b.

Table CT27: Dwelling forecast demand - moderate growth scenario

Forecast dwelling demand	2016	2021	2026	2031	2036	Additional Dwellings Required
Forecast population - Moderate growth scenario	996	1045	1095	1150	1205	
Average number per household	2.7	2.7	2.7	2.7	2.7	
Number of Dwellings	373	387	406	426	446	+73

Source: DELWP, 2019. Remplan, 2019. Latrobe City Council, 2020b.

Table CT28: Dwelling forecast demand - low growth scenario

Forecast dwelling demand	2016	2021	2026	2031	2036	Additional Dwellings Required
Forecast population - Low growth scenario	996	1045	1060	1075	1090	
Average number per household	2.7	2.7	2.7	2.7	2.7	
Number of Dwellings	373	387	393	398	404	+31

Source: DELWP, 2019. Remplan, 2020. Latrobe City Council, 2020b.

Table CT29: Dwelling forecast demand summary

Forecast dwelling demand 2016-2036	Low growth scenario	Moderate growth scenario	High growth scenario
Forecast dwelling demand	+31	+73	+134
Forecast annual residential dwelling demand in Toongabbie	1.55	3.65	6.70

Source: Latrobe City Council, 2020b.

3.8.2 DWELLING DEMAND BY ZONE

Between 2015 and 2019 Residential development has accounted for 63% percent of the development within Toongabbie, while rural residential development accounts for 26%.

This differs markedly from the *Latrobe City Council Residential and Rural Residential Land Assessment 2009* which stated that rural residential development accounted for 57% of development within Toongabbie.

This difference could be partly attributed to the availability of land. However, interviews with real estate agents have indicated that 2 Hectares or more is a highly sought after property size. For that reason, this assessment will use the same assumptions from the *Latrobe City Council Residential and Rural Residential Land Assessment 2009* for dwelling demand by zone as it broadly equates to current residential development rates and allows for a slightly higher development rate in rural residential areas assuming Rural Living land is released through the Toongabbie Structure Plan. This approach also assumes that a portion of the demand will be for Low Density Residential Land of 2000 square metres to 4000 square metres per lot which is consistent with the 95 of 230 allotments that are larger than 2000 square metres within the Toongabbie Township.

The following share of dwelling demand in Toongabbie is assumed:

- NRZ4 and TZ will accommodate for 40% of dwelling demand;
- LDRZ will accommodate for 30% of dwelling demand; and
- RLZ will accommodate 30% of dwelling demand.

Based on the above assumptions, forecast dwelling demand by zone in Toongabbie under the high growth scenario for the next 15 years to 2036 is as follows:

- Residential: 54 dwellings
- Low Density: 40 dwellings
- Rural Residential: 40 dwellings

If the average annual dwelling demand is applied between 2016 and 2019, then the dwelling demand for a high growth scenario reduces to:

Residential: 43 dwellings
Low Density: 32 dwellings
Rural Residential: 32 dwellings

Table CT30 summarises the forecast residential and rural residential demand in Toongabbie by zone.

Table CT30: Dwelling forecast demand by zone

Period	Low Growth Scenario (2016-2036)	Moderate growth scenario (2016-2036)	High Growth Scenario (2016-2036)
<i>Estimated Share of Demand</i>			
NRZ4 and TZ	40%	40%	40%
LDRZ	30%	30%	30%
RLZ	30%	30%	30%
Total	100%	100%	100%
<i>2016 - 2036</i>			
Total dwelling demand forecast in Toongabbie	31	73	134
<i>Dwelling demand by zone</i>			
NRZ4 and TZ	13	29	54
LDRZ	9	22	40
RLZ	9	22	40
<i>2019-2036</i>			
Total dwelling demand forecast in Toongabbie	25	58	107
<i>Dwelling demand by zone</i>			
NRZ4 and TZ	10	23	43
LDRZ	7	17	32
RLZ	8	18	32

Source: Essential Economics, 2009. Latrobe City Council, 2020b.

3.8.3 LAND SUPPLY REQUIREMENTS

The adequacy or not of the supply of residential and rural residential land is calculated by taking the total lot potential and dividing it by the forecast dwelling demand.

A development discount rate of 20% is applied to the total projected lot potential, where this rate assumes that 20% of the lots identified as having future residential capacity will not be developed for various reasons. These reasons may include land holdings, speculative investments or lots that are not available for development. On this basis lot capacity will be reduced to 266 lots in the Neighbourhood Residential Zone and Township Zone, seven lots in the Rural Living Zone, and 29 lots in the Farming Zone where the lot size is less than 6 hectares. If the forecast dwelling demand of 2.7 dwellings in the Neighbourhood Residential Zone 4 (NRZ4)/Township Zone (TZ) continues then at 1000 square metres there is approximately 123 years land supply. However, this is reduced to approximately 98 years of supply if the 20% differential is applied. There is approximately 4.5 years of land supply in the Rural Living precincts

(RLZ), if all the rural residential type land (Rural Living zone and Farming Zone lots under 6 Hectares) were available then there would be approximately 18 years of land supply available. However, this is reduced to approximately 3.5 years of Rural Living Zoned land with the 20 percent differential and 14.5 years of supply if the FZ lots under six hectares is included.

In summary, this assessment indicates that there is a need for more rural living zoned land and that there is currently sufficient supply of residential land, There is currently no LDRZ land; however on the basis of 32 dwellings being required with an average annual development rate of 2.0, a 16-year supply is required. Provision should be made in the Toongabbie Structure Plan for future low density residential areas to cater for future demand. Some LDRZ land should be released at this point in time.

Table CT31 summarises this land supply and demand.

Table CT31: Summary of land supply and demand

	<i>Total lot potential</i>	<i>Total lot potential with 20% differential</i>	<i>Forecast dwelling demand by 2036</i>	<i>Forecast dwelling demand per year</i>	<i>Years of supply</i>	<i>Years of supply with 20% differential</i>
Residential zoned land	331	265	43	2.7	123.0	98.0
Low Density Residential Land	0	0	32	2.0	0.0	0.0
RLZ land (with FZ land under 6 hectares)	36	29	32	2.0	18.0	14.5
RLZ land	9	7	32	2.0	4.5	3.5

Source: Latrobe City Council, 2020b.

Note: It has been assumed that the average dwelling demand of has occurred between 2016 and 2019 and these have been subtracted from the total dwelling forecast. Numbers rounded to nearest 0.5 of a number.

3.8.4 IMPLICATIONS FOR LAND SUPPLY

Based on the analysis presented in this chapter, there is a sufficient total supply of NRZ4 and TZ land to satisfy forecast demand until 2036. However, this outcome relies on large parcels of land in the existing NRZ4 being subdivided and become available for development. The existing supply of vacant NRZ4 and TZ provides for approximately 31 years of supply based on the high growth scenario. However, this drops to approximately 4 years if only the vacant lots are taken into account.

As only a limited supply of RLZ land exists (there is a shortage to meet demand), potential exists for additional land to be identified in order to meet forecast demand over the next 15 years. The existing vacant lot supply equates to approximately 1 year based on the high growth scenario.

Currently, no LDRZ land exists within Toongabbie, If LDRZ land is provided, it is likely that such supply would attract some interest as the 4000 square metre allotments were mentioned as a drawcard for townships like Toongabbie. This is evident from interviews conducted with real estate agents and having consideration for the recent development trends in Toongabbie. If no LDRZ is provided, it is likely that this latent demand will be taken up by additional RLZ properties, meaning that additional land would need to be supplied to meet this demand.

Table CT32 summarises the adequacy of the land supply in Toongabbie as of March 2020.

Table CT32: Adequacy of Land Supply - Toongabbie to 2036 (as of March 2020)

Zone	Low Growth Scenario	Moderate Growth Scenario	High Growth Scenario
<i>Supply of lots available for development</i>			
NRZ4 and TZ	17 years supply	8 years supply	4 years supply
LDRZ	No supply	No supply	No supply
RLZ	4 years supply	2 years supply	1 year supply
<i>Supply of total vacant lot potential</i>			
NRZ4 and TZ	131 years supply	59 years supply	31 years supply
LDRZ	No supply	No supply	No supply
RLZ	4 years supply	2 years supply	1 year supply

Source: Latrobe City Council, 2020b.

Note: Land supply in years expressed in rounded totals.

By 2036, under the high growth scenario, it is estimated that there will be a shortfall of 23 RLZ lots available for development and a shortfall of 32 LDRZ lots.

Two different scenarios are presented for potential RLZ lots, which include:

- All lots are 2 Hectares as is consistent with the fragmented FZ land to the west of the township.
- All lots are 4 Hectares as is consistent with the RLZ land to the north of the township.

For lots at two hectares there would need to be an additional 0 Hectares to 46 Hectares. At 4

hectares there would be a need for between 0 Hectares and 92 Hectares.

For LDRZ land, it is assumed that the lots are unsewered so they would have a minimum subdivision size of 4000 square metres. As such, there is a need for an additional 2.8 Hectares to 12.8 Hectares of land.

The land requirements are summarised in Table CT33 which shows what is needed beyond the total lot potential to meet the forecast dwelling (and therefore lot) requirements.

Residential land is not shown as there is a sufficient supply over the next 15+ years.

Table CT33: Land Requirements - Toongabbie, 2019 to 2036 (as of March 2020)

Zone	Low Growth Scenario (2019 - 2036)	Moderate Growth Scenario (2019 - 2036)	High Growth Scenario (2019 - 2036)
Low Density Residential Zone (LDRZ)			
Short fall in supply	7	17	32
Average Lot size	4000 sq. m	4000 sq. m	4000 sq. m
Land required to meet 15 year land supply	2.8Ha	6.8Ha	12.8Ha
Rural Living Zone (RLZ)			
Short fall in supply	0	9	23
Average Lot size	2Ha	2Ha	2Ha
Land required to meet 15 year land supply	0.0	18Ha	46Ha
Average Lot size	4Ha	4Ha	4Ha
Land required to meet 15 year land supply	0.0Ha	36Ha	92Ha

Source: Latrobe City Council, 2020b.

3.9 Limitations and other Considerations

This section looks at the possible limitations and needs for this land supply assessment.

It will look at:

- Sewer capacity;
- Bushfire Provisions;
- Flooding constraints;
- Age structure and ageing in place; and
- Dwelling suitability.

Sewer, flooding and bushfire are discussed in further detail in the *Toongabbie Structure Plan Background Reports - Bushfire Assessment 2020 and Infrastructure and Servicing Assessment 2020*.

3.9.1 SEWER CAPACITY

With the exception of the TZ and the LDRZ, residential zones must be connected to reticulated services including sewer, water and electricity. Gippsland Water has stated that the current sewer system in Toongabbie has capacity for 40 additional sewer connections.

At 2.7 dwellings per year, this equates to approximately 15 years worth of land supply for the residentially zoned land. However, Gippsland Water says on average there are two additional connections per year; this would equate to 20 years of supply for the residentially zoned land.

3.9.2 BUSHFIRE PROVISIONS

The draft *Municipal Bushfire Risk Assessment 2020* forms part of the draft *Rural Rezoning Strategy* and is in response to Amendment VC140 and an assessment against Clause 13.02 to the Latrobe Planning Scheme. The draft *Municipal Bushfire Risk Assessment 2020* proposes to introduce a “stop light” map (Figure

BF12 in the draft *Toongabbie Structure Plan Background Reports - Bushfire Risk Assessment 2020*) for future rural living precincts. It has three risk categories:

- **Extreme** - No further rural living rezonings should occur;
- **Significant** - Rural living rezonings could proceed if the bushfire risk is appropriately mitigated; and
- **Lower** - Rural Living rezonings can proceed.

The rural living precincts in the north of Toongabbie and Cowwarr are both in the extreme category (see Figure BF12 on page 583). It is proposed that those areas currently outside of the Bushfire Management Overlay (BMO) may be included in the BMO. As such, it is likely that further subdivision is unlikely to be supported by the CFA. This means that the rural residential land supply could be reduced by four lots, eliminating 2.0 years of supply. Under the BMO, the existing vacant lots and titles could still be potentially developed.

Precinct A within the Toongabbie study area (refer to page 13) sits partially within an Extreme Risk area. However, all other precincts can support Rural Living as they are either a Significant Risk or a Lower Risk area, as described above.



3.9.3 FLOODING CONSTRAINTS

Under the West Gippsland Catchment Management Authority's (WGCMA) Floodplain Management Strategy, the flooding overlays for Latrobe City Council are to be updated in the 2020/2021 Financial Year.

Flood data provided by WGCMA proposes to introduce a Floodway Overlay (FO) and adjusts the extent of the current Land Subject to Inundation Overlay (LSIO), as shown in Figure CT30.

If the proposed FO is applied, the three vacant TZ lots cannot be further subdivided and a further eight lots in the NRZ4 sit wholly within the proposed FO and cannot be further subdivided. For the purpose of this assessment, it is assumed that no further development can occur on these lots.

Under the FO provisions, a subdivision cannot occur that creates a lot entirely within the FO. As such, a further 42 lots may not be possible through subdivision in the NRZ4 and TZ which would subtract approximately 16 years worth of land supply leaving approximately 108 years worth of land supply. This has been calculated by taking the area of lots that can be subdivided

not subject to the FO and dividing that area by 1000 square metres. If a lot is developed in that area, one lot was subtracted from that area. As all of the lots within the residential area have a flood depth of less than 1.2m, development can be supported on these lots but further subdivision cannot. As such, land supply has been calculated using the potential lots only.

A further 29 lots may have access issues as the LSIO is proposed to be applied to the properties and to the surrounding access streets. This would affect approximately an additional 11 years worth of land supply.

In total, the flood overlays could affect the potential development of approximately 26 years worth of land supply through the inability to subdivide or have adequate access that would leave 102 years worth of residential land supply.

The proposed FO and LSIO would also affect the ability to connect to septic for three lots under six hectares within the study area and a further nine vacant titles on FZ lots. If these lots and titles cannot support septic, they cannot support a dwelling and, as such, the proposed LSIO could potentially affect 6 years rural residential land supply leaving 12 years rural residential supply.

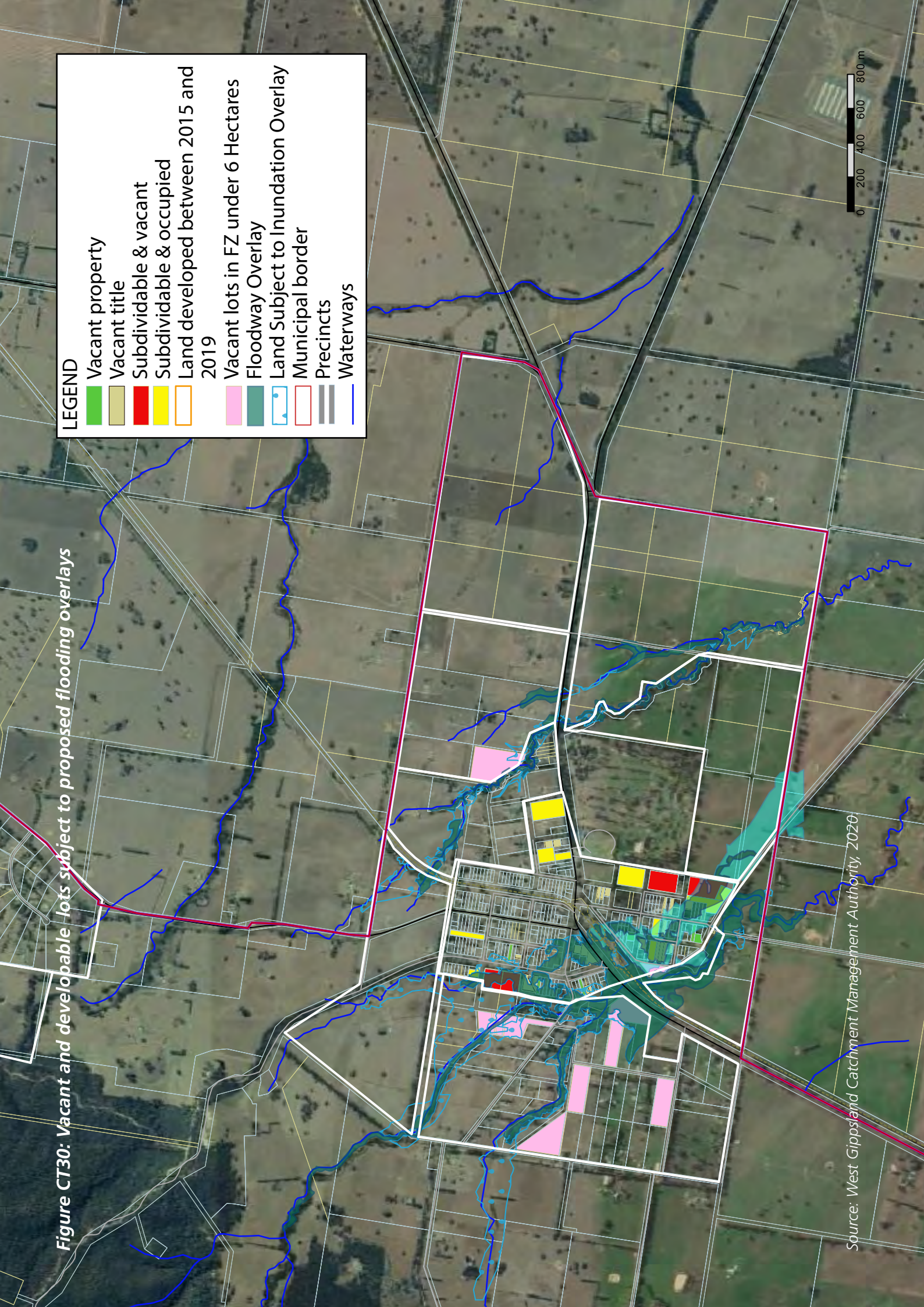
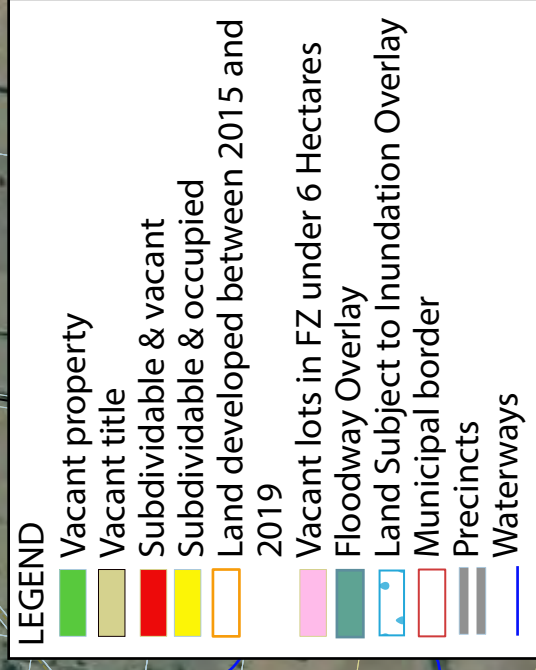
Table CT34: Lots affected by flooding

Zone	No. of lots where subdivision/development is compromised in FO	No. of additional potential lots	Years of land supply	No. of lots/titles where development is compromised in LSIO	Years of land supply
NRZ4	8	36	13.0	29	11.0
TZ	5	6	2.0	0	0.0
Total residential land	13	42	16.0	29	11.0
FZ (lots under 6 hectares)	0	0	0.0	12	6.0

Source: WGCMA, 2020 and Latrobe City Council, 2020b.

Note: Land supply in years expressed in rounded totals.

Figure CT30: Vacant and developable lots subject to proposed flooding overlays



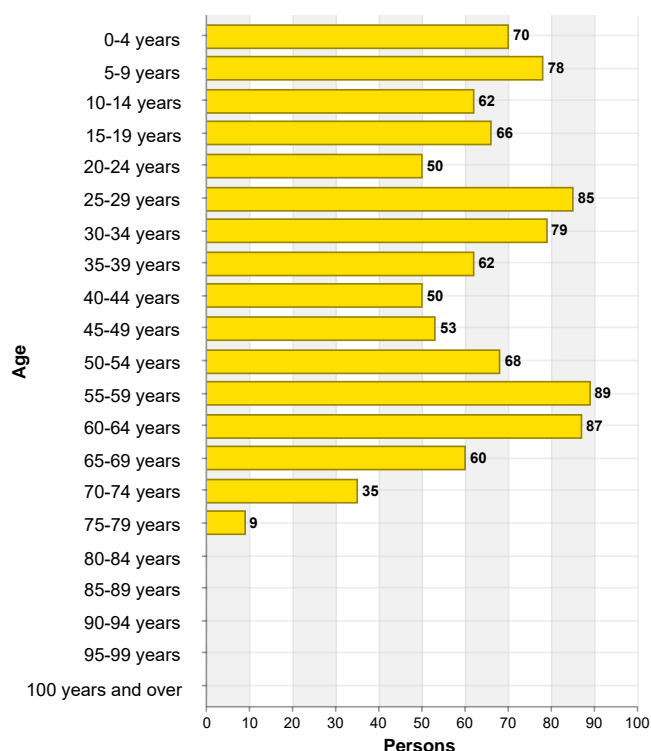
3.9.4 AGEING IN PLACE

One of the themes to come out of the consultation for the Toongabbie Structure Plan was that while the larger lots and rural setting was the preferred outcome, many people would like the housing diversity within town so that they can downsize and not have to move away from Toongabbie.

A total of 9.9 percent of Toongabbie's population was over the age of 65 in 2016 or approximately 105 people. If a lone or older couple is assumed then this could equate to between 50 and 100 dwellings.

Figure CT31: Toongabbie Age Structure

Age - Toongabbie-Cowwarr Statistical Area 1 (2016)



REMPPLAN

Source: Remplan, 2020.

In the *Live Work Latrobe Housing Strategy 2019* it stated that:

Consistent with the ageing of Latrobe City's population is the shrinking of the average household size. There is a significant shift towards lone person households and couples without children households forecast. These two household types will represent approximately 76% of all new households over the next 15 years. In contrast, couples with children and group households will account for just 13% of all new households to 2031.

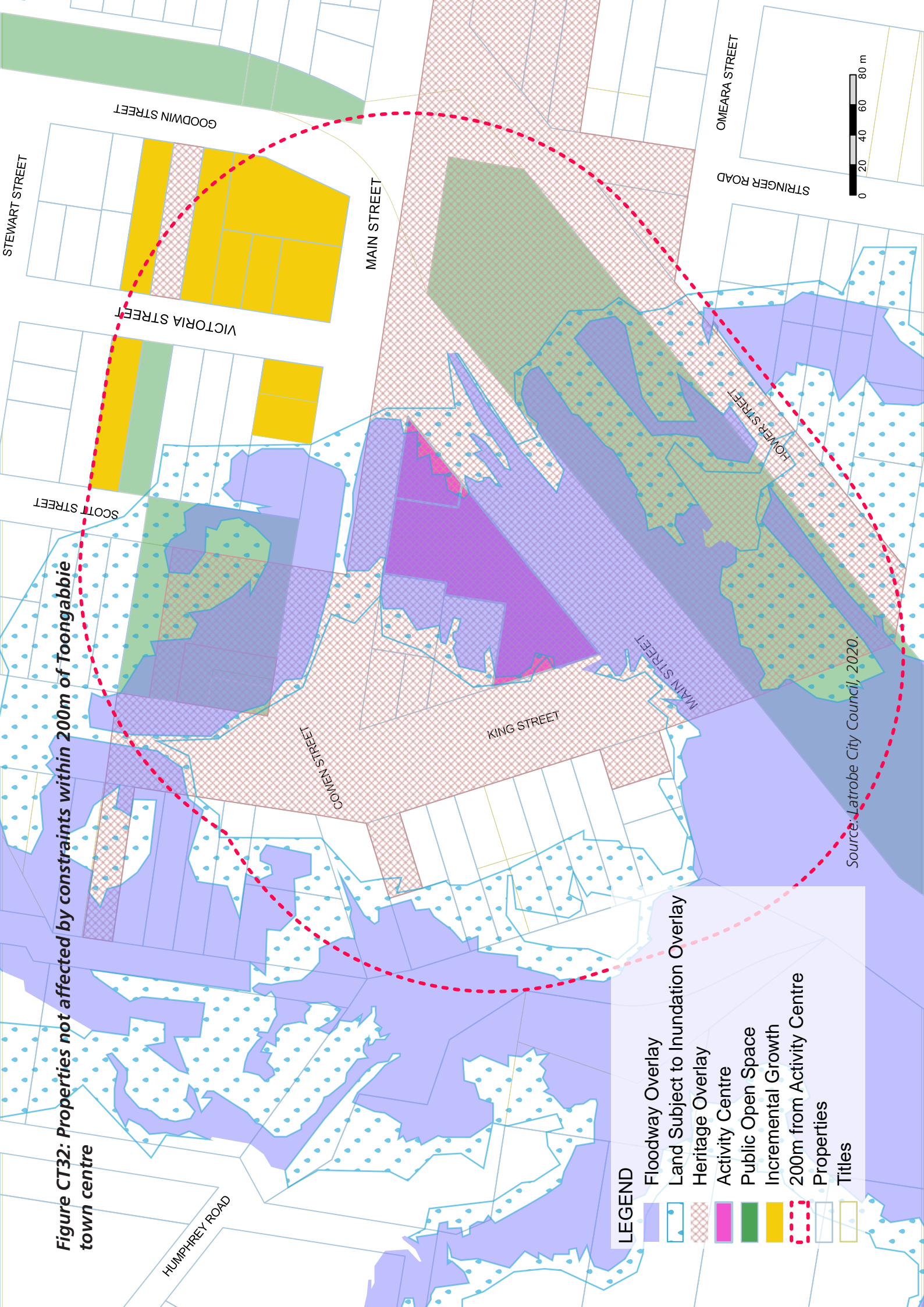
One of the actions in the *Housing Strategy* is to undertake a review and amend Small Town Structure Plans to ensure appropriate opportunities to support greater diversity in housing types (e.g. ageing in place etc.) and manage future housing growth.

The NRZ4 area of Toongabbie is a limited housing change area on the Toongabbie Housing Framework Plan (see Appendix 1). Under Clause 21.01-13 Limited Housing Change Areas in the Latrobe Planning Scheme, it states:

Encourage the development of smaller and diverse housing types, including units and townhouses, within 200 metres of existing or planned Neighbourhood and Local Activity Centres and where good access to public transport is provided.

As this type of development is considered 'Incremental change' then within 200m of the Toongabbie General Store the policy under Clause 21.02-13 can apply under the following criteria (shown in Figure CT32):

Figure CT32: Properties not affected by constraints within 200m of Toongabbie town centre



LEGEND

- Floodway Overlay
- Land Subject to Inundation Overlay
- Heritage Overlay
- Activity Centre
- Public Open Space
- Incremental Growth
- 200m from Activity Centre
- Properties
- Titles

Source: Latrobe City Council, 2020.

- Land which does not have significant heritage or neighbourhood character values (i.e. Heritage Overlay); and
- Land which is not constrained by the flood overlays or the Bushfire Management Overlay.

That would leave approximately nine properties that could be developed with townhouses and units (Figure CT33 - lots shown in dark blue). If 500 square metres is applied as a small lot size than approximately 31 more lots could be developed under this policy in addition to the 331 lots in the residential land supply catering to the ageing demographic and lone person households. If the same annual forecast development rate of 2.7 dwelling per annum of for the NRZ4 is applied this would equate to approximately an additional 11 years of land supply.

It is noted that this could occur under the current zoning, but is yet to occur.

Figure CT33: Housing change areas within 200m of Toongabbie town centre



Source: Latrobe City Council, 2019.

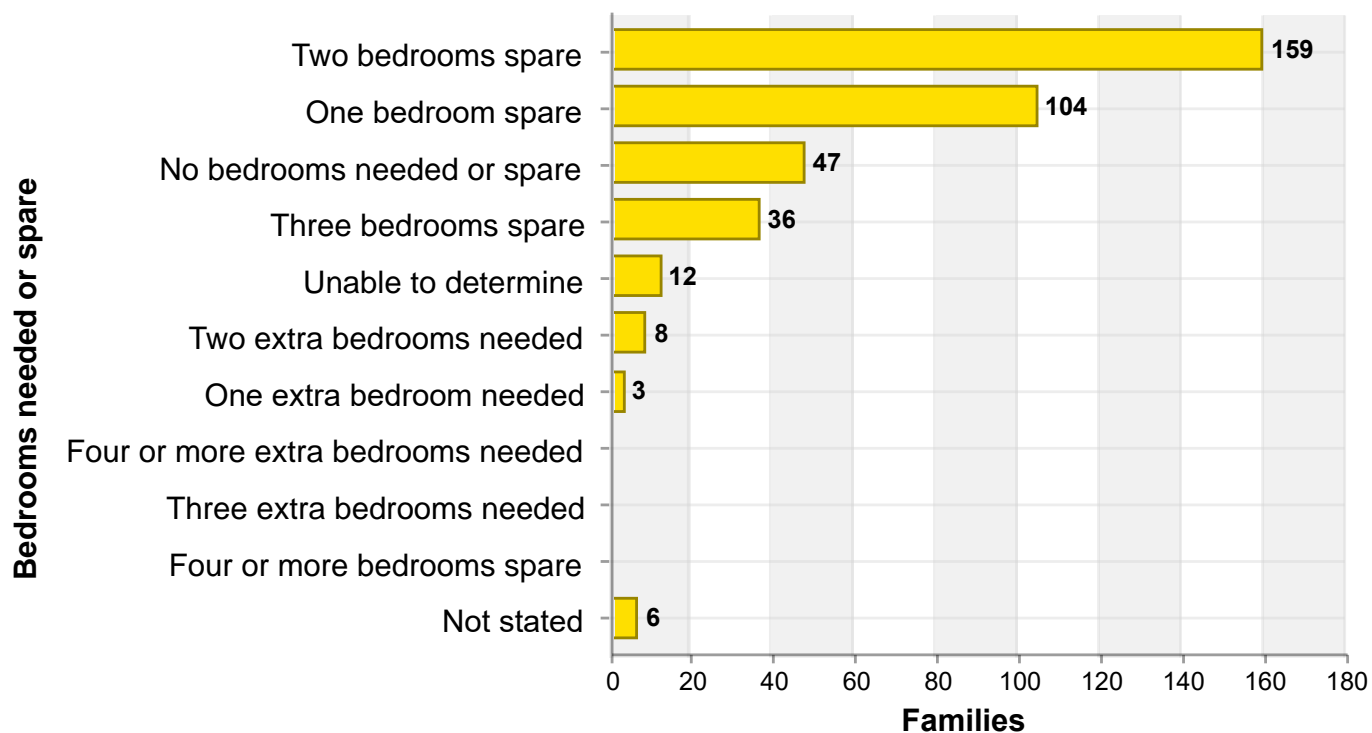
3.9.5 DWELLING SUITABILITY

A further consideration to the housing demands within Toongabbie is the housing appropriateness. A considerable number of dwellings are too large for the user's needs. As shown in Figure CT34, if one spare bedroom is considered appropriate for needs such as a study or a guest bedroom then there are 195 dwellings with two or three bedrooms spare within Toongabbie that, if alternatives were available, could better suit the needs of couples with children, rather than lone person or couple households.

Currently, 100% of dwellings in Toongabbie are single detached dwellings.

Figure CT34: Housing suitability

Housing Suitability - Toongabbie - Cowwarr Statistical Area 1 (2016)



Source: Remplan, 2020.

3.10 Summary of Land Supply

With the identified constraints and the lot yield with the 20% differential, there is a need for an additional 12.8 Hectares of LDRZ land. This could be potentially include some of the larger lots within the township area which would contribute to a more sustainable supply for reticulated sewerage. It is also unlikely to impact on the residential land supply as even with the constraints there is approximately 83 year land

supply within the residential area.

Potential for between 38 and 116 Hectares of additional RLZ land. The variations in additional land need are twofold. Whether the land is at 2 Hectares or 4 Hectares and whether the Farming Zoned land is included in the supply of rural residential land. The preference would be to rezone these fragmented areas to a RLZ.

Table CT35: Summary of land supply and demand

Category	No. of lots	Years of land supply (high growth scenario)	Additional lots required	Land required
Residential land				
Total lot yield	331	122.59	0	0
Total lot yield with 20% differential	-66	-24.44		
Incremental growth	+31	+11.48		
Flood constraints	-71	-26.29		
Total	225	83	0	0
Rural Residential land				
Total lot yield	36	18	0	0
Lot yield with 20% differential	-7	-3.5		
Flood constraints	-12	-6.0		
Bushfire constraints	-4	-2.0		
Total (including FZ lots under 6 hectares)	13	6.5	19	38Ha - 76Ha
Rural Living Zoned land				
Total Lot Yield	9	4.5	23	46Ha-92Ha
Lot yield with 20% differential	-2	-1.0		
Bushfire constraints	-4	-2.0		
Total	3	1.5	29	58Ha-116Ha
Low Density Residential Land				
Total	0	0	32	12.8Ha

Source: Latrobe City Council, 2020b.

Note: Land supply in years expressed in rounded totals.

3.11 Recommendations

The recommendations for residential and rural residential zoned land in Toongabbie are as follows:

Residential Land

1. There is enough land to support infill development within Toongabbie over the next 20 years providing that further subdivision can occur on the larger parcels.
2. There is a need to allow residents to age in place through the provision of smaller parcels, close to the shop and public transport. The General Residential Zone - Schedule 4 which allows for incremental change could be applied to lots that are not affected by the Heritage Overlay or flood overlays. Consideration should be given to lots that are only partially in the flood overlays (as the only constraint) and whether further subdivision would be supported.

Low Density Residential Land

3. Given the lot density in Toongabbie and the sewer capacity, the larger lots in the Toongabbie urban area should be rezoned to LDRZ unless subject to flooding constraints and cannot support septic. This would allow for continued growth within the town and cater to the demand for LDRZ.
4. Provision for Low Density Residential land should be made on the Toongabbie Structure Plan to allow for future growth. This is likely to be to the east of the township between Sparks Lane and Rosedale Creek, south of Hill Street, to Traralgon-Maffra Road for a first stage future release.
5. Any future urban expansion should be LDRZ

unless the sewer system is substantially upgraded.

Rural Residential

6. Rezone up between 58 Hectares of land to RLZ at a minimum subdivision size of 2 Hectares as there is an inadequate supply of rural residential land to meet forecast demand over the next 20 years.

4

Economic Analysis



This chapter provides an overview of Toongabbie's employment and industry structure. It further reviews the retail spend by Toongabbie residents to identify any further gaps that can be addressed through the Toongabbie Structure Plan. Lastly, it identifies the existing land supply situation for commercial activity and identifies any future demand.

4.1 Overview of Labour Force

As of the 2016 Australian Bureau of Statistics Census, the Toongabbie and Cowwarr SA1 areas has 744 people excluding the 30 not stated that can participate in the labour force.

Of those 439 were actively participating in the workforce, a 39 were employed, away from work. 221 stated that they were not in the labour force, and a further 22 were seeking a form of employment. Of the 439 participating in the workforce, 280 were employed full-time, while 159 were employed part-time.

4.1.1 JOB SHARE BY INDUSTRY

The largest industry of employment is Toongabbie is in construction which accounts for 15.74% of the labour force. This is much higher than in comparison to the Latrobe job share of 8.85% and Victoria at 8.11%. The second largest employment industry is retail trade with 11.14% of the job share, followed by electricity, gas, water and waste services with 10.65% and health care and social assistance with 10.41% of the job share. The higher percentage of people working in the electricity, gas, water and waste services industry is expected for Latrobe and Toongabbie when compared to Victoria. The job share by industry in 2016 is shown in Table CT37 and in Figure CT35.

The retail trade job share has decreased by 7.66 percent, while manufacturing and wholesale trade have also decreased significantly by 5.59 percent and 4.34 percent respectively between 2011 and 2016. The fastest growing employment industries are electricity, gas, water and waste services (5.08%), education and training (3.90%), and agriculture, forestry and fishing (3.82%).

Table CT36: Labour Force Status

<i>Labour Force</i>	<i>Toongabbie No. of Persons (2016)</i>	<i>%</i>	<i>Latrobe No. of Persons (2016)</i>	<i>%</i>	<i>Victoria No. of Persons (2016)</i>	<i>%</i>
Employed, work full-time	279	36.4	16,673	28.4	1,666,070	34.2
Employed, work part-time	159	20.8	10,679	18.2	918,753	18.9
Employed, away from work	37	4.8	1,772	3.0	139,796	2.8
Not in the labour force	226	29.5	21,615	36.8	1,578,980	32.4
Unemployed, looking for full-time work	20	2.6	2,098	3.6	102,994	2.1
Unemployed, looking for part-time work	16	2.0	1,040	1.8	90,306	1.9
Not stated	29	3.8	4,757	8.1	297,527	6.1

Source: Remplan, 2020.

Table CT37: Industry of employment

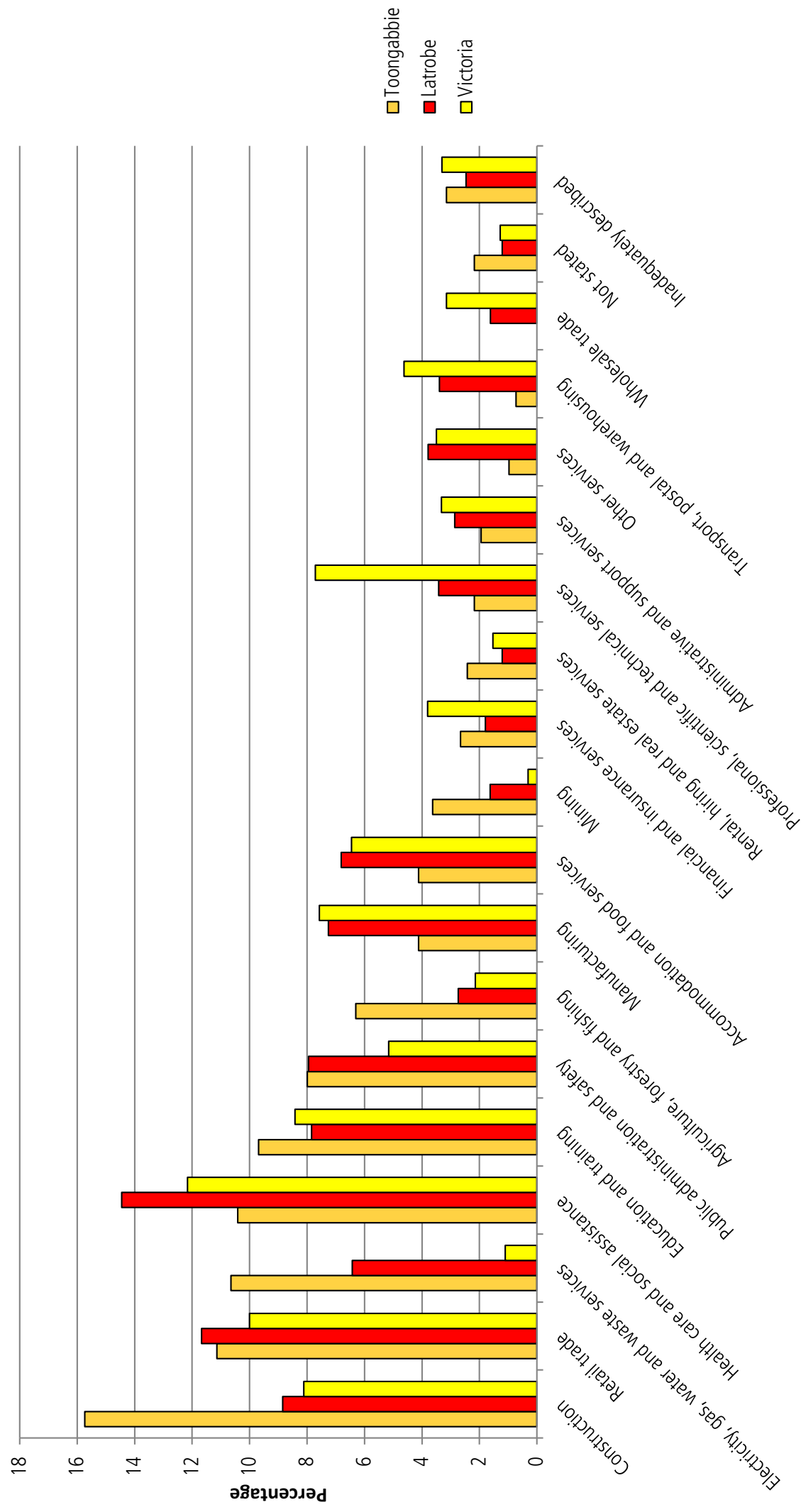
Industry of employment	No. of persons 2016	Toon. Job share 2016 (%)	No. of persons 2011	Toon. Job share 2011 (%)	Change (%)	Latrobe Job share 2016 (%)	Victoria Job share 2016 (%)
Construction	65	15.74	70	14.46	+1.28	8.85	8.11
Retail trade	46	11.14	91	18.80	-7.66	11.67	10.00
Electricity, gas, water and waste services	44	10.65	27	5.58	+5.08	6.43	1.10
Health care and social assistance	43	10.41	65	13.43	-3.02	14.45	12.16
Education and training	40	9.69	28	5.79	+3.90	7.84	8.42
Public administration and safety	33	7.99	28	5.79	+2.21	7.95	5.16
Agriculture, forestry and fishing	26	6.30	12	2.48	+3.82	2.74	2.14
Manufacturing	17	4.12	47	9.71	-5.59	7.26	7.57
Accommodation and food services	17	4.12	14	2.89	+1.22	6.81	6.45
Mining	15	3.63	11	2.27	+1.36	1.63	0.31
Financial and insurance services	11	2.66	3	0.62	+2.04	1.79	3.80
Rental, hiring and real estate services	10	2.42	17	3.51	-1.09	1.21	1.53
Professional, scientific and technical services	9	2.18	12	2.48	-0.30	3.42	7.71
Administrative and support services	8	1.94	0	0.00	+1.94	2.86	3.32
Other services	4	0.97	15	3.10	-2.13	3.79	3.50
Transport, postal and warehousing	3	0.73	17	3.51	-2.79	3.39	4.63
Wholesale trade	0	0.00	21	4.34	-4.34	1.62	3.15
Not stated	9	2.18	3	0.62	+1.56	1.21	1.28
Inadequately described	13	3.15	3	0.62	+2.53	2.47	3.31
Total	413	100.00	484	100.00			

Source: Remplan, 2020.

Note: Only job share that correlates with a Toongabbie Industry of Employment have been shown for Latrobe and Victoria.

Figure CT35: Job share by industry

Industry of Employment (%)



Source: Remplan, 2020.

4.1.2 BUSINESSES WITHIN TOONGABBIE AND COWWARR SA2

There are currently 119 registered businesses in the Toongabbie and Cowwarr SA2 as of 2 March 2020, 49 of those are within the Toongabbie township. It has a diverse range of businesses that occur within the area, with the largest number of registered businesses falling into the construction category with 24 registered businesses. This is consistent with the job share within Toongabbie. This is followed by businesses registered under agriculture, farming and fishing with 15 registered businesses which is consistent with the surrounding land use being a rural area. The third largest category of businesses within the area falls under financial and insurance services.

The location of the businesses is shown in Figure CT37 and CT38.

The colour of each dot corresponds to the industry sector shown in Figure CT36 where a complete breakdown by industry sectors is shown.

A small population and limited urban growth in Toongabbie, and a community vision to retain the rural character and historic charm of the township does constrain significant commercial activity. As a result, it is not expected that significant growth in retail, industry or office development will occur.

However, a combination of further home-based businesses development and agri-business expansion will provide employment and economic growth opportunities that do not impact negatively on the amenity of Toongabbie over the long-term.

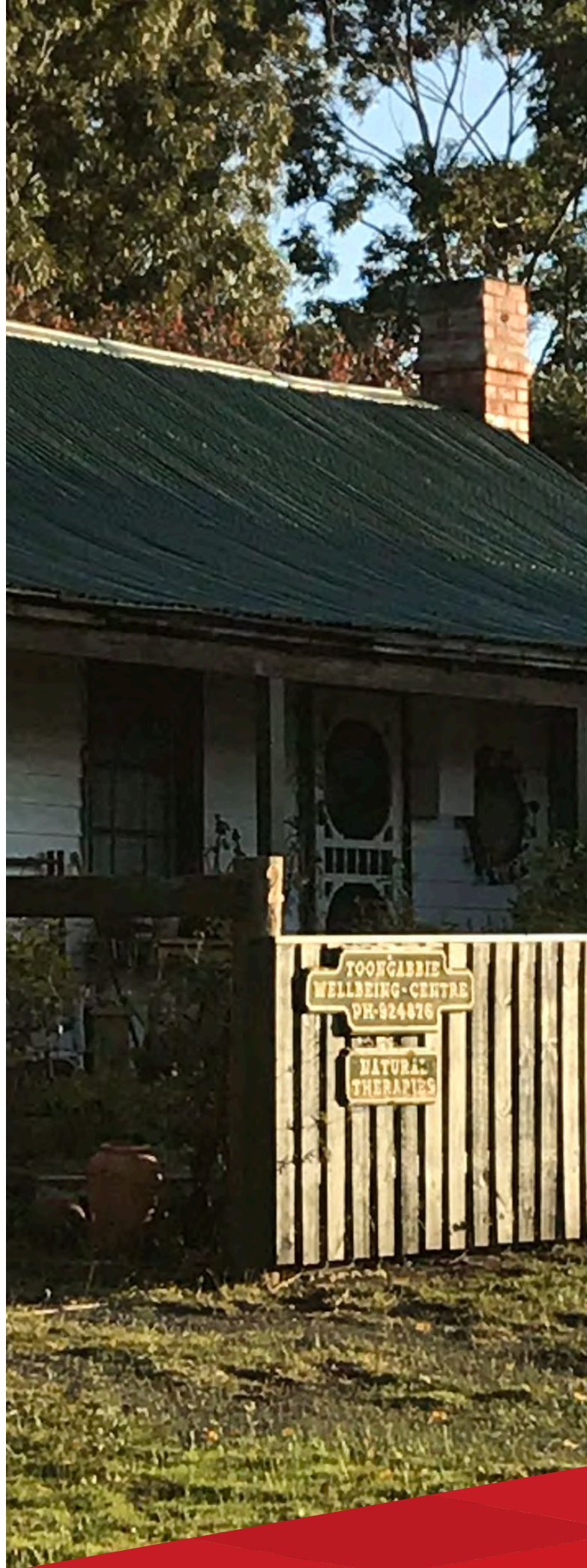


Figure CT36: Business counts in Toongabbie

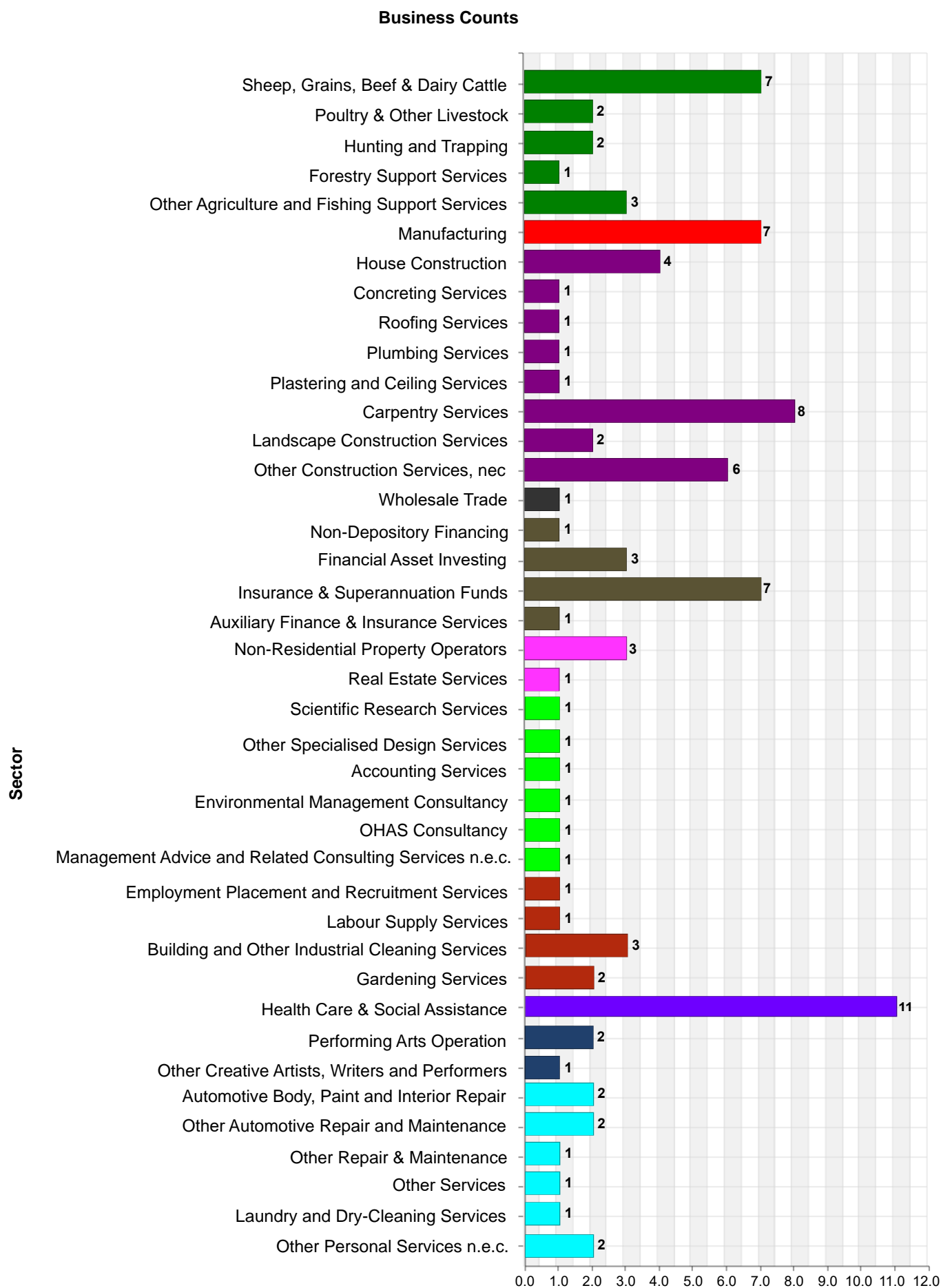
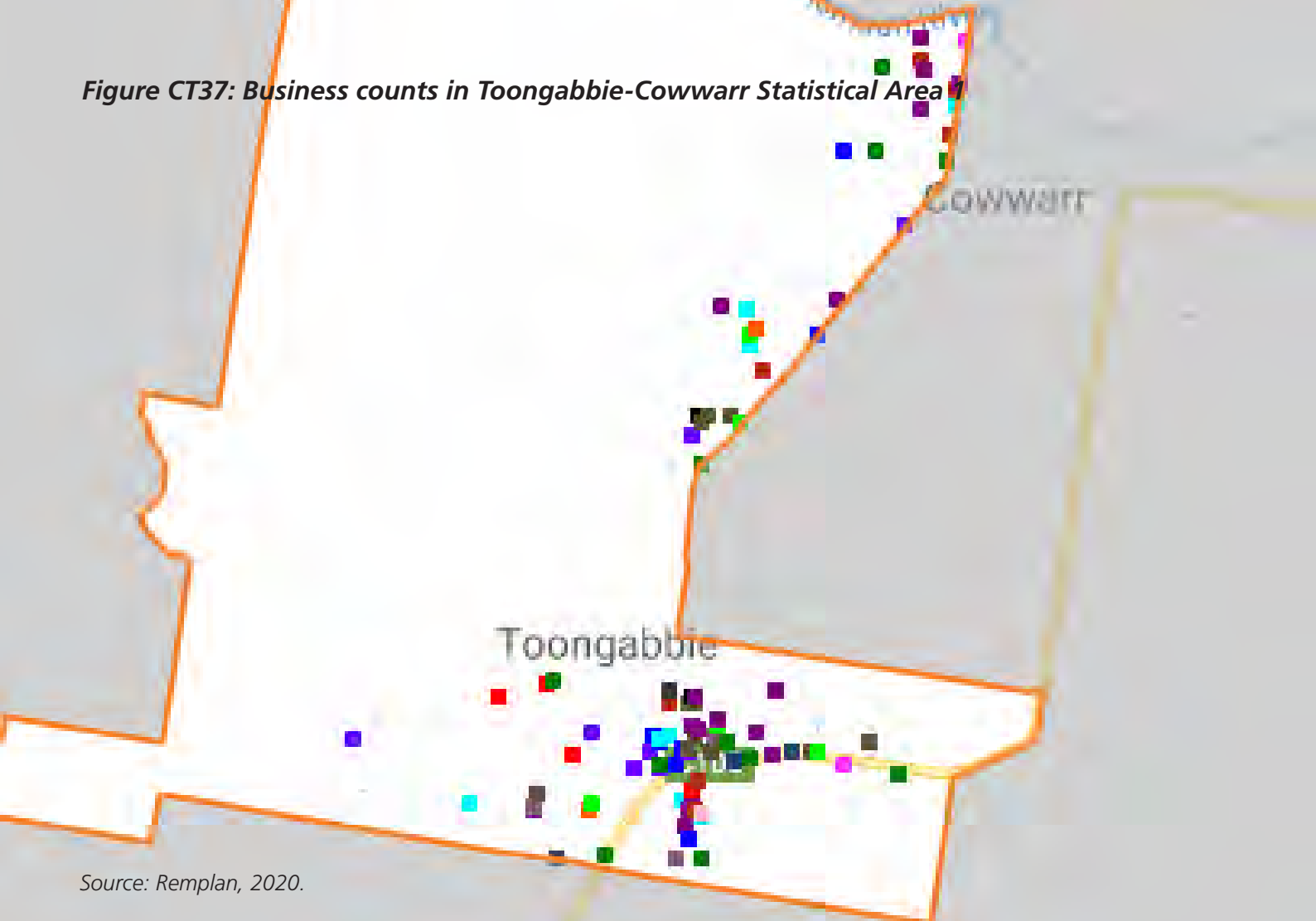
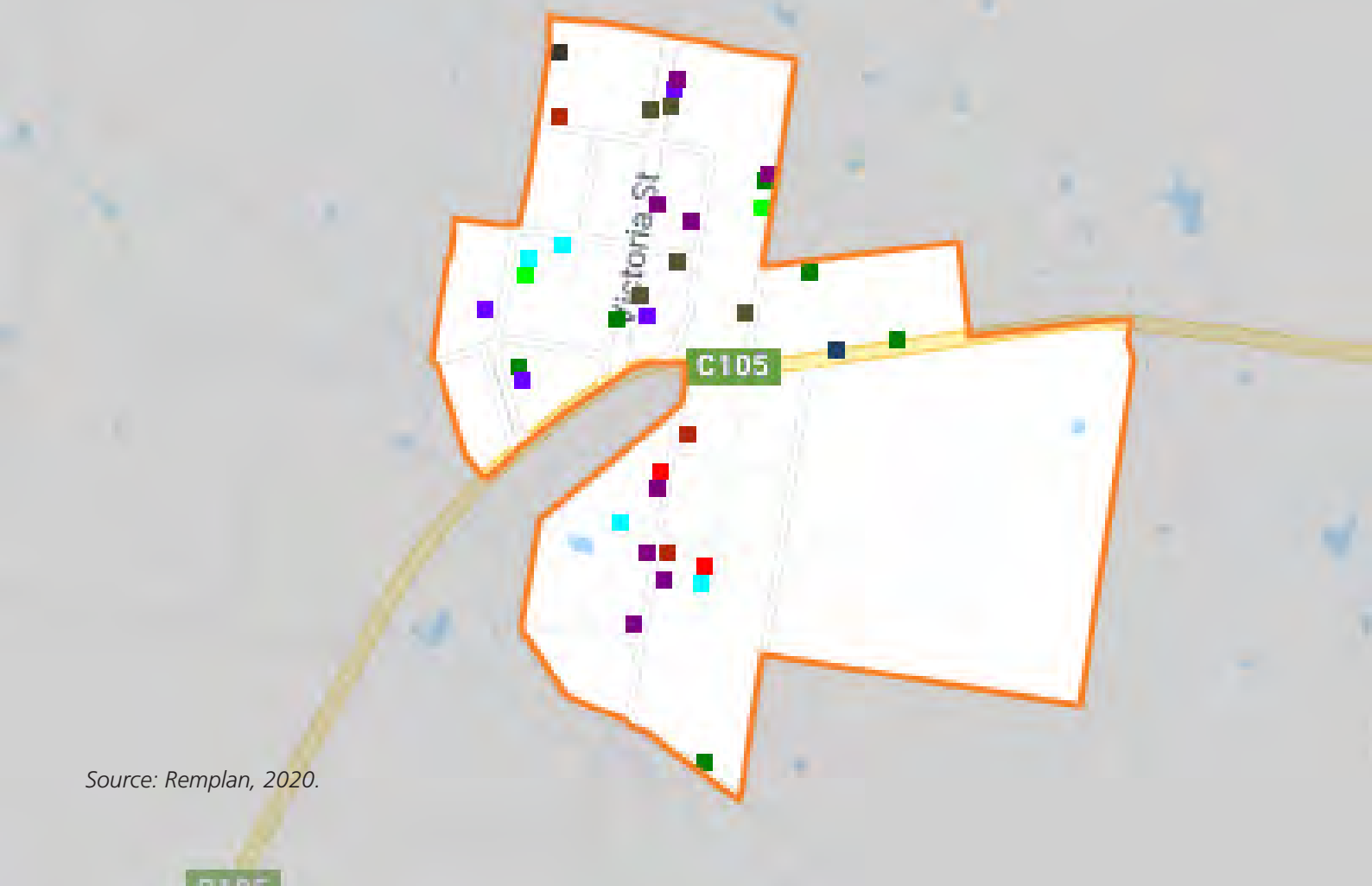


Figure CT37: Business counts in Toongabbie-Cowwarr Statistical Area 1



Source: Remplan, 2020.

Figure CT38: Business counts in Toongabbie Statistical Area 1



Source: Remplan, 2020.

4.2 Retail Analysis

The following is an extract from the *Retail Strategy Background Research and Analysis 2019*.

In Latrobe City Council there will be an additional demand for 42,000 square metres of additional retail floorspace is forecast over the 2018 to 2033 period, comprising:

- +4,200 square metres of food, liquor and grocery (FLG) retail floorspace to accommodate new or expanded supermarkets and specialty food, liquor and grocery stores;
- +3,100 square metres of food catering retail floorspace, comprising new cafés, restaurants and takeaway food stores; and
- +35,000 square metres of non-food retail floorspace, which may comprise the development of additional speciality non-food retailers, retail services and bulky goods retailing.

Toongabbie currently comprises of 120 square metres of floor space primarily for food, liquor and groceries (FLG) in its only shop the Toongabbie General Store. It has no food catering or non-food related floor space.

As there is demand for further food catering, and non-food retail spaces there is potential for Toongabbie to capture some of floorspace demand, however, it would need a demonstrated demand for the town.

In the centre profile from the retail strategy it states that:

The idyllic Toongabbie Village Green, the Gippsland Plains Rail Trail and the nearby Cowwarr Weir may present opportunities to generate additional retail trade associated with visitation to the town.

4.2.1 TOONGABBIE EXPENDITURE

Spendmapp is an online application that allows users to view expenditure activity in, to and from their region. It does this by taking bank transaction (EFTPOS and credit/debit) data and applying a proprietary data transformation to capture virtually all economic activity within a region. It counts cardholders and transactions in specified locations, times and type (resident and visitor). It has provided data for sections 4.2.1 and 4.2.2. The data has been collected between September 2018 and Aug 2019.

There are seven categories for retail expenditure type, these include:

- **Resident internal escape spend:** money spent in Latrobe by residents.
- **Resident external escape spend:** money spent outside of Latrobe and Toongabbie by residents.
- **Resident online spend:** money spent by residents online.
- **Total local spend:** The amount spent within Toongabbie.
- **Internal visitor local spend:** the amount visitors from Latrobe are spending in Toongabbie.
- **External visitor local spend:** is the amount visitors from outside of Latrobe are spending in Toongabbie.
- **Resident local spend:** the amount residents are spending in Toongabbie.

The expenditure by category is shown in Figure CT39. Details for each category are shown in Table CT38.



Figure CT39: Expenditure in Toongabbie

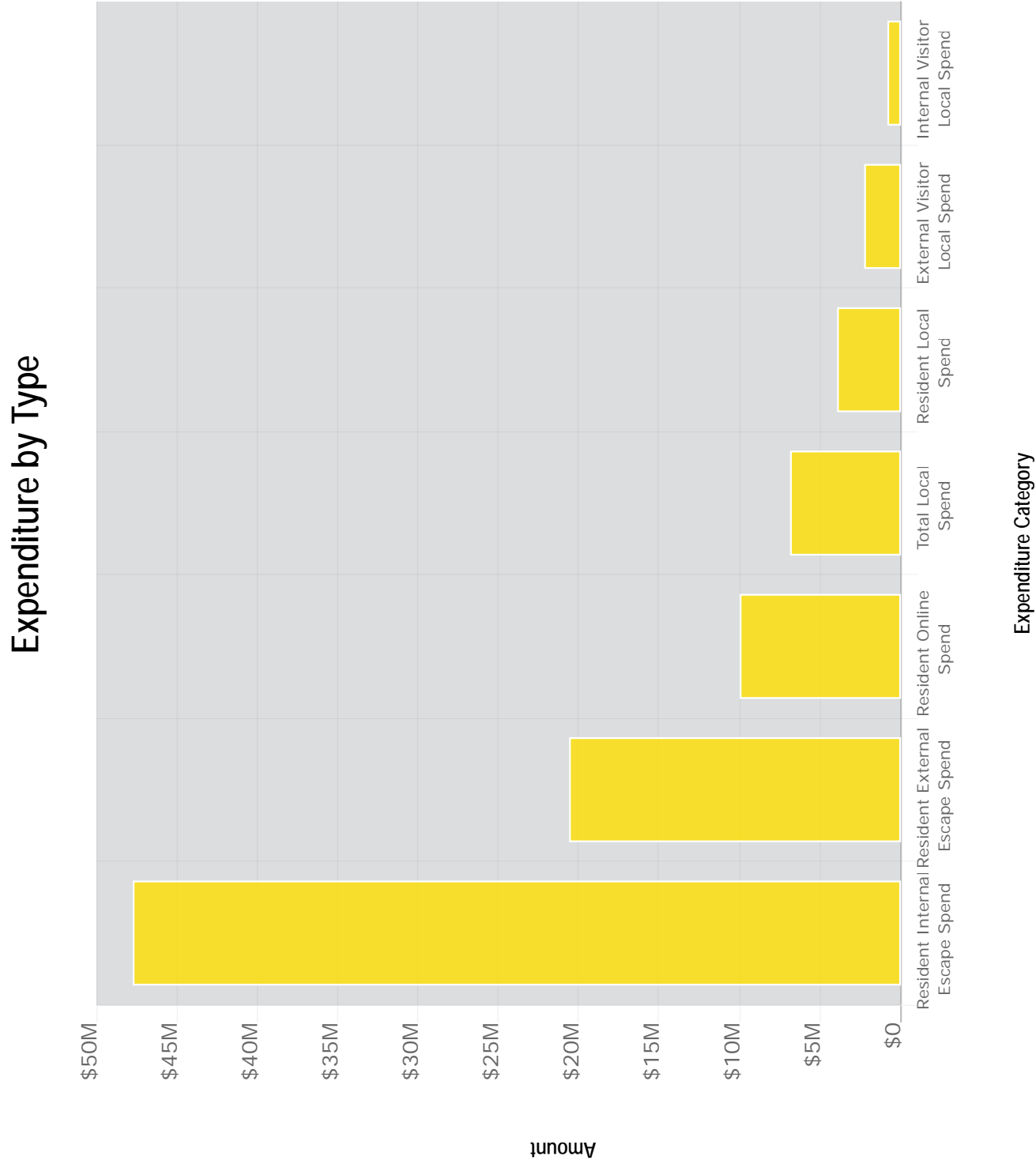


Table CT38: Expenditure Profile

Type	Amount
Resident internal escape spend	\$47.7M
Resident external escape spend	\$20.5M
Resident online spend	\$9.93M
Total local spend	\$6.8M
Resident local spend	\$3.87M
External visitor local spend	\$2.18M
Internal visitor local spend	\$735K

Source: Spendmapp.com.au, 2020.

98.2% of the total local spend is on specialised food retailing which totalled \$2.61 Million. While 1.5% (\$39,000) was spent on personal services. The difference was made up of money spent on dining and entertainment, transport and furniture and other household good.

4.2.2 RETAIL MARKET SHARE ANALYSIS

In the retail hierarchy from the *Retail Strategy 2019*, it states that 'small town centres should provide limited convenience retailing supermarket, and other grocery stores, fruit and vegetable retailing, bread and cake retailing, confectionery, newsagency, beverages etc. to the surrounding township and rural areas. They are important focal points for the community and where appropriate, may include tourism-related retailing.'

In that frame, there will be a fair portion of escape spend from Toongabbie for things that are outside of the limited convenience retailing such as non-food retail.

For the purpose of the next section, Total local spend (internal and external visitor and resident local spend) has been excluded. Resident online spend has been excluded as Spendmapp (2020) states:

By way of a benchmark, the mean ratio of Resident Online Spend to all resident spending is 0.22. That is, for every dollar spent by resident cardholders anywhere, 22c goes online. Another 34c is in Escape Expenditure and the rest is spent locally. Over the last few years across most of Australia, total expenditure has been relatively flat, even in fast growing municipalities. The exception to this has often been in Resident Online Spend, which continues to grow relative to Total Local Spend.

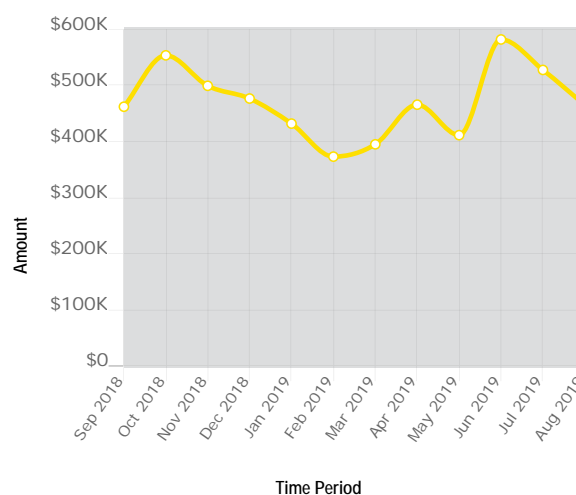
Resident local spend has been included within 'internal visitor' spend. As such, the following four categories apply:

- External escape spend;
- Internal escape spend;
- External visitor spend; and
- Internal visitor spend.

External Escape Spend

According to Spendmapp data, people from the locality of Toongabbie, were spending between \$373,000 in February 2019 and \$582,000 in June outside the municipality between September 2018 and August 2019 as shown in Figure CT40.

Figure CT40: External escape spend timeline



Source: Spendmapp.com.au, 2020.

Table CT39: External Escape Spend

Month	External Escape Spend
September 2018	\$461,780
October 2018	\$553,352
November 2018	\$499,057
December 2018	\$476,363
January 2019	\$431,686
February 2019	\$372, 824
March 2019	\$394, 787
April 2019	\$465,446
May 2019	\$411,099
June 2019	\$581,652
July 2019	\$527,362
August 2019	\$464,806

Source: Spendmapp.com.au, 2020.

Note: Figures rounded to nearest whole dollar.

The top five localities where the spend is escaping to are:

- Sale with \$1.02M capture for the year;
- Heyfield with \$638K capture for the year;
- Lakes Entrance with \$329K capture for the year;
- Maffra with \$328K capture for the year; and
- Melbourne with \$324K capture for the year.

This is shown spatially in Figure CT41 and shown graphically in Figure CT42.

The external escape spend is primarily being spent on (as shown in Figure CT43):

- Grocery stores and supermarkets (\$990K)
- Professional services (\$923K)
- Dining and entertainment (\$886K)
- Transport (\$793K)
- Specialised food retailing (\$440K)



Photo: Playground

Source: McKenzie, T., 2020.

Figure CT41: Spatial distribution of external escape spend

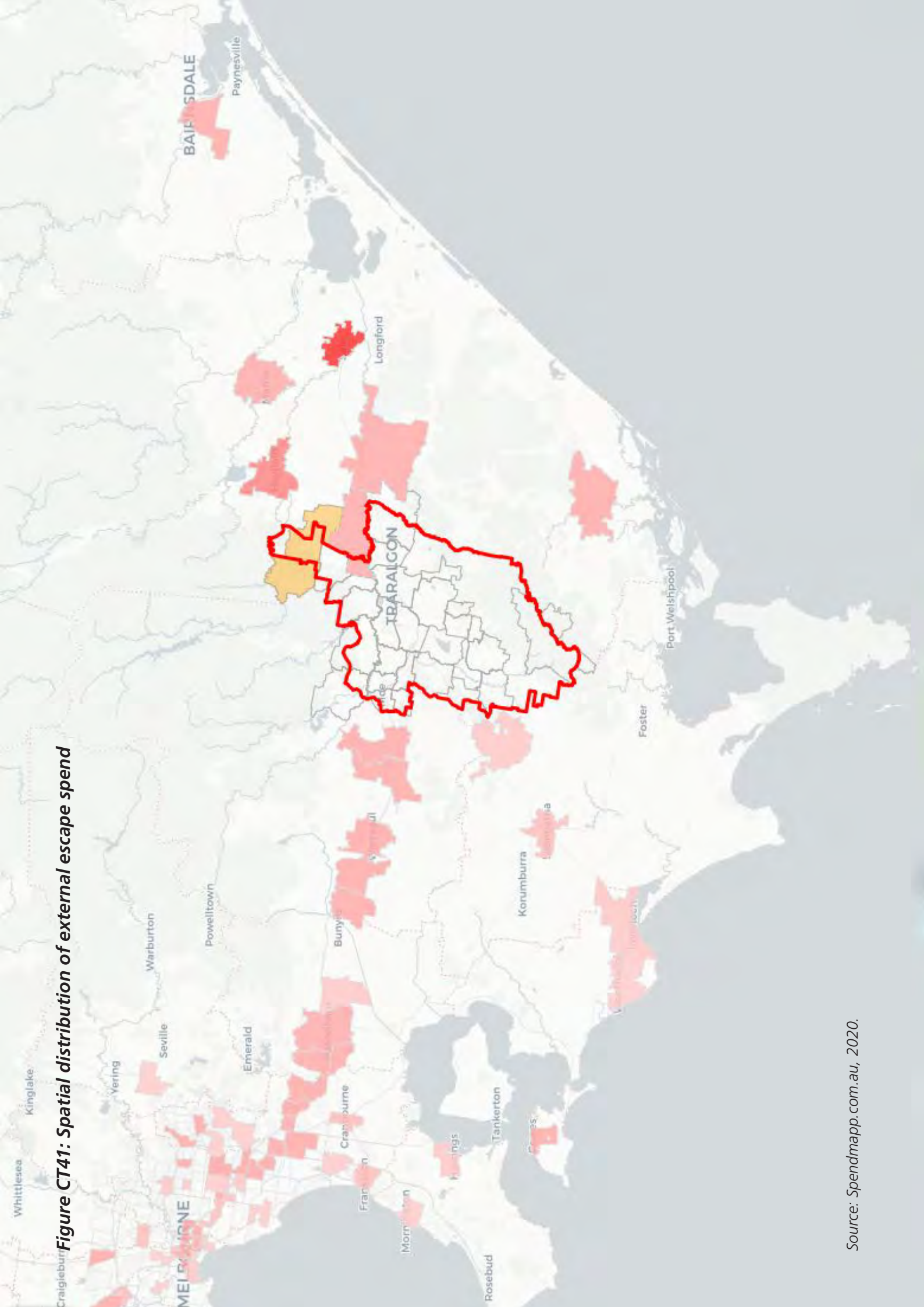
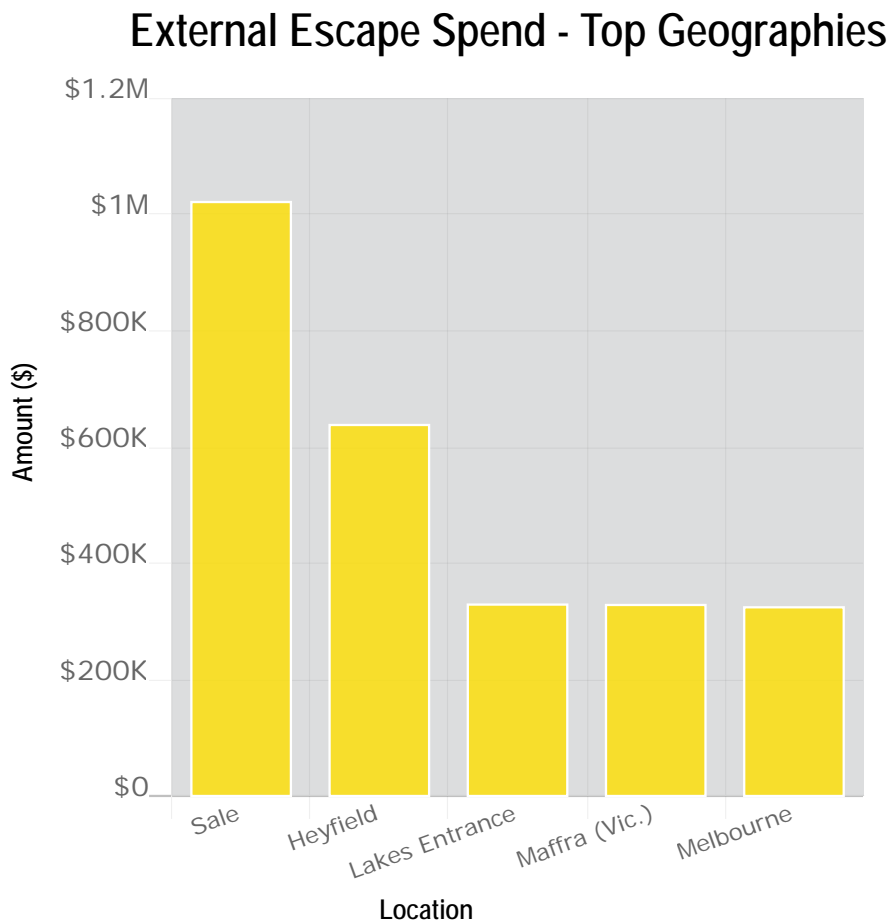
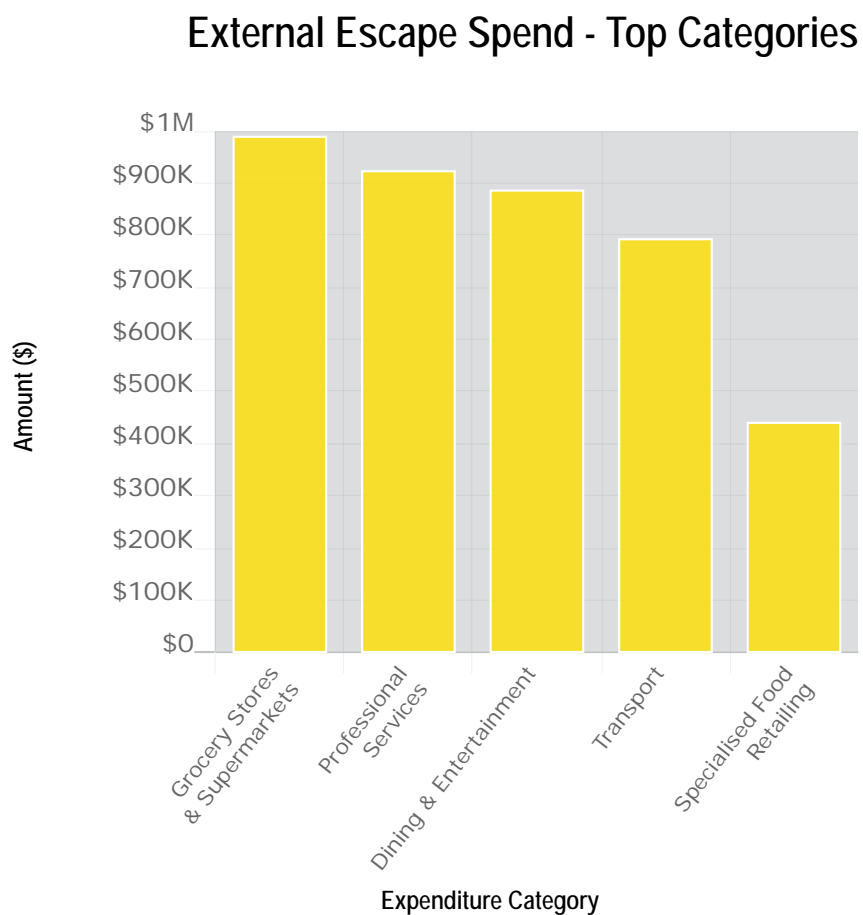


Figure CT42: External escape spend by geography



Source: Spendmapp.com.au, 2020.

Figure CT43: External escape spend by expenditure category

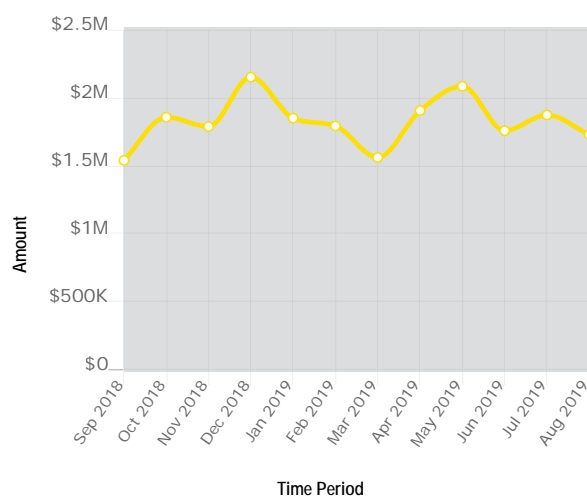


Source: Spendmapp.com.au, 2020.

Internal Escape Spend

The internal escape spend for the year peaked during the Christmas period at \$2.15 million and again in May at \$2.09 million between September 2018 and August 2019, as shown in Figure CT44.

Figure CT44: Internal escape spend timeline



Source: Spendmapp.com.au, 2020.

Table CT40: Internal Escape Spend

Month	Internal Escape Spend
September 2018	\$1,539,861
October 2018	\$1,857,642
November 2018	\$1,788,796
December 2018	\$2,152,751
January 2019	\$1,850,630
February 2019	\$1,793,298
March 2019	\$1,561,087
April 2019	\$1,905,908
May 2019	\$2,085,234
June 2019	\$1,758,283
July 2019	\$1,873,827
August 2019	\$1,728,795

Source: Spendmapp.com.au, 2020.

Note: Figures rounded to nearest whole dollar.

The top five localities where the spend is escaping to within the municipality are:

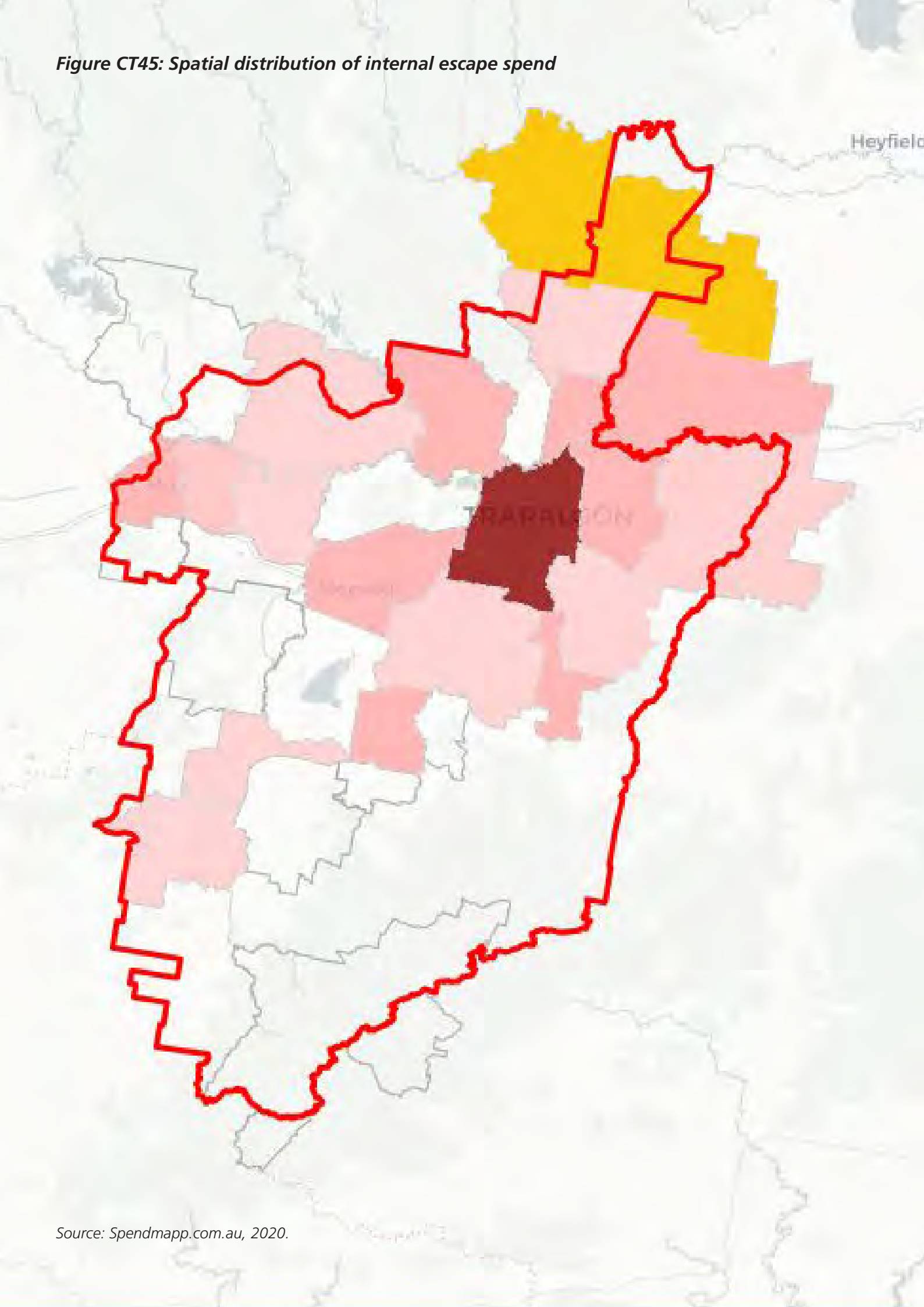
- Traralgon with \$17.2M capture for the year;
- Toongabbie with \$1.69M capture for the year;
- Morwell with \$1.53M capture for the year;
- Glengarry with \$555K capture for the year; and
- Traralgon East with \$437K capture for the year.

This is shown in Figure CT45 and graphically in Figure CT46.

The internal escape spend is primarily being spent on (as shown in Figure CT47):

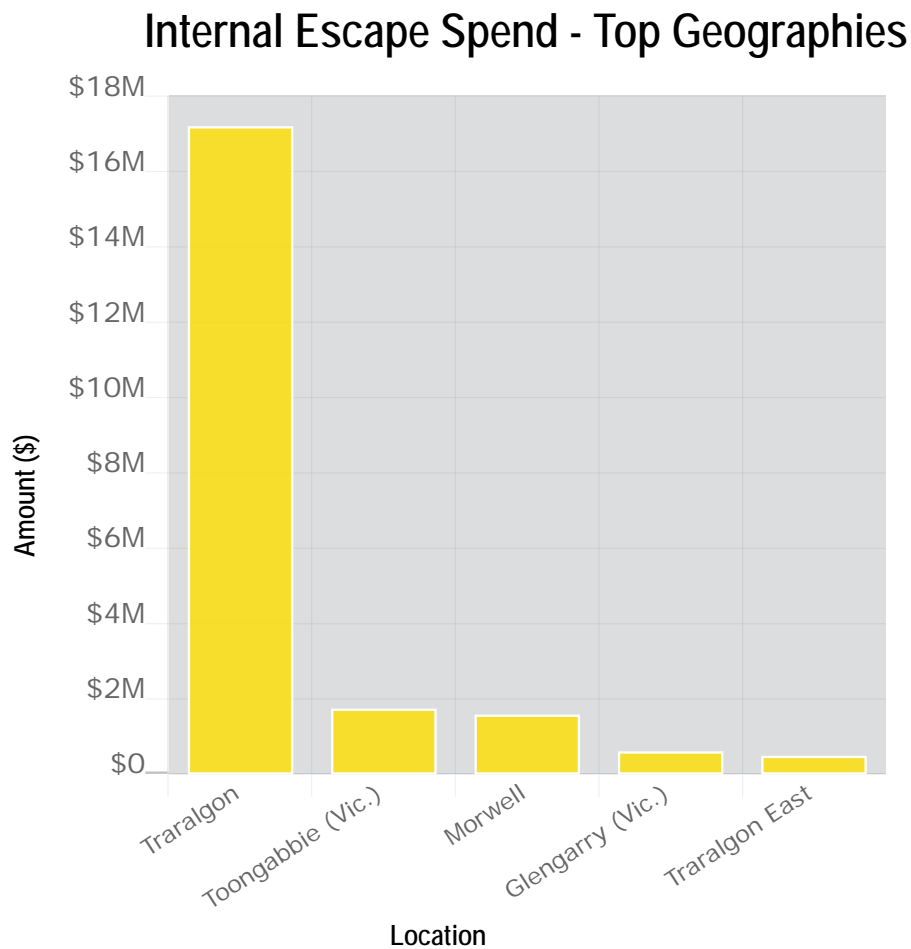
- Specialised food retailing (\$4.82M)
- Grocery stores and supermarkets (\$2.95M)
- Transport (\$2.91M)
- Specialised and Luxury Goods (\$2.09M)
- Dining and Entertainment (1.99M)

Figure CT45: Spatial distribution of internal escape spend



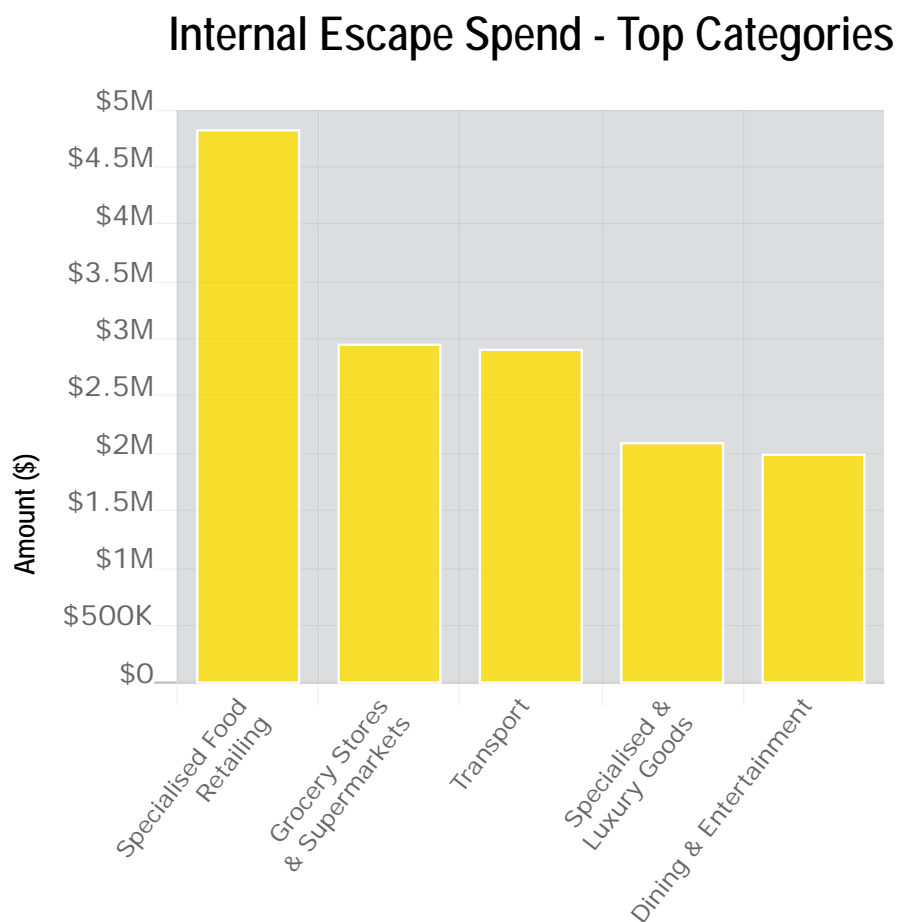
Source: Spendmapp.com.au, 2020.

Figure CT46: Internal escape spend by geography



Source: Spendmapp.com.au, 2020.

Figure CT47: Internal escape spend by expenditure category



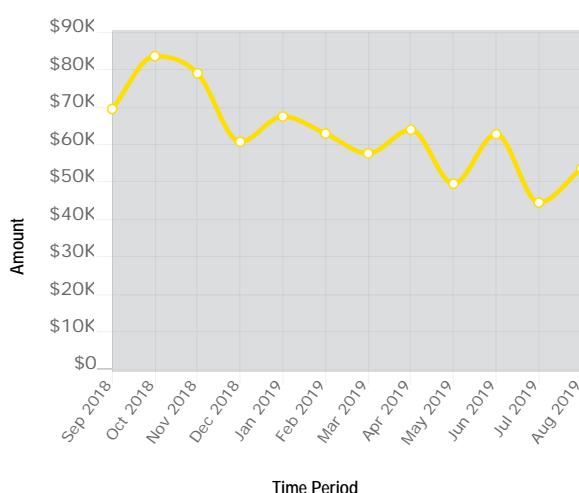
Source: Spendmapp.com.au, 2020.

Expenditure Category

External Visitor Spend

According to *Spendmapp* data, for people from outside of the municipality spending in Toongabbie peaked at \$83,600 in October 2018 and reached it lowest point in July with \$44,500 being spent within the locality of Toongabbie (between September 2018 and August 2019) as shown in Figure CT48.

Figure CT48: External visitor spend timeline



Source: *Spendmapp.com.au*, 2020.

Table CT41: External Visitor Spend

Month	External Visitor Spend
September 2018	\$69,535
October 2018	\$83,613
November 2018	\$79,036
December 2018	\$60,739
January 2019	\$67,508
February 2019	\$62,958
March 2019	\$57,649
April 2019	\$63,979
May 2019	\$49,580
June 2019	\$62,784
July 2019	\$44,538

Month	External Visitor Spend
August 2019	\$53,657

Source: *Spendmapp.com.au*, 2020.

Note: Figures rounded to nearest whole dollar.

The top five localities where the spend is coming from are:

- Glengarry with \$237K capture for the year;
- Seaton with \$166K capture for the year;
- Winnadoo with \$47.8K capture for the year;
- Heyfield with \$40.3K capture for the year; and
- Woodside with \$30.2K capture for the year.

Glengarry is classed as an 'external locality' due to the majority of the locality being located outside of the municipal borders. It does not take into account that the township of Glengarry and therefore the majority of the residents within the locality are within Latrobe's municipal borders.

This is shown spatially in Figure CT49 and graphically shown in Figure CT50.

The external visitor spend is primarily being spent on (as shown in Figure CT51):

- Specialised food retailing (\$749K)
- Dining and Entertainment (\$5.94K)
- Personal Services (\$923)

This is consistent within the Toongabbie General Store being classed as 'specialised food retailing.'

Figure CT49: Spatial distribution of external visitor spend

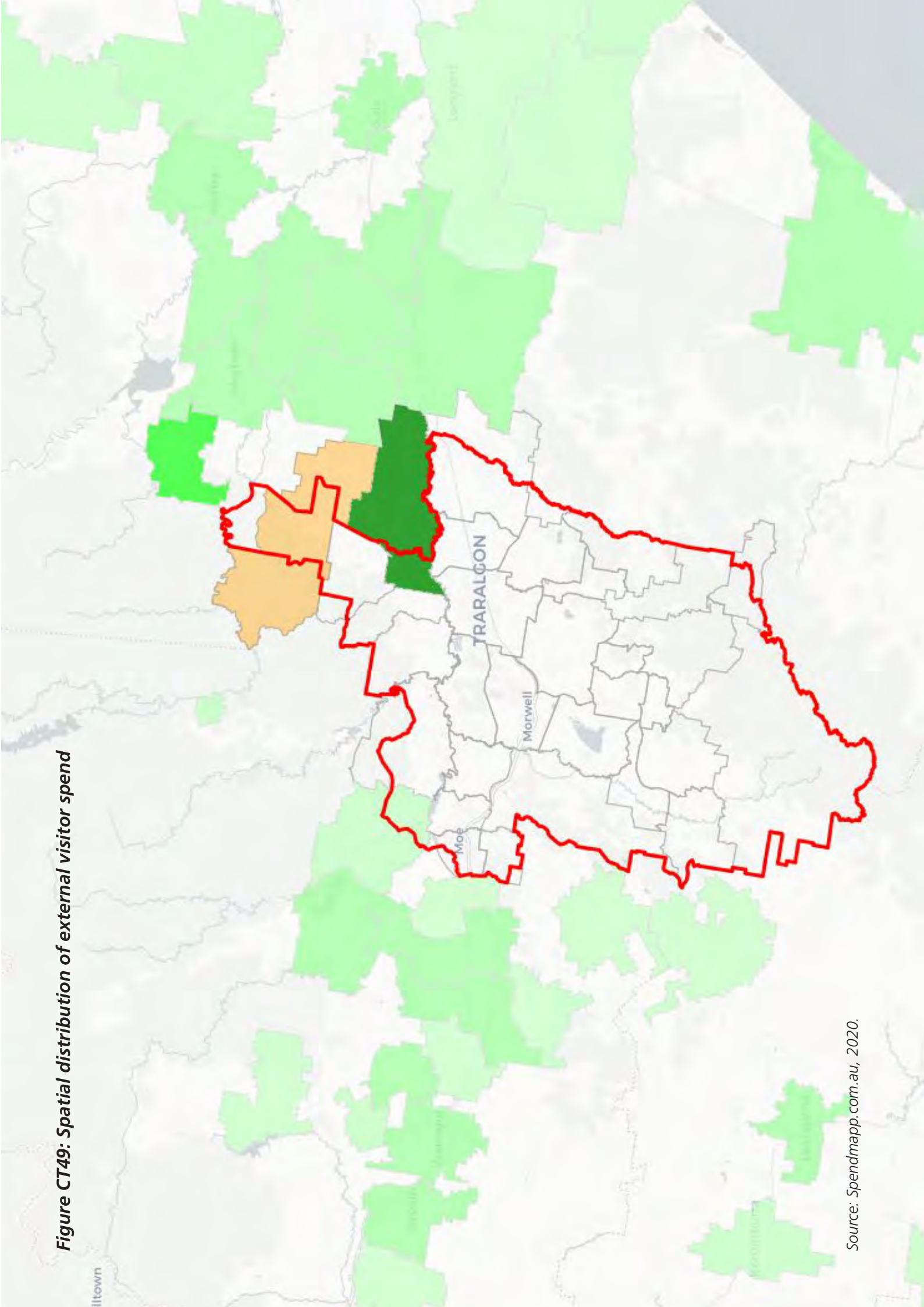
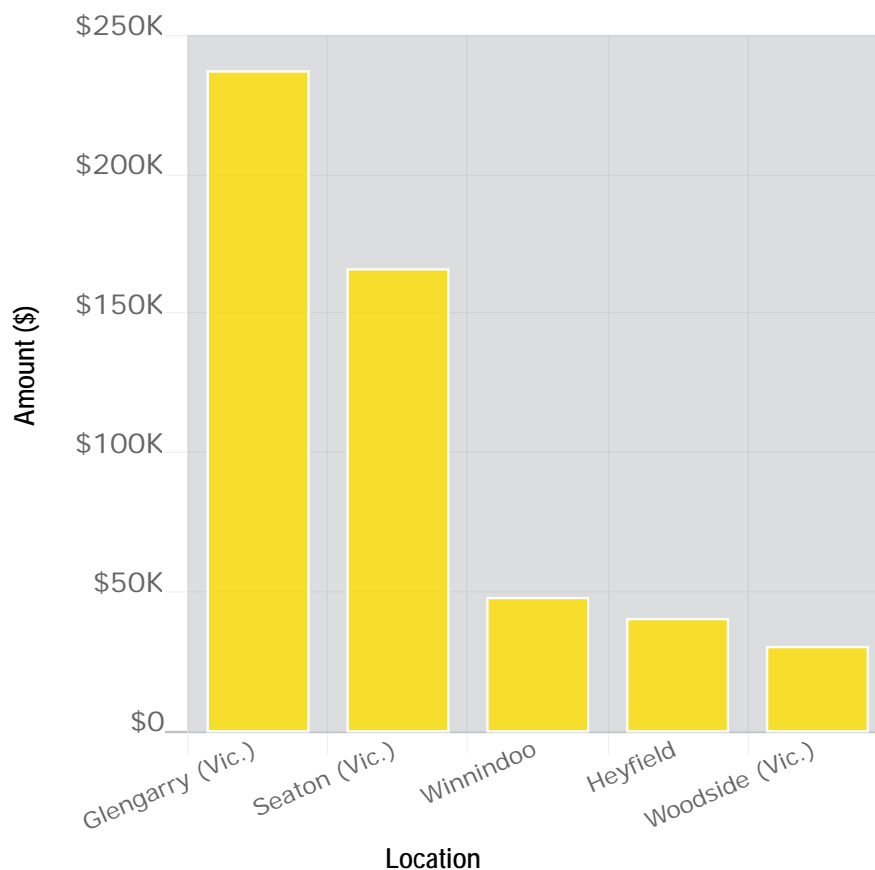


Figure CT50: External visitor spend by geography

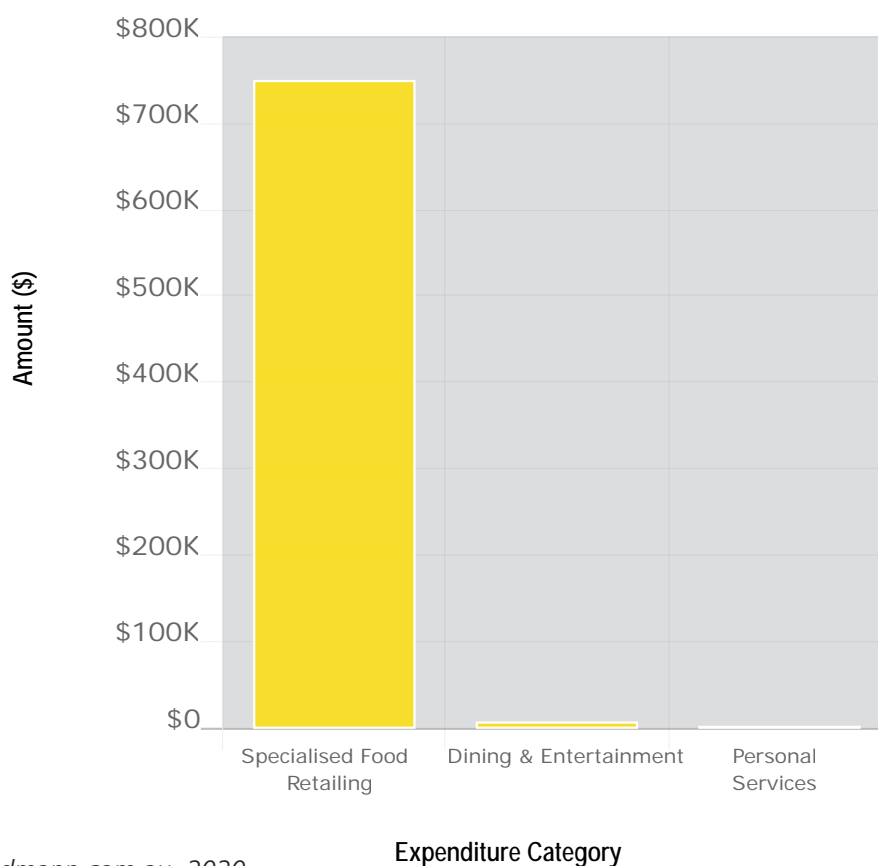
External Visitor Spend - Top Geographies



Source: Spendmapp.com.au, 2020.

Figure CT51: External visitor spend by expenditure category

External Visitor Spend - Top Categories

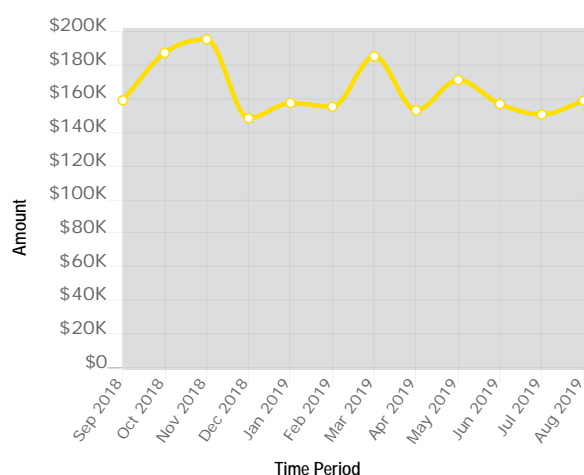


Source: Spendmapp.com.au, 2020.

Internal Visitor Spend

According to *Spendmapp* data, for people from inside of the municipality (including Toongabbie residents) spending in Toongabbie peaked at \$195,000 in November 2018 and again in March 2019 with \$185,000. It reached its lowest point in December 2018 with \$148,000 being spent within the locality of Toongabbie (between September 2018 and August 2019) as shown in Figure CT52.

Figure CT52: Internal visitor spend timeline



Source: *Spendmapp.com.au*, 2020.

Table CT42: Internal Visitor Spend

Month	Internal Visitor Spend
September 2018	\$158,875
October 2018	\$187,103
November 2018	\$195,134
December 2018	\$148,273
January 2019	\$157,361
February 2019	\$155,058
March 2019	\$185,028
April 2019	\$152,945
May 2019	\$170,993
June 2019	\$156,677

Month	Internal Visitor Spend
July 2019	\$150,499
August 2019	\$158,688

Source: *Spendmapp.com.au*, 2020.

Note: Figures rounded to nearest whole dollar.

The top five localities where the spend is coming from are:

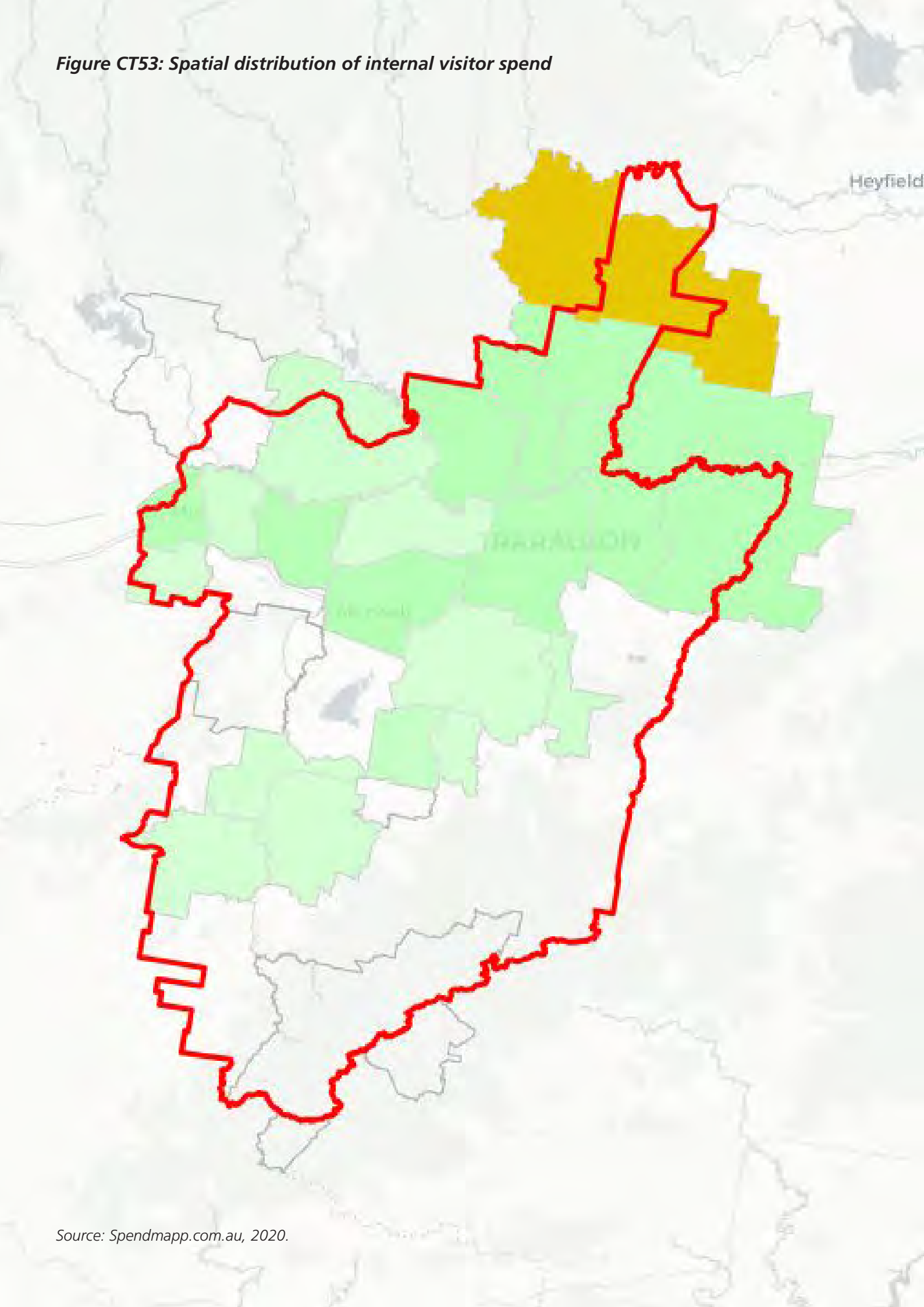
- Toongabbie with \$1.69MK capture for the year;
- Traralgon with \$131K capture for the year;
- Glengarry with \$39.9K capture for the year;
- Morwell with \$21.6K capture for the year; and
- Tyers with \$20.8K capture for the year.

This is shown spatially in Figure CT53 and graphically shown in Figure CT54.

The internal visitor spend is primarily being spent on (as shown in Figure CT56):

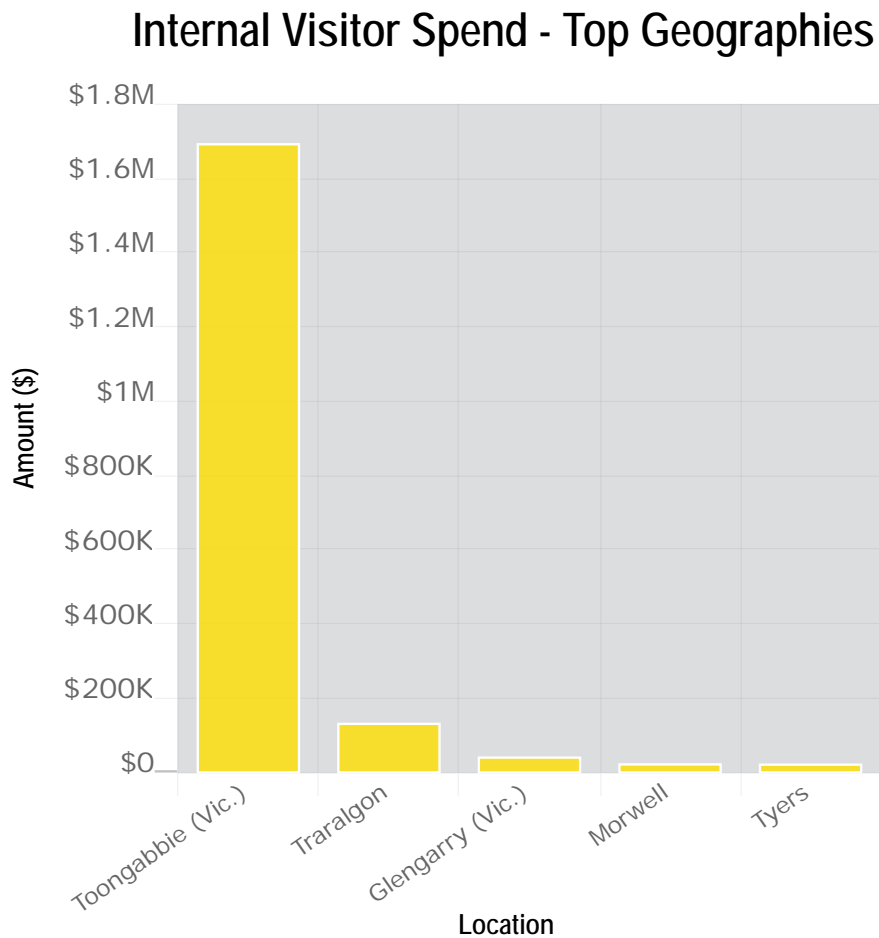
- Specialised food retailing (\$1.93M)
- Personal Services (\$40.9K)
- Dining and Entertainment (\$2.04K)
- Furniture and other household goods (1.34K)

Figure CT53: Spatial distribution of internal visitor spend



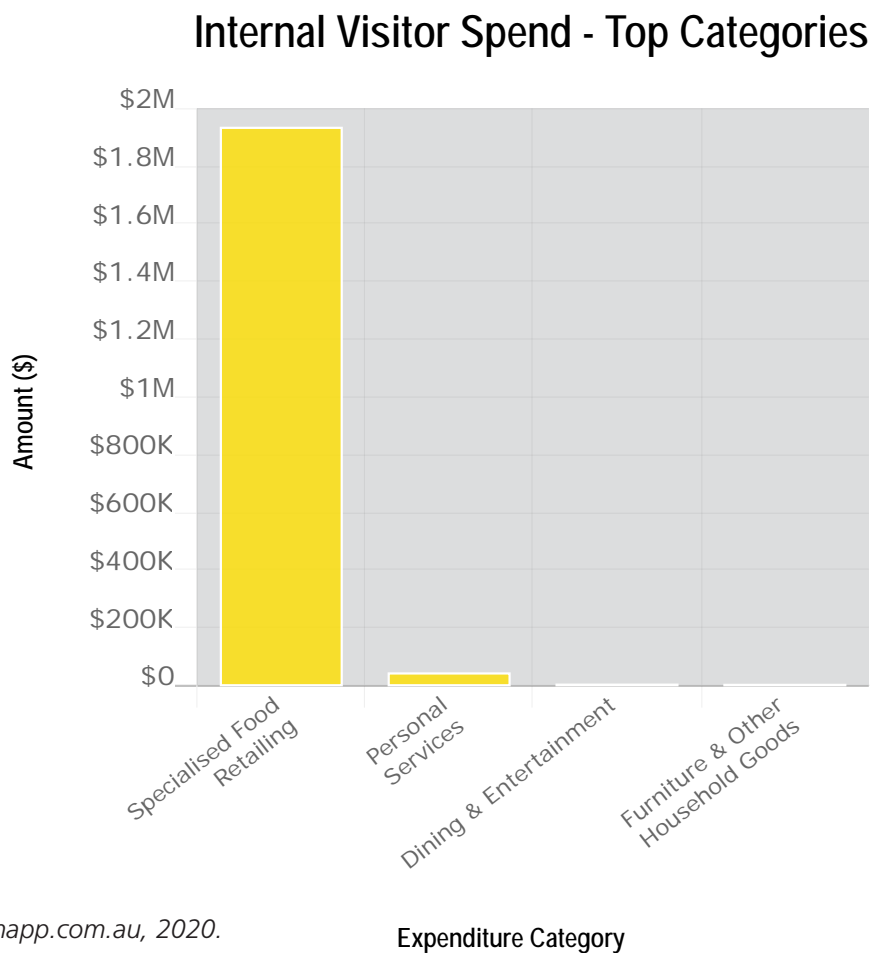
Source: Spendmapp.com.au, 2020.

Figure CT54: Internal visitor spend by geography



Source: Spendmapp.com.au, 2020.

Figure CT55: Internal visitor spend by expenditure category



Source: Spendmapp.com.au, 2020.

4.3 Implications

This data on expenditure implies a number of different things:

1. Toongabbie potentially does not supply enough local convenience services as groceries and supermarkets features in both the top categories for internal and external escape spend. There is an opportunity to capture some of that market with a small supermarket.
2. There is an opportunity to capture some of the dining and entertainment expenditure through the provision of a cafe/bakery/coffee shop type of scenario or for the night market, this may be akin to a pub.
3. Toongabbie is both a historic route to Walhalla and the gateway to Cowwarr Weir, as such it could capture more of the visitor by diversifying its tourism offerings, this could be done through agri-tourism, or events, markets and festivals. There is an opportunity as both the retail strategy and the *Spendmapp* data suggests to capitalise on the visitor spend. This could be through dining options or through an event that promotes the town such as the events like the Tyers Art Show or the Boolarra Folk Festival which promote similar small towns within the municipality.



Photo: Ned Stringer Memorial
Source: McKenzie, T., 2020.

4.4 Provision of Commercial Land

In small towns across the municipality, the Township Zone has been applied to the commercial areas (or the whole town if that town is unsewered).

For Toongabbie, the Township Zone is applied to land between, Traralgon-Maffra Road (Main Street), Cowen Street and King Street, this is shown in Figure CT3 on page 103.

There are currently two vacant titles in the Township Zone which implies that there is adequate land for commercial growth, however, there are a number of constraints that could impact the development potential.

Township Zone

The zone itself is considered a residential zone. Under the zone, a dwelling does not require a planning permit as long as it can meet the requirements under Clause 32.05-3 of the Latrobe Planning Scheme. While an office or a retail premises does require a planning permit. A property owner could decide to have a residential allotment on these titles under the zone which would eliminate the available commercial land.

While this could be a deterrent, there are a number of overlays or proposed overlays that apply to the land that would still trigger for a planning permit.

Heritage Overlay

All three of the vacant titles have Heritage Overlay citation 79 (HO79) applied to the land as shown in Figure CT12 on page 110. Any development would need to provide a sensitive interface with the neighbouring properties ensure that the heritage trees in the road reserve are protected and maintained.

Proposed Flood Overlay and Land Subject to Inundation Overlay

All three titles are affected by the proposed flood and land subject to inundation overlays. WGCMA have advised that development may be possible subject to conditions, however further subdivision is not possible. The proposed FO and LSIO are shown in Figure CT30 on page 164.

Access to Traralgon-Maffra Road

Regional Roads Victoria (VicRoads) have advised that they are unlikely to support further access on to Traralgon-Maffra Road and that as such further commercial development should be directed to Cowen and King Street. This would affect Crown Allotment 3 Section 4 Toongabbie (CA3 Sect 4), which may need a service road or shared access with 43 Main Street.

4.5 Recommendations

1. Review Township Zone provisions and policy provision that enable the continued growth of the commercial area.
2. Support home-based businesses through the continued advocacy for improvements to the telecommunications infrastructure and through access to business development and expansion opportunities.
3. Diversify the tourism offering by supporting the Toongabbie Township Group in the development of an event that captures a greater share of the visitor market.

5

Social Infrastructure



5.1 Strategic Analysis

This chapter looks at the community infrastructure and undertakes a social needs analysis to identify key issues and opportunities associated with community infrastructure and social needs for Toongabbie and the surrounding areas.

For the purpose of this assessment, the following definition has of community infrastructure provided by ARS Research (2008) has been used:

Community Infrastructure is public and private, State, Council and non-Council facilities (e.g., cultural buildings, recreation buildings, passive and active open space) which accommodate community support services, programs and activities (e.g. preschool service, child care, youth services, aged services, community meetings, sporting competition, informal recreation, cultural activities, education activities, emergency services, community support, etc.)

The community infrastructure and social needs analysis has been informed by:

- The planning context (as shown in Chapter 2 of this Context Report);
- The demographics (as shown in Chapter 3 of this Context Report);
- A review and mapping of the existing community, open space and recreation facilities in the study area and, if not found in the study area, the distance to the nearest facility;
- Consultation with council staff and key agencies where possible; and
- Benchmarking against community infrastructure guidelines.

Due to time constraints, the community infrastructure and social needs assessment for the Toongabbie Structure Plan has been undertaken

primarily through a desktop analysis.

In relation to community infrastructure, planning policy framework states that:

Planning should consider demographic trends, existing and future demand requirements and the integration of facilities into communities in planning for the location of education and early childhood facilities by locating community facilities where it maximises access to public transport and safe walking routes; identifying and protecting land for cemeteries; ensuring police, fire, ambulance and other emergency services are provided for in or near activity centres; and planning for regional and local open space networks for both recreation and conservation of natural and cultural environments.

The key findings from the strategy review undertaken in Chapter 2 in relation to community infrastructure and social needs includes:

Recreation and Open Space

- Sport and recreation participation trends help to provide direction on likely future demand pressures for open space utilisation and open space design and development trends will influence how future open space is provided, used and developed;
- Open space provision identifies that local level open space should provide for 0.5 ha within 500m radius of households; residential areas should have access to district level open space within a 3km radius; and each town with a population over 10,000 people should have access to a regional standard public open space venue; and
- Recreation and open space should be accessible to all and a range of facilities should be available for a range of recreation activities (both active and passive). It has been identified that where necessary, facilities

5.2 Existing Infrastructure

should be consolidated to improve access and quality.

Neighbourhood Design, Safety and Amenity

- Neighbourhood clusters of essential services should be encouraged across Latrobe City. This is encouraged because there are efficiency gains from clustering services, there are intergenerational benefits from having a multi-purpose centre and new centres are more likely to occur if they have a less specified purpose;
- The *Healthy By Design Guidelines* and the Municipal Strategic Statement identify that good design helps to promote healthy communities. As such, community centres and open spaces should be accessible and promote walking and cycling. Community centres should be located within 400-800m of all new developments and be of mixed use; and
- Perceptions of safety, especially at night have been identified as an important issue. The Toongabbie Township Group has put together a list of priorities for the Toongabbie Community Plan and has identified street lighting as a particular issue, along with street crossings and the state of footpaths to get between major facilities. This is likely due to how dark it is rather than an issue with crime as Victoria Police stated that there have been four recorded street crimes over the past year which is considered to be relatively low. Victoria Police did comment that street lighting would like contribute to preventing future assault and theft cases due to the increased ability for passive surveillance by residents.

An audit of the existing infrastructure including recreation and open space facilities has been undertaken and is shown in Table CT43.

For the purposes of the table, the distance to the facility has been measured from the Toongabbie General Store as this would be considered the 'activity centre' for Toongabbie.

Facilities that are 15 to 30 minutes away are only shown if Toongabbie does not have similar facilities available.

There are a range of secondary schools available including ones in Traralgon. It is noted that a number of high school students also attend school in Sale. This has not been listed as it is beyond the 30 minute drive.

The location of these facilities is shown in Figure CT56 for Toongabbie and Figure CT57 for locations outside of the study area.

Table CT43: Existing Social Infrastructure

Facility Type	Provided in town	Provided within 15 minutes drive	Provided within 30 minutes drive
Open Space and Recreation	<p>Gippsland Plains Rail Trail Toongabbie Village Green 9 Victoria Street Playground Toongabbie Water Reserve Toongabbie Golf Course Toongabbie Recreation Reserve</p> <ul style="list-style-type: none"> • Skate Park • Tennis Court • Horse Arena <p>Toongabbie Wetlands</p>	Mavis Whateley Reserve	Gippsland Regional Aquatic Centre (17min - currently under construction)
Community and Cultural Facilities	<p>Toongabbie Mechanics' Institute Toongabbie Recreation Hall Toongabbie Men's Shed Ned Stringer Memorial Toongabbie Cemetery</p>	Glengarry Scout Hall (8 min)	<p>Kath Teychenne Neighbourhood Centre (17min) Traralgon Library (17min) Wellington Library Service - Heyfield (17min) Wellington Library Service - Rosedale (16min) Latrobe Performing Arts Centre (17min - currently under construction)</p>

<i>Facility Type</i>	<i>Provided in town</i>	<i>Provided within 15 minutes drive</i>	<i>Provided within 30 minutes drive</i>
Early Years		Glengarry Preschool (7min) Little Saints Early Learning Centre (13min) Good Start Early Learning Traralgon - Park Lane (14min) Park Lane Preschool (14min) Good Start Early Learning Traralgon - Conway Court (14min) Tyers Preschool (14min)	Traralgon Early Learning Centre (16min) Good Start Early Learning Traralgon - Grey Street (17min) Kay Street Preschool (17min) Cameron Street Preschool (17min) Pax Hill Preschool (18min) Cumberland Park Preschool (18min) Heyfield Kindergarten (18min) Li'l Bearz Early Learning Centre (18min) Sara Court Preschool (19min) Heyfield Kindergarten (18min) Parklands Preschool (25min) Mid Valley Kinder & Child Care (25min) Carinya Early Learning Centre (28min) Elizabeth Wilmot Preschool (25min) Goodstart Early Learning Morwell (27min) Kylie Childminding Centre (25min) Dala Lidj - Woolum Bellum Kindergarten (26min) Goodstart Early Learning Morwell Central (27min) Maryvale Crescent Preschool (27min)

<i>Facility Type</i>	<i>Provided in town</i>	<i>Provided within 15 minutes drive</i>	<i>Provided within 30 minutes drive</i>
Primary and Secondary Schools	Toongabbie Primary School	Glengarry Primary School (8min) Traralgon Secondary College - Junior Campus (15min) Tyers Primary School (14min)	Chairo Christian School - Traralgon Campus (17min) St Paul's Anglican Grammar School (18min) Lavalla Catholic College (17min) Traralgon Secondary College (18min) Latrobe Valley Flexible Learning Options (28min)
Emergency Services	Toongabbie CFA Building	There is a CFA building in Glengarry and Tyers. As Toongabbie has a CFA building these will not be shown in Figure 64.	Traralgon Police Station (17min) Rosedale Police Station (16min) Heyfield Police Station (18min) Ambulance Victoria - Heyfield (18min) Ambulance Victoria - Traralgon (20min) Latrobe Regional Hospital (22min)
Senior Citizens		Traralgon East Senior Citizens' Centre (15min)	MRS Senior Citizens Heyfield (16min)
Adult Education		TAFE Gippsland - Traralgon Campus (15min)	TAFE Gippsland - Hi-Tech Precinct (27min) Federation University - Churchill Campus (30 min)

It is noted that the nearest Ambulance and Police facilities are 18 minutes and 16 minutes away respectively.

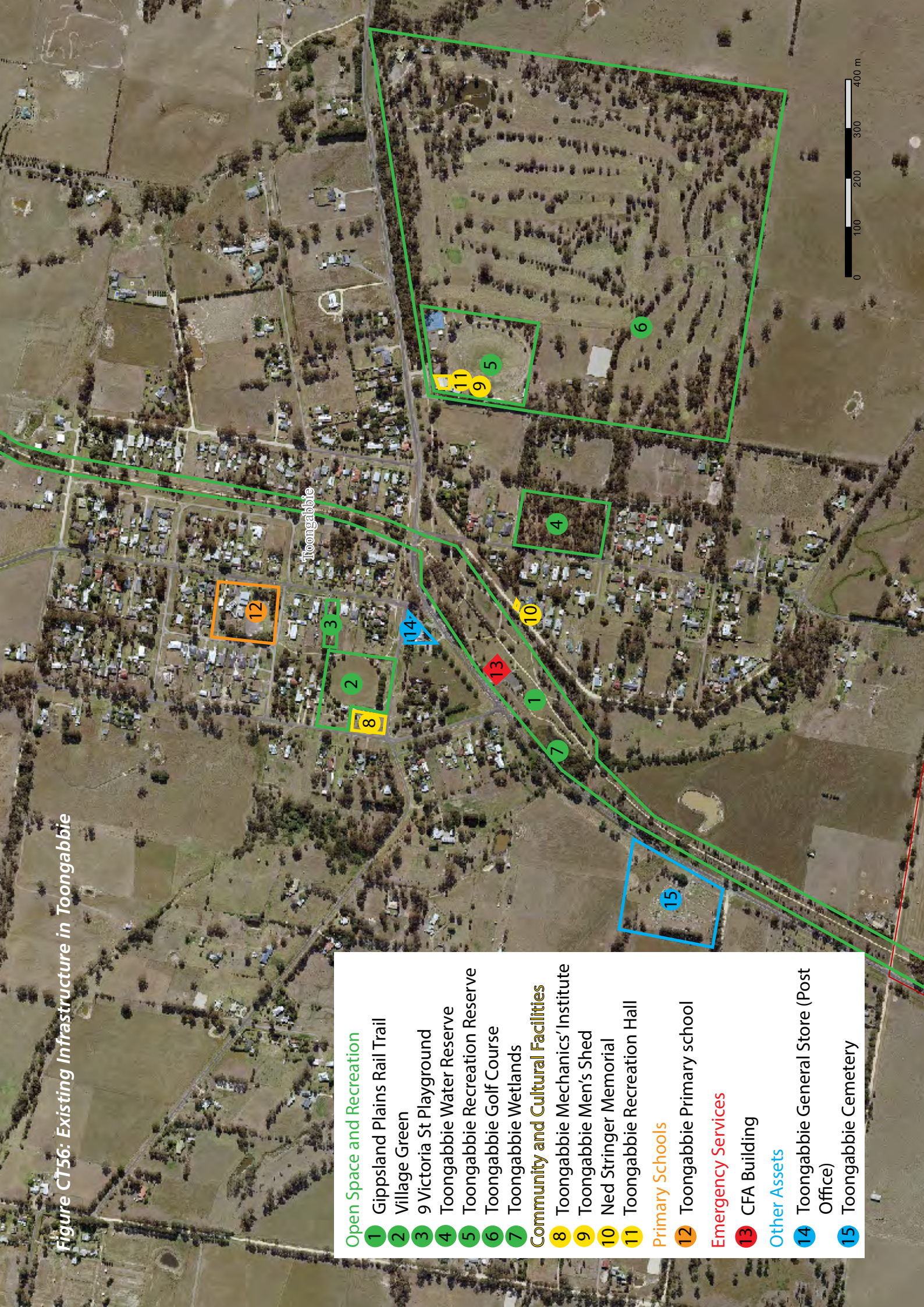
includes sirens, Toongabbie residents would be treated within this time frame. The stations are an acceptable distance away from Toongabbie.

Ambulance Victoria were contacted in relation to acceptable response times and planning for new facilities.

Victoria Police have stated that their average response time is about 20 minutes. Traralgon, Rosedale and Heyfield fall within this timeframe.

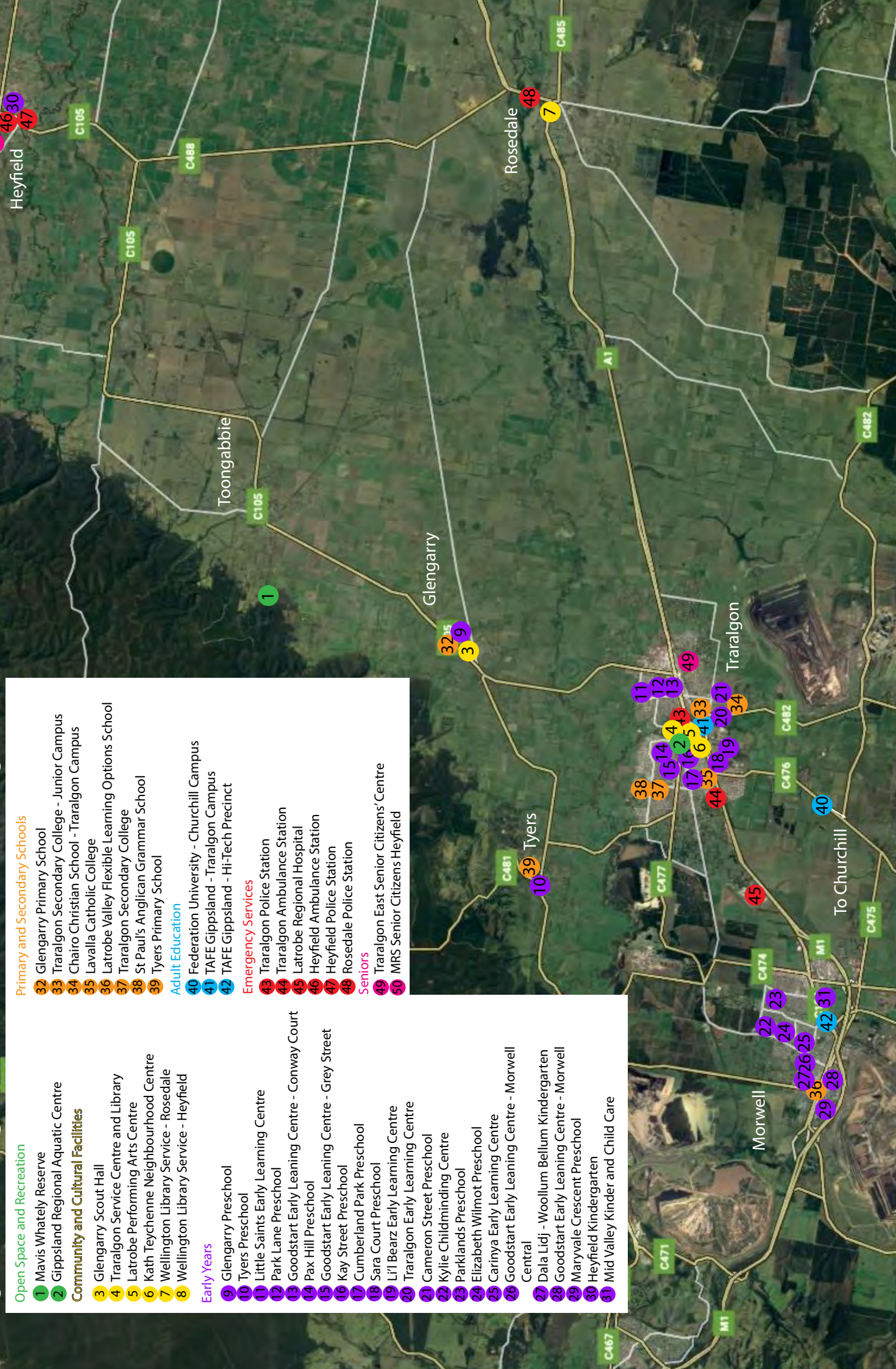
Ambulance Victoria has stated that:
A triage response time should be under 15 minutes, with an emergency response that

Figure CT56: Existing Infrastructure in Toongabbie



- Open Space and Recreation**
- 1 Gippsland Plains Rail Trail
 - 2 Village Green
 - 3 9 Victoria St Playground
 - 4 Toongabbie Water Reserve
 - 5 Toongabbie Recreation Reserve
 - 6 Toongabbie Golf Course
 - 7 Toongabbie Wetlands
- Community and Cultural Facilities**
- 8 Toongabbie Mechanics' Institute
 - 9 Toongabbie Men's Shed
 - 10 Ned Stringer Memorial
 - 11 Toongabbie Recreation Hall
- Primary Schools**
- 12 Toongabbie Primary school
- Emergency Services**
- 13 CFA Building
- Other Assets**
- 14 Toongabbie General Store (Post Office)
 - 15 Toongabbie Cemetery

Figure CT57: Existing Infrastructure within 30 drive of Toongabbie



5.2.1 INDICATIVE HIERARCHY FOR SOCIAL INFRASTRUCTURE

A Short Guide to Growth Area Community Infrastructure Planning (ASR Research, 2008) has the following indicative community infrastructure

hierarchy which indicates which services should be provided within a small town.

Table CT44: Indicative hierarchy for the provision of social infrastructure

Hierarchy	Provision Ratio	Items
Level 1	Up to 10,000 people	Government Primary Schools (including out of schools hours care)/ Early Years Facility Level 1 Council Community Centres/ Early Years Facility/ Neighbourhood House Local level Active Open Space Local level Passive Open Space (including local level playgrounds) Long Day Child Care Centres Social housing
Level 2	Between 10,000 and 30,000 people	Government Secondary Schools Catholic Primary Schools District level indoor recreation centres Level 2 Council Community Centres/Early Years Facility/ Neighbourhood Houses Low Order Tennis Facilities Low Order Youth Facilities Maternal & Child Health (within every second level 1 early years facility) Occasional Child Care (as part of every neighbourhood house and leisure centre) Residential Aged Care

<i>Hierarchy</i>	<i>Provision Ratio</i>	<i>Items</i>
Level 3	Between 30,000 and 60,000 people	Libraries Aquatic Leisure Centres Community Arts Centres Catholic Secondary Schools Higher Order Active Open Space Reserves Regional level indoor recreation centres High Order Tennis Facilities Lawn Bowls Facility High Order Dedicated Youth Facilities Level 3 Council Community Centres Level 3 Council and Community Services Health Precincts (DHS Level 2 Community based health precincts - dedicated outreach health precinct sites) Early Childhood Intervention Service PAG facility Delivered meals facility Regional level adventure playgrounds Other independent schools
Level 4	Provision for the entire municipality	Main Council Civic Centre Level 3 Community-based health precincts – Day hospitals that contain main or outreach Community Health Centre site (including Mental Health) ³ Synthetic athletics track
Level 5	Provision for two or more municipalities	Highest Order Performance Arts Facility Universities/TAFEs Level 4 Community-based health precincts - Hospitals with community-based health services Regional Parks



5.2.2 PROVISION OF SOCIAL INFRASTRUCTURE IN TOONGABBIE

The provision of social infrastructure can be calculated as whether it is appropriate by using the following matrix as shown in Table CT45, the figures are calculated using the population forecasts as shown in Chapter 3. For the number of persons in Toongabbie category the Estimated Resident Population for 2019 (ABS, 2019) figure from Chapter 3 of 1006 persons has been used.

Number of households uses the 2016 data from the ABS Census.

As Toongabbie has a population less than 10,000 people and it is not likely to exceed 10,000 people over the next 20 years, Toongabbie would fall into a Level 1 service provision ratio.

Recreation needs will be discussed in section 5.3.

Table CT45: Provision of Social Infrastructure in Toongabbie Matrix

Service Area	Benchmark	Exisiting facilities	Number in Toongabbie (ERP 2019)	2020 Requirement	2036 Requirement	Assessment by benchmark
Early Years						
Maternal and child health	1 service for 182 babies	None	42 (0 - 2 years of age)	0.23	0.32	Sufficient, as a level two category.
Preschool	1 30-place preschool room for every 30 4-year olds	None	15	0.5	0.7	Insufficient, 1 room needed
Playgroup	1 playgroup per 5,000 residents (uses a general meeting space)	1 service	1006	0.2	0.27	Sufficient
Long day care	1 place per 6.8 children aged 0-6 years	None	104	15.29 places	21.18 places	Insufficient, 1 room needed

Source: ASR Research, 2008; ABS, 2018b and ABS, 2019.

Service Area	Benchmark	Existing facilities	Number in Toongabbie (ERP 2019)	2020 Requirement	2036 Requirement	Assessment by benchmark
Occasional care	3 places per 1,000 children (0-6 years)	None	104	0.31 places	0.43 places	Sufficient, not enough demand for further investigation
Outside school hours care	150 places for 1000 children (0-6 years)	None	104	15.6 places	21.6 places	Insufficient, enough need for 1 room.
Education						
Neighbourhood House	1 per 10,000 residents	None	1006	0.10	0.14	Sufficient, not enough demand for further investigation
Primary School	1 school per 8,000-10,000 residents	1 school	1006	0.12	0.17	Sufficient
Secondary School	1 school per 18,000 residents	None	1006	0.06	0.07	Sufficient, level 2 category
Special Education	1 school per 60,000 residents	None	1006	0.02	0.02	Sufficient, level 3 category
Independent Primary School	1 school per 5,000 households (depending on Catholicity rate)	None	393 (ABS, 2018b)	0.08	0.11	Sufficient, level 2 category

Source: ASR Research, 2008; ABS, 2018b and ABS, 2019.



Service Area	Benchmark	Existing facilities	Number in Toongabbie (ERP 2019)	2020 Requirement	2036 Requirement	Assessment by benchmark
Independent Secondary School	1 school per 16,000 households (depending on Catholicity rate – requires three feeder primary schools)	None	393 (ABS, 2018b)	0.02	0.03	Sufficient, level 3 category
Seniors						
Senior groups	1 per 10,000 people (general space)	None	1006	0.10	0.14	Sufficient, not enough of a requirement to warrant a centre
Planned activity group (PAG)	1 per 40,000 – 60,000 people	None	1006	0.02	0.02	Sufficient, level 3 category
Library						
Library	1 Library per 30,000-60,000 people	None	1006	0.03	0.05	Sufficient, Traralgon Library services a catchment area of less than 60,000 people
General Spaces and Services						
Community meeting space	1 x 1-20 people venue per 4,000 people	2 venues	1006	0.25	0.34	Sufficient

Source: ASR Research, 2008; ABS, 2018b and ABS, 2019.

Service Area	Benchmark	Exisiting facilities	Number in Toongabbie (ERP 2019)	2020 Requirement	2036 Requirement	Assessment by benchmark
	1 x 21-50 people venue per 8,000 people	2 venues	1006	0.12	0.17	Sufficient
	1 x 51-100 people venue per 8,000 people	2 venues	1006	0.12	0.17	Sufficient
	1 x 101-200 people venue per 8,000 people	2 venues	1006	0.12	0.17	Sufficient
	1 x 200+ venue per 20,000 people	None	1006	0.05	0.07	Sufficient
Services for young people	1 per 10,000 people	None	1006	0.10	0.11	Sufficient, not enough of a demand to warrant a centre
Youth space	1 per 8,000 people	None	1006	0.12	0.13	Sufficient, not enough of a demand to warrant a centre
Multi-purpose community centre	1 per 8,000-10,000 people	2 services	1006	0.12	0.17	Sufficient

Source: ASR Research, 2008; ABS, 2018b and ABS, 2019.

The matrix indicates that there may be sufficient need for a preschool room and day care facilities. As indicated by the hierarchy in Table CT44, this could possibly be co-located with the Primary School. However, further consultation with the Department of Education and Training, Toongabbie Primary School and the Latrobe City Family Services team is needed. Childcare and a preschool were mentioned in the survey results (see draft *Toongabbie Structure Plan Background Reports - Consultation Report 2020*) as something that people would like to have available in the community.

While, this matrix identifies the need for day care, if the community also identifies that it has different needs not specified within the table, it could still be delivered. It is noted that it may not be provided through Council but rather through innovative methods that are supported by Council such as mobile libraries or community run centres or via private investment.

Furthermore, it is noted that it is often the qualitative measures such as maintenance of facilities and the services offered that influences how many people use the service. For instance, until recently the Toongabbie Mechanics' Institute did not have heating installed which made it unsuitable for use in winter.

5.2.3 SOCIAL INFRASTRUCTURE CAPACITY

A comprehensive audit of facilities in Toongabbie has not been undertaken. The purpose of this report is to consider whether there is enough land available for the services to either continue to operate or if needed, to be able to establish in Toongabbie. Two key pieces of social infrastructure have been considered in this discussion of capacity, including:

- Toongabbie Primary School
- Toongabbie Cemetery

Toongabbie Primary School

The primary school currently has 54 students. Enrollments at the primary school have stay constant despite the growth in population that Toongabbie has experienced. Locals have stated that they preferred the education model at schools such as Glengarry Primary School over Toongabbie and have stated that the school does not hold activities to engage the local community.

The Department of Education and Training was contacted in regards to enrollment capacity, they are yet to respond. However, due to the relative space that the school has to expand within its grounds and the steady number of enrollments, it is anticipated that the school has enough land to cater towards future growth.

Toongabbie Cemetery

Toongabbie Cemetery currently has capacity for 1500 internments within the gated area, it has further land capacity for another 1500 internments.

As such, the Toongabbie Cemetery Trust have said that there is enough land at the cemetery for the next 100 years. Environmental values have not been considered in that calculation.

5.2.4 RECOMMENDATIONS

Latrobe City to conduct a further analysis and undertake further community consultation into the need for childcare facilities in Toongabbie.

5.3 Recreation Needs Analysis

Toongabbie is well provided for already with public open space. Like most small towns in Latrobe City, Toongabbie's open space and recreation facilities are mostly on crown land.

5.3.1 ACTIVE OPEN SPACES

There are two existing large active recreation reserves:

Toongabbie Recreation Reserve

It is home to cricket, equestrian and golf clubs. The Toongabbie Recreation Reserve also has a skate park (small as it is), Toongabbie Men's Shed and two tennis courts (no tennis club anymore), clubrooms and a large gymnasium/hall. These grounds and facilities are open to and used by a number of other groups such as the Toongabbie Playgroup.

Village Green

It is a small boutique oval, and a quaint, heritage listed grandstand. This is utilised for junior cricket only as the oval is small.

5.3.2 PASSIVE OPEN SPACES

In Victoria street, there is a local level play space, which Latrobe City Council upgraded 2 years ago, which provides for the town.

The other significant recreation asset is the Gippsland Plains Rail Trail and the adjoining reserves (all crown land).

The Gippsland Plains Rail Trail is managed through a crown land appointed Committee of Management. The Gippsland Plains Rail Trail plays a role in increasing tourism within the town through the inter-regional connection between Traralgon and Maffra.

There are three other passive open spaces, including the Toongabbie Water Reserve, Toongabbie Wetlands and the Mavis Whateley Reserve which is outside the study area.

Toongabbie serves as a gateway to other open spaces such as the Cowwarr Weir and the high country.

5.3.3 PARTICIPATION

Participation determines the need for recreation facilities, in line with the *Public Open Space Strategy 2013*. Participation in the sporting groups in Toongabbie is small, with only 52 participants in cricket in 2018 and less than that with golf and equestrian.

5.3.4 MAINTENANCE OF RESERVES

The quality of the two reserves - Toongabbie Recreation Reserve and the Village Green is an ongoing problem. The reserves are managed by a crown land appointed Committee of Management.

Latrobe City Council provides an annual maintenance grant for the ongoing maintenance of sporting infrastructure at the reserves, however this is proving insufficient to maintain assets which are now ageing and deteriorating at a faster pace than the committee can fix them. Latrobe City Council reconstructed the tennis courts in 2013 so they are in very good condition. However, they no longer have an active tennis club. Council also funded and constructed the half pipe skate park in 2010.

Of recent times, the committee have advocated strongly to Council to fund the renewal of their cricket club pavilion roof and ground improvements, such as drainage and irrigation.

No funding for these projects has been forthcoming, largely because there is no demand for these facilities in terms of the level of participation.

The Gippsland Plains Rail Trail Committee also receive an annual maintenance grant from Latrobe City Council for the portion of the trail that sits within the Latrobe City Council municipality. Wellington provides the Committee with funds as well. This committee suffers from the same issues as the Toongabbie Recreation Reserve Committee. They have a large asset to maintain (67 kilometres) on a small budget. The Rail Trail is in good condition, but they rely upon sourcing significant grants to subsidise the annual maintenance grants that they receive.

A number of additional maintenance works are undertaken through the small town minor capital works programs and additional state funding such as the Drought Community Program which has seen the Toongabbie Recreation Reserve receive funding for an upgrade to entrance and carpark as well as the Toongabbie Mechanics' Institute receive funding for heating.

5.3.5 PROVISION OF OPEN SPACE

In terms of demand, if the density of Toongabbie were to increase, there would be a need for local level parks and play space(s) to support this increase, but at the moment there is no demonstrated demand for additional infrastructure.

The *Public Open Space Strategy 2013* identified that the rural townships of Latrobe City have the highest amount of open space per population.

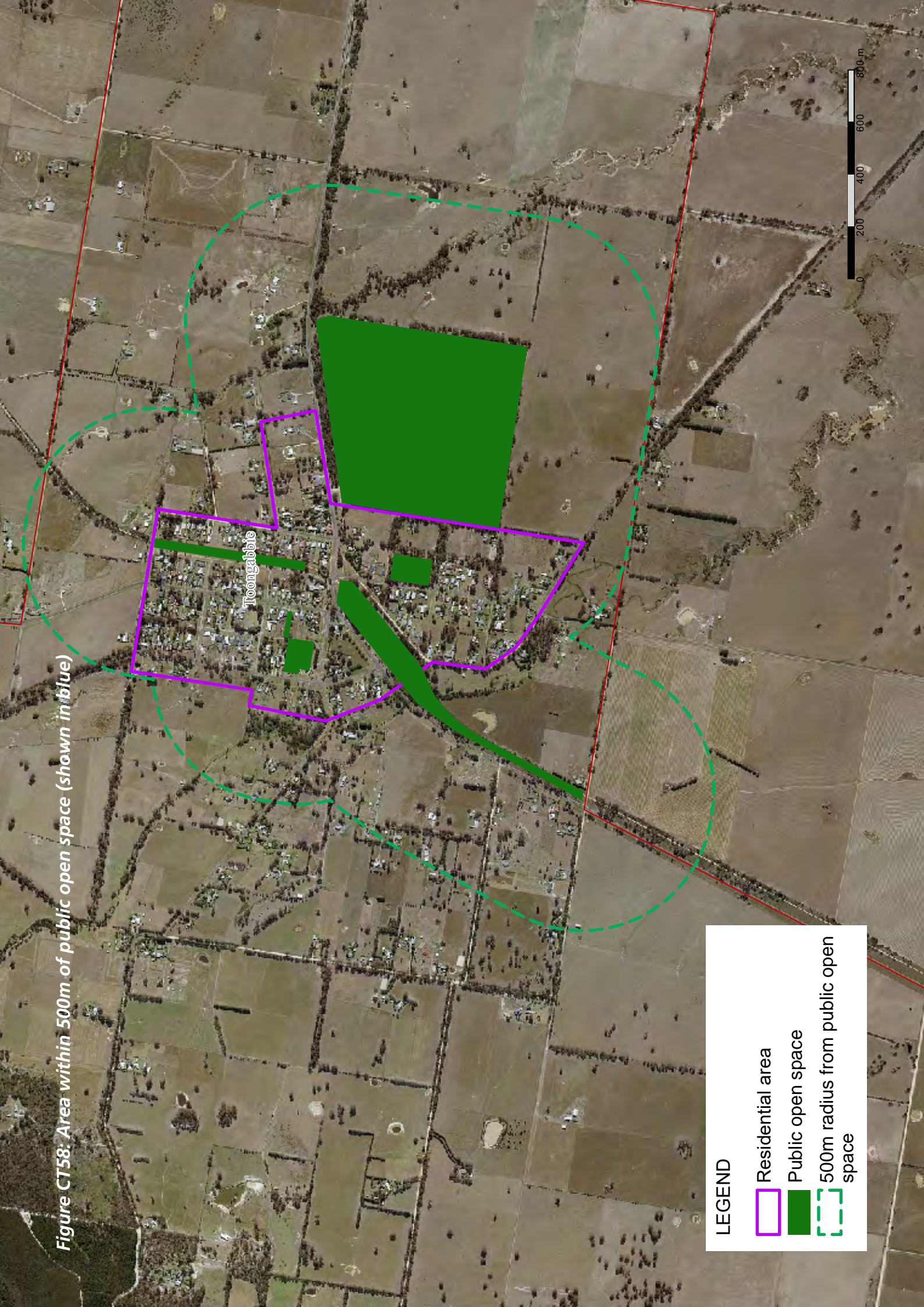
It identifies that 0.5Ha of open space should be provided within a 500 metre radius, this 500

catchment is shown in Figure CT58.




A total of 63.63 hectares of public open space is provided in Toongabbie or 38.17% of the land within the township boundary including the golf course. It is 20.27 hectares of public open space or 12.16% without the golf course included as public open space.

As such, Toongabbie has more than the recommended provision of public open space.

Figure CT58: Area within 500m of public open space (shown in blue)



LEGEND

-  Residential area
-  Public open space
-  500m radius from public open space

6

Recommendations



6.1 Recommendations

The recommendations for residential and rural residential zoned land in Toongabbie are as follows:

6.1.1 LAND SUPPLY AND DEMAND

1. There is enough land to support infill development within Toongabbie over the next 20 years providing that further subdivision can occur on the larger parcels.
2. There is a need to allow residents to age in place through the provision of smaller parcels, close to the shop and public transport. The General Residential Zone - Schedule 4 which allows for incremental change could be applied to lots that are not affected by the Heritage Overlay or flood overlays. Consideration should be given to lots that are only partially in the flood overlays (as the only constraint) and whether further subdivision would be supported.
3. Given the lot density in Toongabbie and the sewer capacity, the larger lots in the Toongabbie urban area should be rezoned to LDRZ unless subject to flooding constraints and cannot support septic. This would allow for continued growth within the town and cater to the demand for LDRZ.
4. Provision for Low Density Residential land should be made on the Toongabbie Structure Plan to allow for future growth. This is likely to be to the east of the township between Sparks Lane and Rosedale Creek, south of Hill Street, to Traralgon-Maffra Road for a first stage future release.
5. Any future urban expansion should be LDRZ unless the sewer system is substantially upgraded.
6. Rezone up between 58 Hectares of land to RLZ at a minimum subdivision size of 2 Hectares as there is an inadequate supply of rural residential land to meet forecast demand

over the next 20 years

6.1.2 ECONOMIC ACTIVITY

The recommendations for economic activity in Toongabbie are as follows:

7. Review Township Zone provisions and policy provision that enable the continued growth of the commercial area.
8. Support home-based businesses through the continued advocacy for improvements to the telecommunications infrastructure and through access to business development and expansion opportunities.
9. Diversify the tourism offering by supporting the Toongabbie Township Group in the development of an event that captures a greater share of the visitor market.

6.1.3 SOCIAL INFRASTRUCTURE AND RECREATION NEEDS

The recommendations for social infrastructure and recreation needs in Toongabbie are as follows:

10. Latrobe City to conduct a further analysis and undertake further community consultation into the need for childcare facilities in Toongabbie.
11. Continue to support the Committee of Management in maintaining community recreation assets.

7

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8

Appendices



Appendix 1

Planning Policy Framework

A.1 Planning Policy Framework

The following information outlines relevant objectives and strategies for the Toongabbie Structure Plan.

A.1.1 IMPLEMENTATION

The purpose of PPF is as follows:

Clause 71.02-3 – Integrated Decision Making

Planning authorities and responsible authorities must integrate policies and balance conflicting objectives in planning and decision making. The operation of the PPF has been amended to ensure that the protection of human life is prioritised over all other policy considerations in areas subject to bushfire risk.

Clause 21.01 Municipal Profile

The Strategic Framework Plan (shown in Figure CT-A1) represents the interdependencies between existing land use and development patterns, settlement hierarchy, extent of infrastructure, environmental assets and hazards. The framework plan advocates for future growth commensurate with access to services, infrastructure, transport, natural resource management and the acknowledgement of environmental risks and hazards.

Key elements of the Strategic Framework Plan for Toongabbie include:

- Settlement Hierarchy anticipating likely growth.
- Implementation of Town Structure Plans.
- Promotion of Rural Living precincts as an attractive lifestyle choice.

Toongabbie is shown as a 'small town' where growth is supported.

A.1.2 SETTLEMENT

Clause 11 Settlement

Planning is to anticipate and respond to the needs of existing and future communities through provision of zoned and serviced land for housing, employment, recreation and open space, commercial and community facilities and infrastructure.

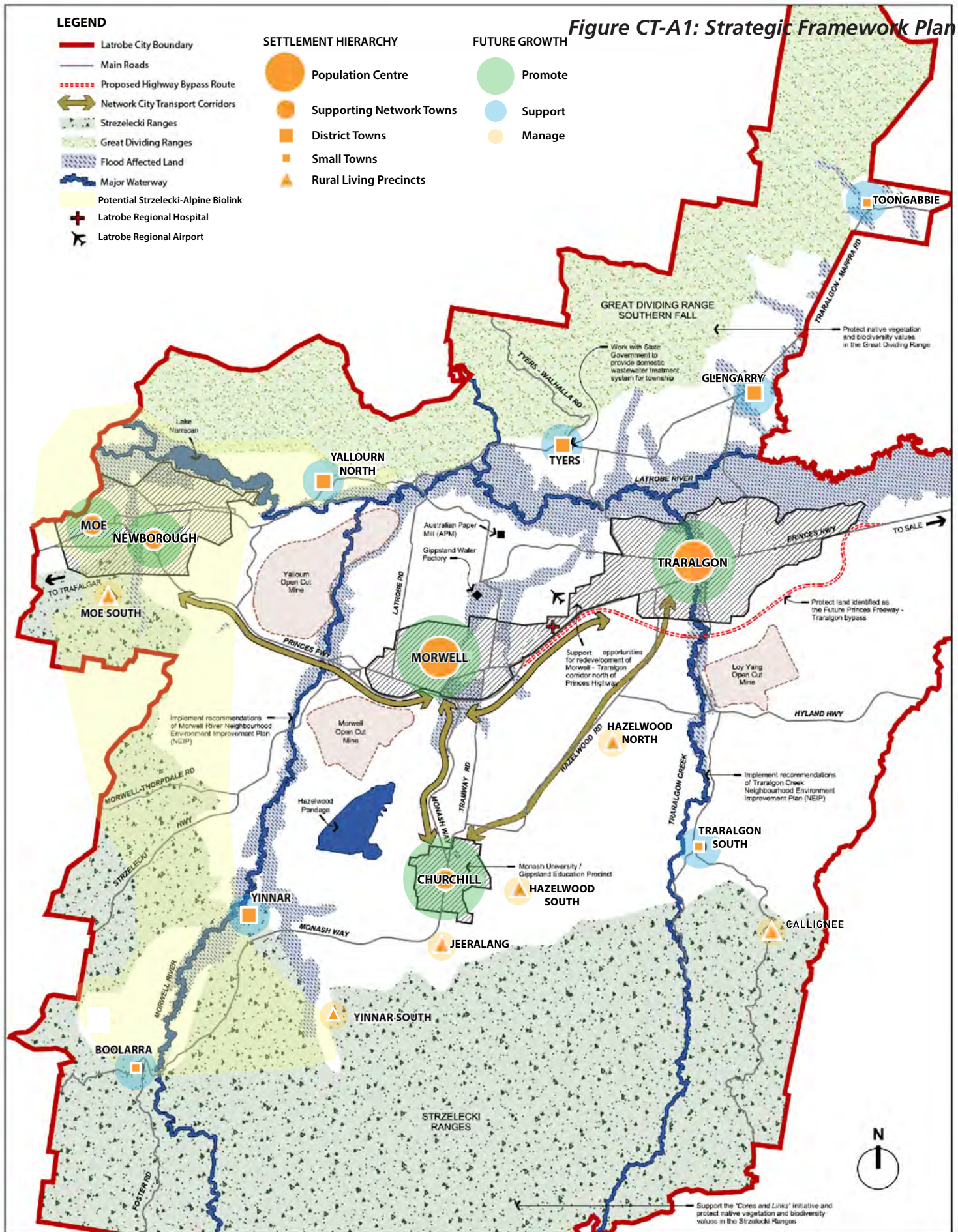
Planning should seek to support the role and function of each centre in the context of its classification, the policies for housing intensification, and development of the public transport network.

Planning is to prevent environmental problems created by siting incompatible land uses.

Planning is to ensure there is an adequate supply of residentially zoned land, to take in account and environmental and landscape risks, create a strong sense of place and identity, maximise use of infrastructure and accessibility to facilities and services, monitor service limitations and the cost of infrastructure, capitalise on the opportunities for urban renewal, infill redevelopment and intensification, consider neighbourhood character, improve access by walking, cycling and public transport to services and facilities and ensuring land required for future residential land is not compromised. Specifically, planning seeks to support the continuing role of towns and small settlements in providing services to their districts, recognising their relationships and dependencies with larger towns by considering the distinctive characteristics and needs of regional and local places in planning for future land use and development.

Relevant clauses include:
Clause 11.01-1S Settlement

Figure CT-A1: Strategic Framework Plan



LATROBE PLANNING SCHEME - LOCAL PROVISION

Clause 11.01R Settlement - Gippsland
 Clause 11.02-1S Supply of Urban Land
 Clause 11.02-2 Structure Planning
 Clause 11.03-1S Activity Centres
 Clause 11.07 Regional and Local Places

Clause 21.02 Housing and Settlement Settlement

Support growth in Boolarra, Toongabbie and Traralgon South as small towns providing a limited range of educational, retail and recreation services, for residents and the community in the surrounding rural areas.

Strategies

- Consider the Municipal Domestic Wastewater Management Plan 2006 and sewerage and water authorities infrastructure plans when assessing new subdivision and development in unsewered areas.

Activity Centres

Toongabbie's commercial area is defined as a Local Activity Centre (LAC) which is defined as "small centres containing individual shops which commonly provide local convenience food shopping, take away food, personal services and have access to public transport. Kindergartens, open space and other more localised community uses may also be provided in such centres."

Strategies

- Increase access to retail, convenience goods and services by encouraging increased residential housing choice within and around Primary, Neighbourhood and Local Activity Centres to strengthen existing centres.
- Encourage strong pedestrian and public transport connectivity to and between all activity centres.
- Encourage all retail outlets to provide active street frontages, including low level

advertising signage to street frontages and minimising blank walls to street facades, to promote active and passive surveillance of the public realm.

- Support walkable spaces in retail areas that are in close proximity to community centres, schools, public transport, civic areas and parks.

Clause 21.09 Local Areas

District and Small Towns

To facilitate development in settlements in accordance with Structure Plans to preserve their unique attributes, valued by their communities.

Strategies

- Retain, promote and preserve the rural atmosphere and residential service centre role of District and Small Towns.
- Encourage urban infill and diversification of housing choice within 200 metres of established Local and Neighbourhood Activity Centres as outlined by the Housing Framework Plans.
- Encourage residential allotment sizes that respect the character of District and Small Towns.
- Provide a visually attractive urban environment and enhance town entrances.
- Encourage commercial development opportunities in and around town centres.
- Encourage well-designed development that responds to local site conditions with regard to character, environmental and heritage values and existing community infrastructure.

A.1.3 ENVIRONMENTAL AND LANDSCAPE VALUES

Clause 12 Environmental and Landscape Values

Planning seeks to protect and enhance the landscape character and biodiversity assets by



ensuring that decision making takes into account the impacts of land use and development on Victoria's biodiversity. This must be considered when applying bushfire protection measures and bushfire planning strategies at the settlement and site scale.

Furthermore, it seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation, protecting environmental, cultural and landscape values of all water bodies and wetlands. Ensure development responds to and respects the significant environmental, conservation, cultural, aesthetic, open space, recreation and tourism assets of water bodies and wetlands.

Planning seeks to improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas. It aims to ensure important natural features are protected and enhanced.

Relevant clauses include:

Clause 12.01-1S - Protection of Biodiversity

Clause 12.01-2S Native Vegetation Management

Clause 12.03-1S River Corridors, Waterways, Lakes and Wetlands

Clause 12.05-2S Landscapes

Clause 21.03 Environment and Landscape Values ***Sustainability, Significant Environments and Landscapes, and Biodiversity***

To identify, maintain and enhance natural ecosystems and biodiversity values within rural and urban areas.

To protect indigenous flora and fauna species and their habitat across the municipality

To increase the extent and quality of indigenous

vegetation and biodiversity across the municipality.

To protect and enhance the visual, natural and cultural heritage values of rural landscapes.

Support the retention and enhancement of habitat and biodiversity values.

Strategies

- Protect all environmental assets as a first priority, enhance as a second priority, and consider replacement as a last resort.
- Encourage the protection of remnant indigenous vegetation.
- Enhance the condition and quantity of indigenous vegetation and biolink connections.
- Encourage the protection of indigenous fauna species and their habitat on land with an emphasis on protecting threatened species.
- Maintain the natural asset value of Council reserves and road reserves.
- Encourage the development of wildlife corridors and links across the municipality.
- Ensure that development protects and enhances the key landscape features of Latrobe City.
- Improve the retention of native vegetation in the landscape on roadsides, waterways and public and private land to facilitate healthy habitats to improve biodiversity.
- Strengthen biodiversity conservation in both rural and urban landscapes and across all land tenures.
- Ensure that the enhancement of biodiversity outcomes, including the establishment of a potential biodiversity corridor, considers bushfire risk and does not pose an unacceptable increase in risk to community and infrastructure.

A.1.4 ENVIRONMENTAL RISKS AND AMENITY

Clause 13 Environmental Risks and Amenity

Planning seeks to:

- Consider the risks associated with climate change in planning and management decision making processes.
 - Integrate strategic land use planning with emergency management decision making.
 - Direct population growth and development to low risk locations.
 - Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.
 - Ensure planning controls allow for risk mitigation or risk adaptation strategies to be implemented.
 - Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.
- flood waters is not compromised.
 - Discourage subdivision, other than realignment or consolidation, in a floodway.
 - Discourage dwellings, other than replacement dwellings, in a floodway.
 - Require dwellings to be located above the 1:100 year flood level.
 - Require building envelopes for dwellings provide an adequate effluent disposal area which is free from flooding.
 - Ensure that the natural function of the floodplain to convey and store flood waters is preserved.
 - Discourage developments in residential areas that encroach on 1:100 year floodplains or existing waterways.

Relevant Clauses include:

Clause 13.01-15 Natural Hazards and Climate Change

Clause 13.02-15 Bushfire

Clause 13.03-15 Floodplain Management

Clause 13.04-15 Contaminated and Potentially Contaminated Land

Clause 21.04 Environmental Risks

Floodplains

To minimise the potential for loss of life, risk to health and damage to property, as a result of flooding.

Strategies

- Discourage urban or rural residential development on areas subject to regular flooding.
- Ensure the floodway is maintained and that the free passage and temporary storage of

Bushfire

To minimise the risk to life, property and the environment from bushfire.

Strategies

- Ensure the design, siting and layout of subdivision increases protection from fire.
- Require that use and development includes adequate fire protection measures.
- Ensure the application of, and compliance with, the Bushfire Management Overlay (BMO), in highest risk parts of the municipality.
- Outside of the BMO, in Bushfire Prone Areas (BPA) parts of the municipality:
- Ensure new development and uses are appropriately located and designed in response to the bushfire hazard.
- Ensure that larger or more vulnerable developments and uses as identified at Clause 13.02, incorporate measures to acceptably mitigate any identified bushfire risk, including as appropriate:
 - Assessment of the landscape risk;
 - For subdivisions of more than 10 lots, a

lot layout that responds to the risk and incorporates a perimeter road and two ways in and out of the development where possible;

- A construction standard no higher than BAL-29 unless there are significant siting constraints, with commensurate vegetation management for defensible space;
 - A reliable water supply for property protection and fire fighting;
 - Adequate access for emergency management vehicles; and
 - Development of a Bushfire Emergency Management Plan (BEMP) as appropriate, including triggers for closure or restricted operation on days of elevated fire danger.
- Ensure alignment of, and consistency between, planning policy and practices, and the Latrobe City Municipal Fire Management Plan.

A.1.5 AGRICULTURE

Clause 14 Agriculture

Planning seeks to protect productive farmland which is of strategic significance in the local or regional context. It aims to do this by protecting productive land and irrigation assets including the Macalister Irrigation District; encouraging sustainable agricultural land use; supporting effective agricultural production and processing infrastructure, rural industry and farm-related retailing and assist genuine farming enterprises to adjust flexibly to market changes; facilitating the establishment, management and harvesting of plantations and discouraging incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed

Relevant clause include:

Clause 14.01-1S Protection of Agricultural Land
Clause 14.01-1R Protection of Agricultural Land - Gippsland

Clause 14.01-2S Sustainable Agricultural Land Use

Clause 14.01-3S Forestry and Timber Production

Clause 14.02-2S Water Quality

Clause 21.05 Natural Resource Management Agriculture

To protect productive agricultural land from fragmentation and the establishment of non-agricultural use and development.

Strategies

- Support productive agricultural land use whilst ensuring the retention of significant vegetation of Local, State or National importance to biodiversity.
- Avoid subdivision or development of dwellings on land in the Farming Zone Schedule 1 -
- Commercial Agriculture, where the proposal does not support agriculture use.
- Avoid non-agricultural uses from locating or developing in a manner that will inhibit the expansion or operation of future farming, forestry or other primary production uses.
- Support land uses that complement and enhance the viability of agricultural activity, including value adding to agricultural activity either by on-farm processes, agricultural product processing or farm gate sales or related tourism.
- Support complementary land uses, tourism and associated dwellings where non agricultural activities can adequately address bushfire risk.

Water

To protect and improve water quality and river health.

To protect waterways, aquatic areas, floodplains, wetlands, swamps and catchments.

To protect riparian land, vegetation communities, waterway valleys and escarpments.

Strategies

- Provide urban development buffers to waterways to maintain water quality.
- Maintain community wetlands and infrastructure (such as gross pollutant traps) in urban areas.
- Protect, enhance and reinstate environmental values of the waterway.
- Encourage connectivity of waterways to open space and other natural environment and landscape features.
- Protect and enhance waterway corridors through use of good urban design, appropriate built form, water sensitive urban design, appropriate plantings and land management.

Stone Resources

To protect significant stone resources and ensure an adequate supply of stone in future years.

Strategies

- Ensure the protection, development and use of stone resources.

The Toongabbie study area sits outside of the Extractive Industry Interest Area as shown in Figure CT-A2.

Clause 22.02 Rural Subdivision and Dwellings

This policy builds on and supports Clause 21.05-1 Agriculture to facilitate the following:

Retain larger lots and avoid the establishment of sensitive land uses within the Farming Zone – Schedule 1 in order to retain flexibility for current and future agriculture investment.

Provide direction for the use and development of land within the Farming Zone - Schedule 2 for the purpose of niche and mixed farming, tourism and hobby farms in locations compatible with existing infrastructure investment, biodiversity values, land holding patterns and adjacent land use.

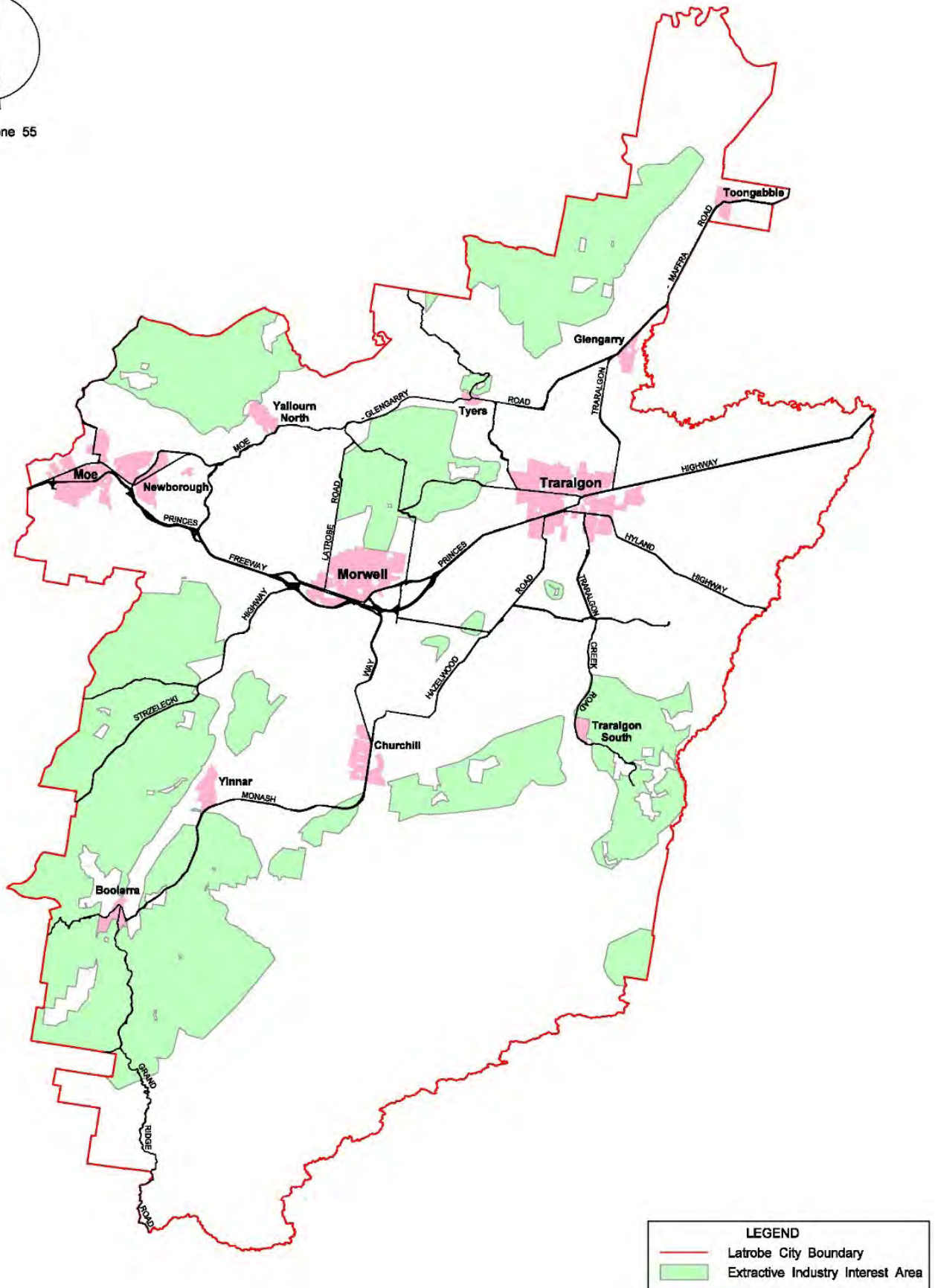
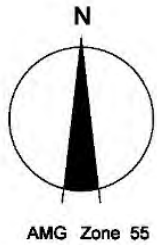
A.1.6 BUILT ENVIRONMENT AND HERITAGE

Clause 15 Built Environment and Heritage

Planning seeks to:

- Require development to respond to its context in terms of character, cultural identity, natural features, surrounding landscape and climate.
- Ensure that development provides landscaping that supports the amenity, attractiveness and safety of the public realm.
- Minimise the detrimental impact of development on neighbouring properties, the public realm and the natural environment.
- Ensure the form, scale, and appearance of development enhances the function and amenity of the public realm.
- Ensure development is designed to protect and enhance valued landmarks, views and vistas.
- Encourage development to retain existing vegetation.
- Design neighbourhoods that foster community interaction and make it easy for people of all ages and abilities to live healthy lifestyles and engage in regular physical activity
- Conveniently located public spaces for active recreation and leisure.
- Ensure development responds to cultural identity and contributes to existing or preferred neighbourhood character.
- Protect heritage values and built form that reflect community identity.
- Ensure that the siting, scale and appearance of development protects and enhances rural character.

Figure CT-A2: Extractive Industry Interest Areas



- Protect the visual amenity of valued rural landscapes and character areas along township approaches and sensitive tourist routes by ensuring new development is sympathetically located.
- Site and design development to minimise visual impacts on surrounding natural scenery and landscape features including ridgelines, hill tops, waterways, lakes and wetlands.
- Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.

Relevant clauses include:

Clause 15.01-1S Urban Design

Clause 15.01-1S Building Design

Clause 15.01-4S Healthy Neighbourhoods

Clause 15.01-5S Neighbourhood Character

Clause 15.01-6S Design for Rural Areas

Clause 15.02-1S Energy and Resource Efficiency

Clause 15.03-1S Heritage Conservation

Clause 15.03-2S Aboriginal Cultural Heritage

Clause 21.06 Built Environment and Heritage

Urban Design and Neighbourhood Character

Reinforce the regional suburban character of Latrobe City's established and new neighbourhoods whilst responding to changing housing needs.

Strategies

- Facilitate and support the development of diverse and smaller housing types in preferred locations in accordance with the Housing Framework Plans, while retaining streetscape character and recognised heritage values.
- Facilitate the development of streetscapes of regional suburban character in Latrobe City, comprising built form that addresses public areas, wide streets, provision of generous front setbacks and space between dwellings.
- Support development that is practical, flexible and which meets the needs of people of

different ages and abilities without the need for major adaptation post construction.

- Encourage built form that supports and enhances passive surveillance.
- Ensure new dwellings have good access to pedestrian and cycle paths.
- Ensure that urban design and landscaping improves the visual amenity of gateways, transport routes, streets and places.
- Ensure that multi-unit housing is well landscaped, with tree and shrub selection creating a positive visual image.
- In residential areas, ensure there is adequate scope for canopy tree planting in private properties and within street reservations.

Heritage

To identify, recognise and protect places of heritage, cultural and social significance.

Strategies

- Discourage demolition of heritage assets, unless net community benefit can be demonstrated.
- Ensure that additions, alterations and replacement buildings are sympathetic to the heritage area and surrounds.
- Ensure that the management of heritage places will reveal rather than diminish the significance of the place.
- Ensure that the use and development of heritage places and adjoining land is compatible with and does not adversely affect the significance of the place.

Township Identity

To protect and enhance the unique landscape qualities and features that contribute to places in the urban and rural character of the municipality, and which give the different localities in the City their own identity.



Strategies

- Ensure that new development maintains and enhances the character of the surrounding area.
- Improve the amenity of neighbouring areas and seek to enhance the built form design.
- Encourage the retention of intact, older buildings and features that contribute to the character of the area.
- Integrate buildings and landscape settings with open space and the environs.

A.1.7 HOUSING

Clause 16 Housing

Planning seeks to:

- Increase the supply of housing in existing urban areas by facilitating increased housing yield in appropriate locations, including under-utilised urban land.
- Ensure that an appropriate quantity, quality and type of housing is provided, including aged care facilities and other housing suitable for older people, supported accommodation for people with disability, rooming houses, student accommodation and social housing.
- Ensure housing developments are integrated with infrastructure and services, whether they are located in existing suburbs, growth areas or regional towns.
- Encourage higher density housing development on sites that are well located in relation to jobs, services and public transport.
- Ensure housing stock matches changing demand by widening housing choice.
- Improve housing affordability
- Manage development in rural areas to protect agriculture and avoid inappropriate rural residential development.
- Demonstrate need and identify locations for rural residential development through a housing and settlement strategy.
- Encourage consolidation of existing isolated

small lots in rural zones.

- Ensure land is only zoned for rural residential development where it:
 - Is located close to existing towns and urban centres, but not in areas that will be required for fully serviced urban development.
 - Can be supplied with electricity, water and good quality road access.

Relevant clauses include:

Clause 16.01-1S Integrated Housing

Clause 16.01-2S Location of Residential Development

Clause 16.01-3S Housing Diversity

Clause 16.01-4S Housing Affordability

Clause 16.01-5S Rural Residential Development

Clause 16.01-7S Residential Aged Care Facilities

Clause 21.02 Housing and Settlement Housing

Housing change areas as identified in the Housing Framework Plans that are relevant to Toongabbie include Incremental, Limited and Minimal Change. Incremental is not currently identified on the Toongabbie Housing Framework Plan as shown in Figure CT-A3.

Incremental Change Areas

Encourage higher density housing in the form of townhouses, units and dual occupancies, appropriate to the surrounding context.

Strategies

- Support new medium density development that provides a sensitive and appropriate interface with adjoining streetscapes, buildings and residential areas.
- Facilitate the development of streetscape character that contains private gardens in front yards, space between buildings, views to

local landmarks and natural shade.

Limited Change Areas

Encourage housing growth which reinforces the spacious regional suburban character of established and developing residential areas.

Strategies

- Reinforce the spacious regional suburban character of existing and developing residential neighbourhoods by supporting the development of detached dwellings and dual occupancies only. If a lot is greater than 1500m² a greater density could be supported if that lot:
 - Is within 400m walking distance from a public transport network;
 - Meets the objectives and requirements of the Zone, Housing Strategy and Urban Design Guidelines;
 - Is consistent with the average lot size or density development of the area within a 150m radius. Only lots within a residential zone should be considered and should exclude the subject site; and
 - Not constrained by an overlay which affects the development potential of the lot (heritage, bushfire or flooding overlay).
- Encourage the development of smaller and diverse housing types, including units and townhouses, within 200 metres of existing or planned Neighbourhood and Local Activity Centres and where good access to public transport is provided.
- Discourage units or townhouses beyond 200 metres from an existing or planned Neighbourhood Activity Centre or Local Activity Centre, except on Strategic Development Sites.

Minimal Change Areas

Preserve and enhance the significant

environmental, heritage or neighbourhood character attributes through minimal housing growth and change.

Strategies

- Promote minimal change, in the form of detached houses and dual occupancies, in locations with special or distinct character attributes, such as heritage value, identified neighbourhood character values, environmental or amenity value or infrastructure limitations.
- Maintain the generous front and side setback character of identified locations and encourage the retention and provision of vegetated areas including canopy trees and large garden spaces.
- Ensure building siting and massing responds to the topography of the area and that hard surfaces occupy a low proportion of the site area.

Rural Living

To identify and support rural living and associated land use within appropriate locations.

Strategies

- Encourage rural living where there will be minimal or no negative environmental impact or conflict with commercial agriculture.
- Support rural living where it can be demonstrated that improved land management outcomes will result.
- Discourage rural living where there is substantial risk to life and property.
- Encourage facilities and services required by rural residents to locate in existing townships.
- Discourage further rural living or low density residential development on the fringes of the major towns where land is designated as a long-term urban growth corridor.
- Encourage animal keeping facilities or animal

Housing Framework Plan

TOONGABBIE

Figure CT-A3: Toongabbie Housing Framework Plan



production uses in rural living areas only where the proposal is of low intensity, and is able to be undertaken in accordance with relevant codes of practice, environmental standards and guidelines (including noise).

- Discourage new rural living zone areas on existing timber haulage routes to avoid road safety and amenity issues.
- Support rural living in lower bushfire risk locations or where bushfire risk can be reduced to an acceptable level.

A.1.8 ECONOMIC DEVELOPMENT

Clause 17 Economic Development

Planning seeks to:

Facilitate growth in a range of employment sectors, including health, education, retail, tourism, knowledge industries and professional and technical services based on the emerging and existing strengths of each region.

Support rural economies to grow and diversify

Provide new convenience shopping facilities to provide for the needs of the local population in new residential areas and within, or immediately adjacent to, existing commercial centres.

Promote tourism facilities that preserve, are compatible with and build on the assets and qualities of surrounding activities and attractions.

Support nature-based tourism proposals that complement and are compatible with the region's environment and landscape attractions or are close to identified strategic tourism investment areas.

Relevant clauses include:

Clause 17.01-1S Diversified Economy

Clause 17.02-1S Business

Clause 17.04-1S Facilitating Tourism

Clause 17.04-1R Tourism - Gippsland

Clause 21.07 Economic Development

Economic Growth

To facilitate a vibrant and dynamic economic environment that will grow and diversify employment opportunities.

Strategies

- Provide adequate land for industrial and commercial growth.
- Ensure industrial and commercial development is of the highest quality particularly at the interface with residential land and at key township gateway locations.

Tourism

To encourage environmentally sustainable tourism opportunities and establish a point-of-difference in tourism product.

Strategies

- Ensure the use and development of land for tourism does not conflict with primary production activities such as agriculture, extractive industry and forestry.
- Encourage commercial tourist development to locate within the urban areas and support opportunities for small-scale and low impact rural tourism, accommodation and related activities in rural areas.

Clause 22.03 Rural Tourism

This policy builds on and supports Clause 21.05-1 Agriculture and Clause 21.07-7 Tourism, to facilitate the following:

Land uses that complement and enhance the viability of agricultural activity through small scale rural based tourism.

The development of low impact rural tourism and related activities within the Farming Zone where it is consistent with settlement patterns, landscape, amenity and environmental values.

A.1.9 TRANSPORT

Clause 18 Transport

Planning should:

- Encourage the use of walking and cycling by creating environments that are safe and attractive and develop high quality pedestrian environments that are accessible to footpath-bound vehicles such as wheelchairs, prams and scooters.
- Plan for bus services to meet the need for local travel.
- Make better use of roads for all road users through the provision of wider footpaths, bicycle lanes, transit lanes (for buses and taxis) and specific freight routes.

Relevant clauses include:

Clause 18.02-1S Sustainable Personal Transport

Clause 18.02-2S Public Transport

Clause 18.02-3S Road System

Clause 21.08 Transport and Infrastructure *Integrated Transport Networks*

To increase and maximise public transport opportunities between large and small towns and within corridors to support the networked city.

Strategies

- Provide for an integrated, safe and efficient transport network.
- Implement the adopted Latrobe City Bicycle Plan 2007-2010 and Tracks, Trails and Paths Strategy (2016).
- Ensure that walking and cycling infrastructure is incorporated into the design and development of all new neighbourhoods.
- Ensure new residential estates include a bicycle network linking with the principal bike routes.
- Ensure connectivity of local streets and open spaces to link with employment, retailing, education, transport and community facilities.

- Facilitate a functional, safe and efficient rural roads system that supports the maintenance of the rural character as well as meeting the demands of both rural industry and rural residents.
- Provide for the safe storage of bicycles at all public destinations such as town centres and railway stations.

A.1.10 INFRASTRUCTURE

Clause 19 Infrastructure

Planning should consider demographic trends, existing and future demand requirements and the integration of facilities into communities in planning for the location of education and early childhood facilities.

Planning should seek to:

- Locate childcare, kindergarten and primary school facilities to maximise access by public transport and safe walking and cycling routes.
- Ensure childcare, kindergarten and primary school facilities provide safe vehicular drop-off zones.
- Ensure streets and access ways adjoining education and early childhood facilities are designed to encourage safe bicycle and pedestrian access.
- Support innovative ways to maintain equitable service delivery to settlements that have limited or no capacity for further growth, or that experience population decline.
- Identify and protect land for cemeteries and crematoria.
- Ensure police, fire, ambulance and other emergency services are provided for in or near activity centres.
- Plan for regional and local open space networks for both recreation and conservation of natural and cultural environments.
- Create opportunities to enhance open space

- networks within and between settlements.
- Develop open space to maintain wildlife corridors and greenhouse sinks.
- Ensure public land immediately adjoining waterways and coastlines remains in public ownership.
- Plan and coordinate integrated water management, bringing together stormwater, wastewater, drainage, water supply, water treatment and re-use.
- Ensure that development protects and improves the health of water bodies including creeks, rivers, wetlands, estuaries and bays.
- Ensure that modern telecommunications facilities are widely accessible to business, industry and the community.

Relevant clauses include:

Clause 19.02-2S Education Facilities

Clause 19.02-4S Social and Cultural Infrastructure

Clause 19.02-5S Emergency Services

Clause 19.02-6S Open Space

Clause 19.03-4S Telecommunications

Clause 19.03-2S Infrastructure Design and Provision

Clause 19.03-3S Integrated Water Management

Clause 21.02 Housing and Settlement

Public Open Space

Strategies

- Encourage the development of linear reserves, habitat corridors and linkages between key open spaces, community destinations and employment precincts.
- Extend open space corridors along major waterways where existing or future open space linkages can be achieved.
- Encourage the provision of a well-connected open space system that extends from urban to rural areas and has both north-south and east-west linkages.
- Facilitate the expansion of cycling and

pedestrian networks within all towns in accordance with the Latrobe City Council Bicycle Plan 2017-2010 and the Trails, Tracks and Paths Strategy 2016.

- Encourage the development of open space linkages and improve connectivity to open space areas and destination points, within precincts and to connecting precincts.

Clause 21.08 Transport and Infrastructure

Community and Development Infrastructure

To promote physical activity and walkability in all towns by ensuring all dwellings are within close walking distance of a community centre.

To maximise the use of existing infrastructure.

Strategies

- Support appropriate recreation and community facilities that are compatible with the needs, character and socio-economic profile of the local area.
- Encourage the integration of roads, bike paths, footpaths and public transport options.
- Promote and support the infrastructure and development of small town communities.
- Ensure all proposed developments enhance the liveability and sustainability of the community.
- Support a diversity of streetscape outcomes and successful street tree planting.
- Require that all forms of urban development are connected to appropriate infrastructure including reticulated water, sewerage, telecommunications, and power and stormwater facilities.
- The Municipal Domestic Wastewater Management Plan 2006 and sewerage and water authorities infrastructure plans when assessing new subdivision and development in unsewered areas.

Appendix 2

Ministerial Directions, Planning Advisory Notes and
Planning Practice Notes

B.1 Ministerial Directions

The Minister for Planning issues directions to planning authorities about the preparation of planning schemes and amendments to planning schemes.

Planning authorities must consider all Ministerial directions when preparing a planning scheme or an amendment to a planning scheme.

B.1.1 MINISTERIAL DIRECTION - THE FORM AND CONTENT OF PLANNING SCHEMES

This Direction applies to the form and content of all planning schemes prepared under Part 3 of the Planning and Environment (Planning Schemes) Act 1996 and any amendment to those planning schemes.

Unless prepared and published from the Department of Environment, Land, Water and Planning amendment management platform, a planning scheme or planning scheme amendment must be prepared and presented in accordance with the style guide set out in Annexure 1 and written in plain English.

B.1.2 DIRECTION NO. 1 POTENTIALLY CONTAMINATED LAND

This direction applies to potentially contaminated land.

In preparing an amendment which would have the effect of allowing (whether or not subject to the grant of a permit) potentially contaminated land to be used for a sensitive use, agriculture or public open space, a planning authority must satisfy itself that the environmental conditions of that land are or will be suitable for that use.

In regards to Toongabbie, the only site that may be potentially contaminated is the Toongabbie

General Store as it has petrol tanks on site. It is currently zoned Township Zone which is a residential zone and any potential rezoning considerations would be to a commercial zone. However, while it removes sensitive uses as a section 1 use which does not require a planning permit, if it was redeveloped in the future, a Commercial 1 Zone would not trigger a permit for a shop. As such, consideration needs to be given to what this implies in regards to the potential contamination.

B.1.3 DIRECTION NO. 11 – STRATEGIC ASSESSMENTS OF AMENDMENTS

Minister's Direction No. 11 Strategic Assessment of Amendments requires a planning authority to evaluate and discuss how an amendment addresses a number of strategic considerations. What should be considered as part of the direction is explained in this practice note. The Strategic Assessment Guidelines provide a consistent framework for preparing and evaluating a proposed planning scheme amendment and its outcomes.

Under the Minister's Direction, not all amendments require an assessment against the strategic considerations. This practice note also outlines how some minor amendments only require a brief assessment against the strategic considerations.

Amendments that do require assessment should use the Strategic Assessment Guidelines in all stages of the amendment process and be evaluated against the strategic considerations.

B.1.4 DIRECTION NO. 15 – THE PLANNING SCHEME AMENDMENT PROCESS

The direction applies to the Minister for Planning, the Secretary of the Department of Planning and Community Development, a panel appointed under Part 8 of the Planning and Environment Act 1987 (Act) and all planning authorities in Victoria. The direction sets times for completing steps in the amendment process, including:

- Preparing an amendment after authorisation has been granted
- Pre-setting a date for a directions hearing and a panel hearing
- Giving notice of an amendment
- Considering submissions and requesting the appointment of a panel
- Commencement of the panel's functions (that is, a directions hearing, or if a directions hearing is not required, the panel hearing).
- A panel submitting its report to the planning authority
- The planning authority and the Minister making a decision on the amendment.

B.1.5 DIRECTION NO. 19 - THE PREPARATION AND CONTENT OF AMENDMENTS THAT MAY SIGNIFICANTLY IMPACT THE ENVIRONMENT, AMENITY AND HUMAN HEALTH

This ministerial direction consists of two parts - Part A and Part B.

The purpose of Part A is to require planning authorities to seek the views of the Environment Protection Authority (EPA) in the preparation of planning scheme reviews and amendments that could result in use or development of land that may result in significant impacts on the environment, amenity and human health due to pollution and waste.

This Direction applies to the review of planning schemes, preparation of planning scheme amendments and any strategies, policies, plans or reviews forming the strategic basis for a review or amendment, including precinct structure plans.

The purpose of Part B is to set out information required of planning authorities by the Minister under section 12(1)(f) of the Planning and Environment Act 1987 (Act) in respect of planning scheme amendments that could result in significant impacts on the environment, amenity and human health due to pollution and waste.

In applying to the Minister for authorisation to prepare a planning scheme amendment under sections 8A or 8B of the Act, or preparing a planning scheme amendment under section 9 of the Act, a municipal council, Minister or public authority must provide the following information to the Minister:

- The written views of the EPA, including any supporting information and reports; and
- A written explanation of how the proposed amendment addresses any issues or matters raised by the EPA.

B.2 Planning Advisory Notes

Planning Advisory notes provide point-in-time information about new initiatives, and changes to specific Victoria Planning Provisions and planning scheme provisions, processes and subjects. Advisory notes are not updated. This page provides a listing of all currently available Planning Advisory Notes.

Information in an advisory note should be read and understood in context with the specific planning initiative being implemented, only providing relevant information at the date of the advisory note. Planning Practice Notes provide ongoing departmental advice about relevant planning issues.

B.2.1 AN29: AMENDMENT VC66 REGIONAL BLUEPRINT

The government approved Ready For Tomorrow – a Blueprint for Regional and Rural Victoria (the Blueprint) in June 2010.

The Blueprint provides for rural and regional policy, strategies and programs to support and facilitate sustainable and prosperous communities and development in the regions of Victoria. The Blueprint introduces the Regional Victoria Settlement Framework and identifies the strategic placement of future urban growth.

A consistent projected population growth period of 15 years will apply across Victoria. Clause 14 provides reference to the State, regional and local context for decision making in growth locations.

Prioritising growth to identified centres recognises that not all towns and cities need to have the same level of urbanisation.

Urban land supply should be determined by the settlement planning principles and through

integrated precinct based planning. Regional planning should take into account the Regional Victoria Settlement Framework.

B.2.2 AN68: BUSHFIRE STATE PLANNING POLICY VC140

In settlement planning, responsible authorities must:

- Not approve any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL- 12.5 rating under AS 3959-2009.
- Strategic plans under consideration, and not yet approved, that include development with a BAL 19 rating or greater must be adjusted to comply with BAL 12.5.

Additional bushfire hazard assessments and protection measures may be required to achieve this. While this may require additional resources, the protection of human life must be prioritised.

B.2.3 AN69: AMENDMENT VC143

This advisory note provides information about Amendment VC 143, which makes changes to the Victoria Planning Provisions (VPP) and all planning schemes to improve the operation of the residential zones.

The improvements change the definition and operation of the minimum garden area, including clarifying exemptions from the garden area requirement in the Neighbourhood Residential Zone and the General Residential Zone and introducing permit requirements for certain commercial land uses in the Residential Growth Zone.

B.3 Planning Practice Notes

The following practice notes applying directly to land in Toongabbie, other Planning Practice Notes that may apply to the writing of policy provisions have not been included in these descriptions.

B.3.1 PPN01: APPLYING THE HERITAGE OVERLAY

Identifies in what circumstances heritage overlays can be applied, what criterion a site must meet before being considered, what information must be included in the heritage citation, and how to draft a schedule to Clause 43.01.

Latrobe undertook a Heritage Study and subsequent amendment to apply the Heritage Overlay in 2010. A heritage precinct within Toongabbie was identified as HO79 in Schedule 1 to Clause 43.01. The heritage citation in the Latrobe City Heritage Study: Volume 3 2010 states:

The Toongabbie Township precinct comprises the historic core of the old town on either side of the former railway reserve. It includes a cluster of mid to late nineteenth century and some early twentieth century buildings around the triangular section created by King, Main and Cowen streets and around the northern end of Stringer Road.

B.3.2 PPN02: PUBLIC LAND ZONES

Public land is not defined in the VPP or the Planning and Environment Act 1987, but it is commonly accepted that public land comprises:

- Crown land;
- Land vested in or owned by a minister, government department, public authority or municipal council;
- Land otherwise used for a public purpose.

The Practice note identifies that a Public Use

Zone should be applied to public land owned or managed by a government department or public land manager, including national parks, state forests, coastal crown land and land reserved under the Crown Land (Reserves) Act 1978.

Toongabbie has the Public Use Zone Schedule 2, the Public Park and Recreation Zone and the Public Conservation and Resource Zone applied within the township bounds.

B.3.3 PPN07: VEGETATION PROTECTION IN URBAN AREAS

The Planning Practice Note indicates what the key issues are when assessing vegetation in urban areas, identifies how to develop a strategy to assess the vegetation and what constitutes significant vegetation.

This Planning Practice Note was utilised in assessing the flora and fauna in Toongabbie as a part of a technical assessment to inform directions for this report. Further consultation was undertaken with the community in what vegetation they aesthetically valued to complete the assessment.

B.3.4 PPN12: APPLYING FLOOD PROVISIONS IN PLANNING SCHEMES

Flood risk must be considered in planning decisions to avoid intensifying the impact of flooding through inappropriately located uses and developments. Areas affected by flooding should be identified on the planning scheme maps and appropriate controls on the use and development of land introduced through the use of the flood zone and overlays in the VPP. Local floodplain development plans should also be prepared and incorporated into the planning scheme to guide decision-making on applications for development on land in the flood zone or overlay.

Section 62(e) of the *Planning and Environment Act 1987* enables planning schemes to 'regulate or prohibit any use or development in hazardous areas, or areas likely to become hazardous'. As a result, planning schemes contain State planning policy for floodplain management requiring, among other things, that flood risk be considered in the preparation of planning schemes and in land use decisions.

The WGCMA identifies Toongabbie as a high risk area, the Flood Overlay and Land Subject to Inundation Overlay has been applied to land within the Toongabbie township. Updated mapping from WGCMA is proposed to be incorporated in the Latrobe Planning Scheme in 2020.

B.3.5 PPN23: APPLYING THE INCORPORATED PLAN AND DEVELOPMENT PLAN OVERLAY

The overlays have two purposes:

- To identify areas that require the planning of future use or development to be shown on a plan before a permit can be granted; and
- To exempt a planning permit application from notice and review if it is generally in accordance with an approved plan.

The overlays are used to:

- Require a plan to be prepared to coordinate proposed use or development, before a permit under the zone can be granted;
- Guide the content of the plan by specifying that it should contain particular requirements;
- Provide certainty about the nature of the proposed use or development;
- Remove notice requirements and third-party review rights from planning permit applications for proposals that conform to

plan requirements;

- Ensure that permits granted are in general conformity with the plan;
- Apply particular permit conditions that help to implement the plan; and
- Provide statutory force to plans.

Both overlays prevent the granting of permits under the zone before a plan has been approved, unless a schedule to the zone states that a permit may be granted. The purpose of this provision is to limit or allow consideration of use and development of the land until a plan has been prepared and ensure that future use and development of the land is carried out in accordance with that plan. The plan details the form and conditions that must be met by future use and development of the land.

A Development Plan Overlay may be applied to new rural living precincts.

B.3.6 PPN28: USING NEIGHBOURHOOD CHARACTER PROVISIONS IN PLANNING

One of the issues facing a planning authority is selecting the right neighbourhood character provision to give effect to its desired neighbourhood character outcomes. In a practical sense, this poses many questions about the appropriate selection and use of the neighbourhood character provisions. Selecting the appropriate neighbourhood character provision requires road testing against real life scenarios before a planning authority can be sure that it has made the right selection.

The Planning Practice Note was considered when assessing how the township character could be protected and enhanced and what the appropriate tools were.

B.3.7: PPN30: POTENTIALLY CONTAMINATED LAND

The planning system is the primary means for regulating land use and approving development and is an important mechanism for triggering the consideration of potentially contaminated land. The Planning and Environment Act 1987 requires a planning authority when preparing a planning scheme or planning scheme amendment to 'take into account any significant effects which it considers the scheme or amendment might have on the environment or which it considers the environment might have on any use or development envisaged in the scheme or amendment' (Section 12).

The Act also requires a responsible authority, before deciding on a planning permit application, to consider 'any significant effects which the responsible authority considers the use or development may have on the environment or which the responsible authority considers the environment may have on the use or development' (Section 60).

An assessment of the current or previous land uses of a site is an important step in the identification of potentially contaminated land.

The practice note provides a guide on what uses are considered as having a high, medium or low potential for land to be contaminated.

B.3.8 PPN37: RURAL RESIDENTIAL DEVELOPMENT

The zones usually applied to rural residential land are:

The Low Density Residential Zone (LDRZ) is a 'residential' zone. It specifies a lot size of at least

0.4 hectares in areas where reticulated sewerage is not connected or 0.2 hectares for each lot connected to reticulated sewerage. A different lot size can be specified in a schedule to the zone.

The Rural Living Zone (RLZ) is a 'rural' zone. It specifies a lot size of at least 2 hectares and provides opportunities for some rural uses to occur. A different lot size can be specified in a schedule to the zone.

These considerations mean that the following broad questions should be answered in sequence:

- **Strategy:** Does rural residential development align with the overall strategic planning of the municipality?
- **Housing need:** How much rural residential development is required to provide appropriate housing diversity and choice to meet housing needs?
- **Location:** Where should new rural residential development take place?
- **Subdivision and design:** Is the new rural residential development subdivided and designed in an attractive setting offering high amenity and efficient infrastructure?

Toongabbie Structure Plan has looked at both the LDRZ and RLZ to see if either zone is an appropriate response to the desired outcome and the land use constraints.

B.3.9 PPN42: APPLYING THE RURAL ZONES

The Planning Practice Note outlines the purpose of each rural zone, the main features of the zone and where the zone should be applied. The four applicable rural zones are summarised as

follows:

- Farming Zone – a zone that is strongly focussed on protecting and promoting farming and agriculture
- Rural Activity Zone – a mixed use rural zone that caters for farming and other compatible land uses
- Rural Conservation Zone – a conservation zone that caters for rural areas with special environmental characteristics
- Rural Living Zone – a zone that caters for residential use in a rural setting.

B.3.10 PPN43: UNDERSTANDING NEIGHBOURHOOD CHARACTER

The key to understanding character is being able to describe how the features of an area come together to give that area its own particular character. Breaking up character into discrete features and characteristics misses out on the relationships between these features and characteristics. Understanding how these relationships physically appear on the ground is usually the most important aspect in establishing the character of the area. The factors that may need to be considered include:

- The pattern of development of the neighbourhood (only for permit applications for two or more dwellings on a lot and residential buildings) including:
 - Topography;
 - Street block length;
 - Street alignment, type, and proportions;
 - Extent of rear gardens and private open space;
 - Landscaping and vegetation in the neighbourhood;
 - Patterns of use and occupation; and
 - Diversity of housing.

- The built form, scale and character of surrounding development including front fencing including:
 - Building mass and height;
 - Setbacks;
 - Space around properties and site coverage;
 - Car parking; and
 - Fences (style and height).
- Architectural and roof styles including:
 - Architectural rhythm of street;
 - Porches and verandahs;
 - Architectural consistency; and
 - Roof form.
- Any other notable features or characteristics of the neighbourhood.
 - Waterways;
 - Street trees;
 - Details of the footpath and street;
 - Landscaping and vegetation on private lots; and
 - Nearby historic buildings or features.

B.3.11 PPN45: THE ABORIGINAL HERITAGE ACT 2016 AND THE PLANNING PERMIT PROCESS

This practice note describes the key provisions of the Aboriginal Heritage Act 2006 (the Act), and how it interacts with the planning permit process.

A responsible authority must check whether a CHMP is required prior to determining a planning permit application, referred to as a statutory authorisation.

A request to rezone land does not trigger a requirement to prepare a CHMP. A preliminary cultural heritage assessment is strongly recommended at this stage to identify any relevant constraints and opportunities that may assist in the rezoning of land.

If a CHMP is required, the responsible authority

cannot issue a planning permit until it receives a copy of the approved CHMP (section 52(1) of the Act). A planning permit cannot be granted for an activity that is inconsistent with an approved CHMP (section 52(3) of the Act).

Responsible authorities may choose to include a note on the permit directing the proponent to the recommendations of the CHMP approved under the Act. This may be of assistance to proponents in identifying all compliance requirements for a project.

For Toongabbie, it is likely that a high impact activity is the most likely cause for a CHMP. High impact activities are specified in the Aboriginal Heritage Regulations 2007 (Part 2, Division 5), and generally include buildings and works that result in significant ground disturbance. The specified activities include, but are not limited to:

- Subdivisions of three or more lots;
- The construction of three or more dwellings;
- Constructing roads, bicycle and walking tracks over 100m in length;
- Activities that require an Earth Resource Authorisation; and
- Industrial developments.

If the proposed activity is not a listed high impact activity it does not trigger a CHMP.

B.3.12 PPN64: LOCAL PLANNING FOR BUSHFIRE PROTECTION

Bushfire should be considered wherever there is a bushfire hazard that may impact on planning objectives. This includes when preparing strategic plans and policies for settlements, towns and rural areas, when preparing planning scheme amendments and when considering development proposals. Considering bushfire as

part of strategic planning ensures that bushfire matters are identified and addressed early and facilitates strategies and directions which have bushfire considerations embedded within them. Engagement with the relevant fire authority on strategic planning is essential.

The Bushfire Management Overlay should not be used as the sole indicator of where bushfire matters need to be considered.

B.3.13 PPN84: APPLYING THE MINIMUM GARDEN REQUIREMENT

The minimum garden area requirement forms part of the Government's response to the recommendations of the Managing Residential Development Advisory Committee (July 2016). The minimum garden area requirement specifies the percentage of a lot that must be set aside to ensure the open garden character of suburbs is protected.

The minimum garden area requirement applies to land in the Neighbourhood Residential Zone and General Residential Zone and must be met when:

- Constructing or extending a dwelling or a residential building; or
- Subdividing land to create a vacant residential lot less than 400 square metres in area.

B.3.14 PPN90: PLANNING FOR HOUSING

Planning for housing change can provide certainty for the community about where change is likely to occur as well as what form it should take. To respond to state and regional planning policies and provide clear directions about where housing growth should occur, a planning authority will normally undertake some form of strategic planning to underpin the vision

and strategic directions set out in the Municipal Planning Strategy (the MPS).

This planning practice note recommends identifying housing change areas. In the case of Toongabbie, Limited and Minimal Change areas apply to the residentially zoned areas. Limited change is not defined in the planning practice note.

B.3.15 PPN91: USING THE RESIDENTIAL ZONES

This practice note states that there are five principles underpinning the application of the residential zones:

- Housing and neighbourhood character plans need to be consistent and align with one another when specifying preferred future housing and neighbourhood character outcomes for an area;
- All residential zones support and allow increased housing, unless special neighbourhood character, heritage, environmental or landscape attributes, or other constraints and hazards exist.
- The Residential Growth Zone promotes housing intensification in locations close to jobs, services and facilities serviced by public transport including activity centres.
- The General Residential Zone is a three-storey zone with a maximum building height of 11 metres.
- The density or number of dwellings on a lot cannot be restricted in the Neighbourhood Residential Zone unless special neighbourhood character, heritage, environmental or landscape attributes, or other constraints and hazards exist.

*Photo: Afternoon ride along Cowen Street.
Source: McKenzie, T., 2020.*



Figure CT-B1: Applying a zone to a change area

Zone	Special or constrained	Minimal	Incremental	Substantial
Low Density Residential Zone	✓	✓		
Mixed Use Zone			✓	✓
Township Zone		✓	✓	
Residential Growth Zone			✓	✓
General Residential Zone			✓	✓
Neighbourhood Residential Zone	✓	✓	✓	

Figure CT-B2: What is the best tool to using when seeking a particular height outcome?

Maximum building height	Best zone	Best height tool	Rationale
Less than 9m or 2 storeys	NRZ	Overlay	A maximum building height lower than the NRZ cannot be specified in a zone schedule. An overlay is required to recognise the special characteristics.
9m (2 storeys)	NRZ	NRZ	The zone mandates this maximum building height and storey control.
Greater than 9m (retain 2 storeys)	NRZ	NRZ schedule	The schedule to the zone enables a greater maximum building height to be specified while maintaining the 2-storey requirement.
11m (3 storeys)	GRZ	GRZ	The zone mandates this maximum building height and storey control.
Greater than 11m (retain 3 storeys)	GRZ	GRZ schedule	The schedule to the zone enables a greater maximum building height to be specified while maintaining the 3-storey requirement.
13.5m (4 storeys)	RGZ	RGZ schedule	The schedule to the zone forces the discretionary maximum building height to be mandatory.
Greater than 13.5m and greater than 4 storeys	RGZ	Overlay	Maximum building height requirements along with other specific design and built form requirements should be included in an overlay so all built form requirements are included in the one provision.

DRAFT

Latrobe*City*

Infrastructure and Servicing Assessment

Toongabbie Structure Plan

Background Report



<i>Name</i>	<i>No.</i>	<i>PM Approved</i>	<i>PD Approved</i>	<i>Date</i>
Draft Infrastructure and Servicing Assessment	1	TM	LD	22.12.19
Draft Infrastructure and Servicing Assessment	2	TM	LD	18.02.2020

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ACKNOWLEDGEMENTS

The Study Team recognises that the State of Victoria has an ancient and proud Aboriginal history and complex ownership and land stewardship systems stretching back many thousands of years. We would like to acknowledge the Traditional Owners of this land, and offer our respect to the past and present Elders, and through them to all Aboriginal and Torres Strait Islander People.

Executive Summary

Latrobe City Council has prepared a servicing and infrastructure assessment for the Toongabbie township and surrounding areas, as identified in the study area on page 13 of the *Toongabbie Structure Plan Background Reports 2020*.

This report aims to inform the Toongabbie Structure Plan by identifying any infrastructure constraints that would inhibit any potential growth, as well as to identify any gaps that can improve the liveability of Toongabbie residents. The assessment aims to:

- Review the current road, water, sewer, drainage, electricity, gas and telecommunications extent and capacity;
- Review any relevant literature;
- Explore future infrastructure needs for each of these services; and
- Identify any constraints that will impact on future population growth.

This assessment will inform the potential zoning requirements, as well as identifying further advocacy or internal capital works that need to be undertaken. It will provide recommendations to address any potential gaps identified, as well as policy directions for the Toongabbie Structure Plan.

The Infrastructure and Servicing Assessment was developed in consultation with:

- West Gippsland Catchment Management Authority (WGCMA);
- Gippsland Water;
- SP Ausnet;
- VicRoads;
- APA Gas – Servicing; and
- Infrastructure Division of Latrobe City Council

As a result of the consultation and site visits to

Toongabbie, key recommendations for Latrobe City Council include:

- Explore zones that can sustainably manage the infrastructure requirements for the town;
- Write a policy on requirements for road construction standards in small towns;
- Amend the addendum to the *Infrastructure Design Manual* on the road standards within small towns after undertaking consultation with the other small towns;
- Write a Toongabbie Sequencing Strategy that outlines where the priority upgrades for roads and footpaths will be and the timing of works;
- Work with Latrobe Valley Bus Lines to advocate for more bus services between Toongabbie and Traralgon; and
- Advocate for sustainable energy options within the town as reticulated services continue to experience a level of stress.
- Direct commercial growth to Cowen Street with the option to extend King Street through policy in the Latrobe Planning Scheme.

Key recommendations for Latrobe City Council to work with other servicing agencies include:

- Work with VicRoads to explore traffic calming measures on the entrances to streets off Traralgon-Maffra Road;
- Work with WGCMA and Gippsland Water to draft an integrated water management strategy for Toongabbie;
- Work with WGCMA on appropriate controls for dwellings in a flood-prone area for infill development within the town; and
- Work with Optus and Telstra to provide better mobile phone coverage for Toongabbie.



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1

Introduction

1.1 Purpose

The purpose of this report is to inform the development of the Toongabbie Structure Plan, by providing an overview of the existing traffic and transport conditions, and infrastructure provisions around and within Toongabbie and identifies opportunities and constraints which may influence the location and timing of future growth in Toongabbie.

1.2 Methodology

A desktop assessment was carried out which included:

- A review and analysis of VicRoads and Council traffic counts. This assessment was undertaken using Latrobe City Council's and VicRoads' traffic counts. These range from 2004 to 2018 depending on the street in question.
- A review of relevant strategies and documents including:
 - Victorian Floodplain Management Strategy;
 - Macalister Irrigation District 2030 - Southern Rural Water;
 - WGCMA Floodplain Management Strategy; and
 - Gippsland Water Sustainable Water Strategy.
- A review of relevant Council documents including:
 - Toongabbie Framework and Strategy Plan 2002;
 - Latrobe. Be In It. Tracks, Trails and Paths 2014; and
 - Bike Plan 2007.
- An assessment of the road network using mapping data;
- A site visit was undertaken 30 July 2018 and again on 29 August 2019; and
- Consultation with all relevant authorities on 8, 13 and 14 February 2019 including:
 - Council's City Assets - Infrastructure Planning team;
 - West Gippsland Catchment; Management Authority (WGCMA);
 - Gippsland Water;
 - Regional Roads Victoria (VicRoads);
 - SP Ausnet;
 - APA Gas; and
 - Telstra.

2

Strategy Review



2.1 Traffic and Transport Strategy Review

2.1.1 STRUCTURE PLANS FOR TOONGABBIE, YALLOURN NORTH, AND YINNAR 2002

The *Toongabbie Framework & Strategy Plan* was prepared on 6 September 2002, and includes the following objectives relevant to the transport and traffic review:

- Provide additional leisure pursuits for the youth of Toongabbie, develop a skateboard circuit and BMX track on the former railway land;
- Develop the Rail Trail as a major recreation area for cycling and camping;
- Discuss with VicRoads the installation of 50 km/h road speed signs at all township entries to Toongabbie, specific requirement exists in the vicinity of the primary school; and
- Improve access to the creek and develop it as a focal point feature.

Once a site visit was completed, it was apparent that none of these actions have been completed at this point in time. However, a skate park does exist at the Toongabbie Recreation Reserve.

2.1.2 TRACKS, TRAILS & PATHS STRATEGY – LATROBE. BE IN IT. 2016

Tracks, Trails and Paths builds upon the Bicycle Plan and highlights that the on road cycle paths along King Street, Victoria Street and Toongabbie-Cowwarr Road to complete a cycle route within town still needs to be implemented.

Signage could still be improved along with the speed limits and road crossings along Traralgon-Maffra Road.

However, it was noted that the Gippsland Plains Rail Trail provided good intra-town connectivity.

Figure IS1 highlights the existing and proposed bicycle routes. While Figure IS2 highlights the current footpath routes and the need for greater connectivity.

2.1.3 LATROBE CITY BICYCLE PLAN 2007-2010

The *Latrobe City Bicycle Plan 2007-2010* recommends the following actions:

Cowen Street

A shared trail should be constructed along the north side of Cowen Street to link the existing Victoria Street trail with the Village Green Cricket Ground located at the King Street intersection. This work has been completed.

Gippsland Plains Rail Trail

It is recommended that:

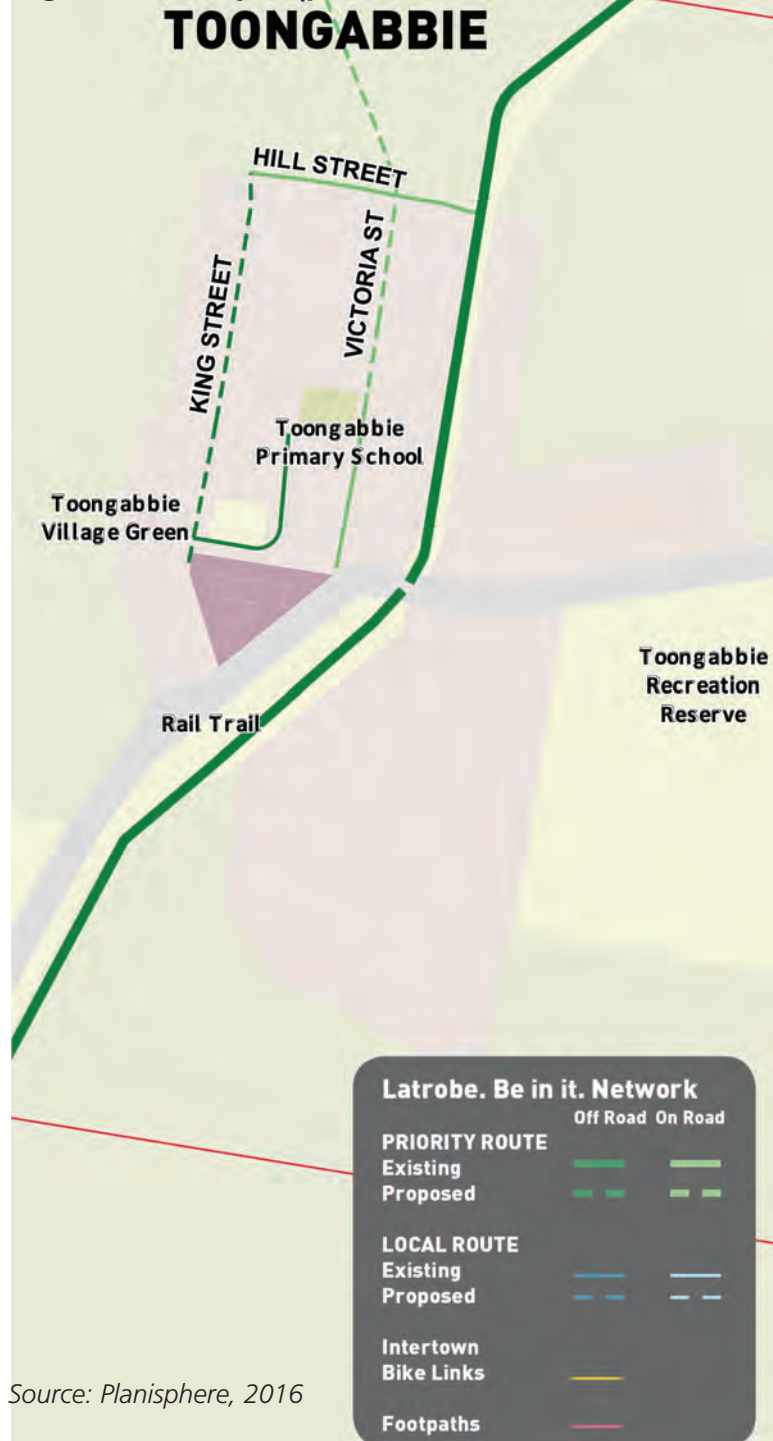
- Provide improved directional signage linking key features within Toongabbie including the general store and skate park;
- Install toilets, shelter and drinking water in close proximity to the former railway station;
- Provide distance signage advising of distances between towns; and
- Extend rail trail to cross Main Street creating a formal crossing and upgrade it to warn trail users of the road crossing ahead.

Of these the crossing has been formalised, and the toilets and drinking water have been installed.

Victoria Street/Cowwarr Weir Road

Facilitate improved cycling along this route north to Cowwarr Weir. It is recommended that the existing shared path should be extended further to the north along Victoria Street to Hill Street

Figure IS1: Bicycle Paths



Source: Planisphere, 2016

Figure IS2: Footpaths



Source: Planisphere, 2016

and that in the long term sealed shoulders should be provided along Cowwarr Weir Road connecting Toongabbie through to Cowwarr Weir. These could be provided when the existing seal is due for renewal. In the short term it is recommended that cyclist warning signs W6-V11 should be provided at 5km intervals along the route and at major intersections to indicate that it is commonly used by cyclists. This work has not been undertaken.

Scott Street Reservation

A formal shared path should be constructed and signed as a shared path through the reserve. This work has been completed.

End of Journey Facilities

It is recommended additional facilities at the main recreational area be provided on top of the existing facilities at the General Store. This work has not been undertaken.

King Street and Hill Street

Provision of a bicycle route along King and Hill Street would form a larger circuit around the town and provide access for adjacent residents to the school and recreational areas of the town. It is recommended that:

- A shared path be constructed along King Street between the Village Green and Hill Street.
- An on road cycle route to be constructed between King Street and the Gippsland Plains Rail Trail.

This work has not been undertaken.

NB: The Bicycle Plan 2007 is due to be updated in the 2020/2021 financial year.

2.1.4 INFRASTRUCTURE DESIGN MANUAL AND ADDEDUM

The *Infrastructure Design Manual* (IDM) was originally prepared by the Cities of Greater Bendigo and Greater Shepparton and the Shire of Campaspe. Their joint initiative was one which recognised the benefits of municipalities working together towards consistent requirements and standards for the design and development of Infrastructure.

Since the preparation of the Manual many other Councils have adopted the Manual. These Councils have formed the Local Government Infrastructure Design Association (LGIDA) which now owns and maintains the Manual. Latrobe City Council is one of these councils.

The IDM provides design standards for different road standards; rural drainage; retardation basins; on-site detention systems; stormwater discharge points; whole farm plans; landscaping and public open space; street tree spacing; associated infrastructure such as telecommunications, gas, water and sewer, emergency markers and electrical infrastructure; and public lighting.

Latrobe City also has an addendum to the IDM which allows for a wider street width than is currently allowed under the IDM standards, as well as allowances for variations in pavement thickness and variations to the urban drainage minimum pipe cover standard.



Photo: Victoria Street drain.
Source: McKenzie, T., 2019.



2.2 Water and Sewer Strategy Review

2.2.1 VICTORIAN FLOODPLAIN MANAGEMENT STRATEGY (VFMS)

The *Victorian Floodplain Management Strategy* states that “community resilience can be improved by using a mix of strategic and statutory planning tools. Land Use planning and building controls are generally more cost effective than flood mitigation infrastructure, flood warning systems, flood education programs or flood emergency responses.” It states that:

- Integrated water management provides an opportunity to manage urban flooding through stormwater and rainwater harvesting; and
- Reduced connection from impervious surfaces to drainage systems.

Clause 56 of the Latrobe Planning Scheme for Residential Subdivision and Clause 53.18 Stormwater Management in Urban Development ensure that planning implements these mitigation techniques.

Part 3 of the VFMS outlines ways to reduce the existing risk. These include:

- Construction of levees and flood ways;
- Changes to culvert arrangements;
- Debris clearance;
- Sediment removal; and
- Vegetation management.

2.2.2 GIPPSLAND WATER SUSTAINABLE WATER STRATEGY

In the *Gippsland Water Sustainable Water Strategy* it identifies the following as key objectives:

- Improving opportunities for trade;

- The Snowy River;
- Protecting Far East Gippsland’s pristine environment;
- Offshore oil and gas production;
- Managing Gippsland’s Lakes system;
- Storing water extracted from rivers;
- Better use of the Blue Rock Reservoir;
- Macalister Irrigation District;
- Improving reliability of urban supplies; and
- Protecting waterways and estuaries in South Gippsland.

It is important to consider how water is sustainably managed and how long-term residential growth impacts on the availability of water.

2.2.3 MACALISTER IRRIGATION DISTRICT (MID) 2030 – SOUTHERN RURAL WATER

Southern Rural Water is modernising the district through a combination of pipelining, channel automation and regulator upgrades that will improve availability and service for customers and provide 22,000 Megalitres (22 Gigalitres) of water savings to be made available for irrigation use within the district. Combined with unallocated water from the Latrobe, Thompson and Macalister river systems this presents opportunities for expansion of the MID. Southern Rural Water are currently undertaking assessment of suitable locations for expansion of the MID.

Areas of Latrobe City such as Toongabbie and Glengarry are being considered in the investigation.

2.2.4 WGCMA FLOODPLAIN MANAGEMENT STRATEGY (WGFMS)

Identification of threats to floodplains is critical in determining appropriate management responses. The key threats to floodplains in the region are:

- Development within floodplains which increases the flood risk to life and property;
- Extractive and other industries which can alter flood behaviour and damage environmental values such as water quality and river banks;
- Land clearing which can increase runoff and decrease the quality of water being received by waterways;
- Agricultural activities which can result in:
 - Land clearing;
 - Modification of land form and waterways;
 - Introduction of chemicals;
 - Loss of native habitat; and
 - Changes to groundwater.
- Changes to natural flow regimes via regulating structures;
- Floodplain management activities such as channel modification and construction of levees; and
- Climate change implications that can reduce rainfall overall, increase the severity of flood events and lead to rising sea levels.

Waterways are dynamic as they are acted on by complex geomorphological processes that alter their form and capacity over time. In general, waterways will meander more over time, which cuts into adjoining land, damaging property, buildings and roads. Bank erosion and changes in flow capacity can increase flooding on adjoining land. Integrated catchment management seeks to strike a balance between the socio-economic impacts of flooding and waterway health.

Urban stormwater flooding impacts a number

of towns in the region, usually resulting from inadequate drainage infrastructure and planning practices.

Stormwater flooding includes flooding due to inundation by local runoff caused by heavier than usual rainfall. Local Government Authorities (LGAs) are accountable for managing urban stormwater outside the Port Phillip and Westernport catchments. The improved management of urban stormwater flooding represents an integrated approach to the management of all forms of flooding, and results in resilient urban water systems that address the impacts of climate change, population growth and new development.

The Latrobe City municipality covers an area of approximately 1,400 square kilometres and is entirely contained within the West Gippsland catchment. It includes varying topography ranging from the steep hills of the Jeeralang and Strzelecki Ranges to flat plains of the Latrobe Valley. The majority of the region is agricultural land, with large pockets of eucalypt and pine plantations, residential areas, and industry, with the most significant being coal mining and electricity production. The municipality contains four major urban areas – Moe, Morwell, Traralgon and Churchill. Major rivers include the Latrobe, Tanjil, Tyers and Thompson Rivers.

Roads inundated during floods include the Princes Highway through eastern Morwell and Traralgon, and a large number of rural roads such as the Hyland Highway south of Traralgon, Glengarry West Road, Traralgon-Maffra Road and Traralgon Creek Road, that are near and/or cross waterways. Actions out of the *WGCMA Floodplain*

Management Strategy for flood mitigation actions to be implemented over the ten-year duration of the WGFMS within Latrobe City, subject to funding and feasibility, include:

1. Develop individual flood guides for high priority areas, specifically Morwell, Moe, Glengarry, Toongabbie and Traralgon.

2.2.5 MUNICIPAL DOMESTIC WASTEWATER MANAGEMENT PLAN (DWMP) 2019

The primary purpose of this DWMP is to:

- Identify, assess and manage cumulative risks of onsite domestic wastewater systems discharging waste beyond allotment boundaries;
- Engage with the EPA and Gippsland Water to identify existing unsewered allotments which do not retain wastewater on site or are not capable of preventing the discharge of wastewater beyond allotment boundaries, or preventing impacts on groundwater beneficial uses for inclusion in the domestic wastewater management plan; and
- Identify, cost, prioritise and evaluate options to:
 - Provide solutions to prevent discharge of wastewater beyond allotment boundaries;
 - Provide for the compliance assessment and enforcement of on-site domestic wastewater systems in accordance with the plan; and
 - Where applicable have regard to the Guidelines for Planning Permit Applications in Open, Potable Water Supply Catchments and any relevant guidelines authorised by the EPA.

Within the DWMP a risk assessment to assess the land capability and infrastructure capability was

undertaken.

For Toongabbie, there are lots to the east, south east and south west that have a high hazard rating. This is further discussed in Chapter 4.

2.2.6 OPTIONS FOR AN INNOVATIVE WASTEWATER MANAGEMENT SCHEME FOR TYERS

The strategy explores decentralised wastewater management options that may be applicable to Tyers which has a number of non-compliant septic tanks. A set of potential options for improved wastewater servicing has been developed for Tyers based on the outcomes of a risk assessment and using the decentralised wastewater management tools available. Consideration was also given to the economic capacity to implement improved servicing strategies in the area. An outline of potential options is presented along with concept plans and indicative costings for two preferred options of:

- Combination of on-site systems and a community wastewater scheme; or
- Whole town community wastewater system.

This document was reviewed as a management option for sewer constraints within Toongabbie. Sewer details are further discussed in Chapter 4.

There is no relevant literature that relate directly to Electricity, Gas and Telecommunications planning in Toongabbie.

3

Traffic and Transport



3.1 Objectives

The objectives for the traffic and transport assessment include:

- Considering road hierarchy implications and how that affects settlement growth;
- Identifying key access and movement corridors; and
- Identifying any gaps in traffic and transport infrastructure provisions that require further considerations.

3.2 Existing Conditions

3.2.1 ROAD NETWORK

The existing conditions within the study area are described in Appendix 1. In summary, the vast majority of streets within the study area are unsealed. However, the arterial, collector and main access roads are sealed. These include:

- Main Street (Traralgon-Maffra Road);
- Victoria Street (Traralgon-Cowwarr Road);
- King Street;
- Cowen Street; and
- Stringer Road.

A portion of Sparks Lane is also sealed. The rest of the streets are gravel. The northern section of Goodwin Street between Hazel and Hill Streets is not maintained, neither is Omeara Street which is used as an entrance to the Toongabbie Water Reserve.

There are a large number of road reserves that are not being used. Within town, these include:

- Ries Street;
- Semmens Street;
- Timmins Street; and
- Omeara Street.

Some of these road reserves have been fenced off so that they no longer act as thoroughfares. This is particularly evident on Semmens Street between Gadd and Hower Street. However, these road reserves would only be needed in the future if the blocks were subdivided in a way that required access from these streets. As, the zoning allows for further subdivision, it would be preferable to retain the road reserves for future access. However, the probability of needing these in the near future is relatively low due to the existing lot layout and the preferred size of the lot by Toongabbie residents. Road reserves that

adjoin the Gippsland Plains Rail Trail have not been included in this count due to the preference to limit road crossing across the trail.

Regional Roads Victoria support limiting road crossings of the Gippsland Plains Rail Trail. They state that additional crossings should be avoided and that consideration should be made to upgrade rail trail crossings to include raised safety platforms, line marking and relevant signage to ensure that use of the rail trail by pedestrian and cycling traffic has priority and is as safe as possible. This includes upgrades to the crossing across Traralgon-Maffra Road.

There are unmade reserves that may need to be further developed if future growth occurs in the area that are outside of the township boundary, these include:

- The east and west extensions of Hill Street;
- The northern extension of Page Lane;
- The southern continuation of Nippe Lane;
- The west extension of Hazel Street;
- The northern extension of Harris Lane and the maintenance of the southern section;
- The continuation of Guyatts Road between River Road and Hendersons Road; and
- Several unnamed road reserves between Heywood Street and Nippe Lane.

Regional Roads Victoria has advised that any rural living development facing onto Traralgon-Maffra Road would need to include a service road which could be incorporated into the development plan stage.

3.2.2 ROAD HIERARCHY

Figure IS3 shows the existing road hierarchy within the Toongabbie study area. This generally helps determine the width of the road, the

provision of cycle paths and speed limits. Road assets are classified on the following basis:

- Access Lanes;
- Access Place;
- Minor Access Street;
- Major Access Street;
- Collector Road; and
- Link Road.

The hierarchal classifications reflect the relative community importance of roads and enables Council to efficiently define an appropriate level of service to all roads in the network. The definitions for each are discussed in Table IS1.

It is very important in limiting any future traffic management problems that streets should be designed to meet their function and carry the volumes and limit vehicle speeds as specified in Table IS2. The following definitions apply in the classification of urban roads:

- Target speed is defined as the average speed of vehicles at the location within the street segment where vehicles travel at their highest speed. Each street segment being defined by the location at each end of an appropriate slow point to control vehicle speeds.
- Design speed means the speed used for the design of each element of a road.



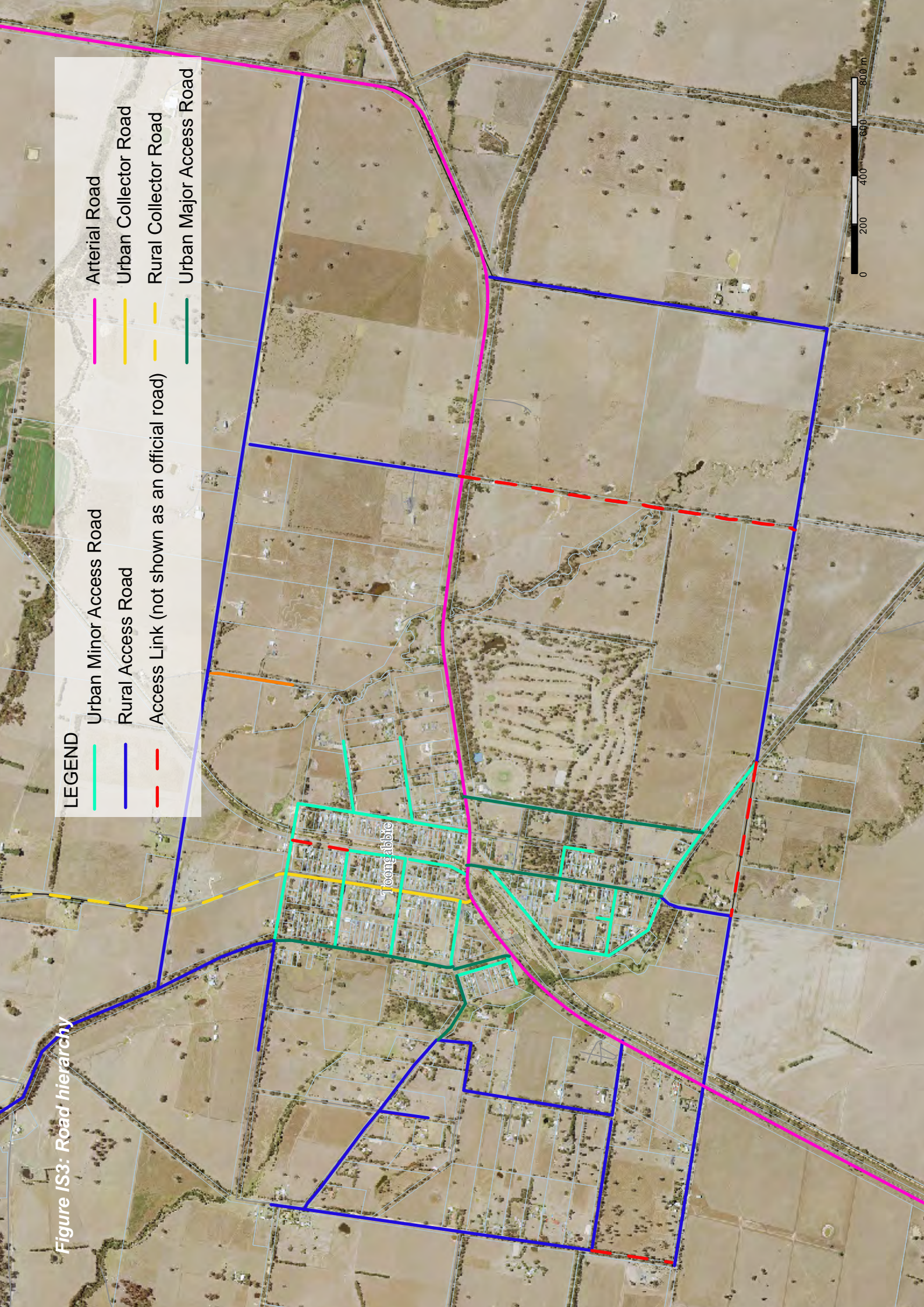
Table IS1: Road hierarchy

<i>Hierarchy Type</i>	<i>Description</i>
Access Lanes	A side or rear lane principally providing vehicle and pedestrian access to parking for lots with frontage to another street. Includes CBD lanes. Traffic volumes generally up to 200 vehicles per day.
Access Place	A minor street whose primary function is to provide local residential property access with shared traffic, pedestrian and recreation use of the road pavement. The maximum length of an access place is 100 m. Does not provide for any through traffic. Traffic volumes generally up to 200 vehicles per day.
Minor Access Street	A street providing local residential access where traffic is subservient to local amenity, vehicle speeds and volumes are low and pedestrian and bicycle movements are facilitated. Serves no external through traffic function. Traffic volumes generally up to 500 vehicles per day.
Major Access Street	A street providing local residential access where traffic is subservient to local amenity. Traffic volumes are permitted to a higher level and speed limit is set to the default urban limit of 50 km/hr. Serves no external through traffic function. Traffic volumes generally up to 2,000 vehicles per day.
Collector Road	Collects traffic from the access places and access streets and connects to an Arterial road or another Collector road. Should not provide an attractive alternate route for through traffic on Arterial roads. Services traffic generated only within the Local Traffic Area. Speed limit is generally at least 60 km/hr. Traffic volumes generally up to 6,000 vehicles per day.
Link Road	Where the road is not designated as a primary arterial (C road), but the main function is to provide for through movements by external traffic and the requirement for access to adjacent property is also important.

Table IS2: Road hierarchy design standards

<i>Classification</i>	<i>No. Of Dwellings Served</i>	<i>Vehicles per Day (number the design caters up to)</i>	<i>Target Speed (Km/h)</i>	<i>Design Speed (Km/h)</i>
Access Lane		200	15	N/A
Access Place	<=13 Max. length of 100m	200	15	N/A
Minor Access Street	<50	500	30	N/A
Major Access Street	<200	2000	40	N/A
Collector Road		6000	N/A	Speed limit of road
Link Road		10,000	N/A	Speed limit of road

Figure IS3: Road hierarchy



3.2.3 PUBLIC TRANSPORT

Service Provision

There are existing public transport services run by Vline (bus routes) along Traralgon-Maffra Road with the buses turning off onto King Street, with an existing stop on Cowen Street next to the General Store.

The bus connects between Traralgon and Sale via Maffra providing connections to Glengarry, Traralgon, Cowwarr, Heyfield, Tinamba, Maffra and Sale.

It currently runs three services a day in each direction. However, these do not coincide with work-times which means that the main commuting cohort cannot take public transport to work, it limits shift workers from using public transport, and provides limited services for the elderly and the disabled.

Separate school bus services are operated by Latrobe Valley Bus Lines. The school bus route is shown in Figure IS4.

Journey to Work

The Australian Bureau of Statistics (2016) indicates that 100 per cent of the journey to work was either as a driver or a passenger in a car. Public Transport has an opportunity to provide an alternative to this method of travel.

Service upgrades

Department of Transport (DoT - the overarching department that oversees Public Transport for Victoria and VicRoads) regularly review bus networks and services against forecast demand. This assessment will be considered as part of any potential future service uplift for the area.

Infrastructure requirements for new roads need to consider whether the route is required to be bus

capable or not.

NB: Bus capable routes need to connect to other bus capable routes or form a loop to facilitate bus access. Recent changes to passenger vehicle legislation now enables more community transport options, which may provide alternatives for the residents of Toongabbie to access services and events.

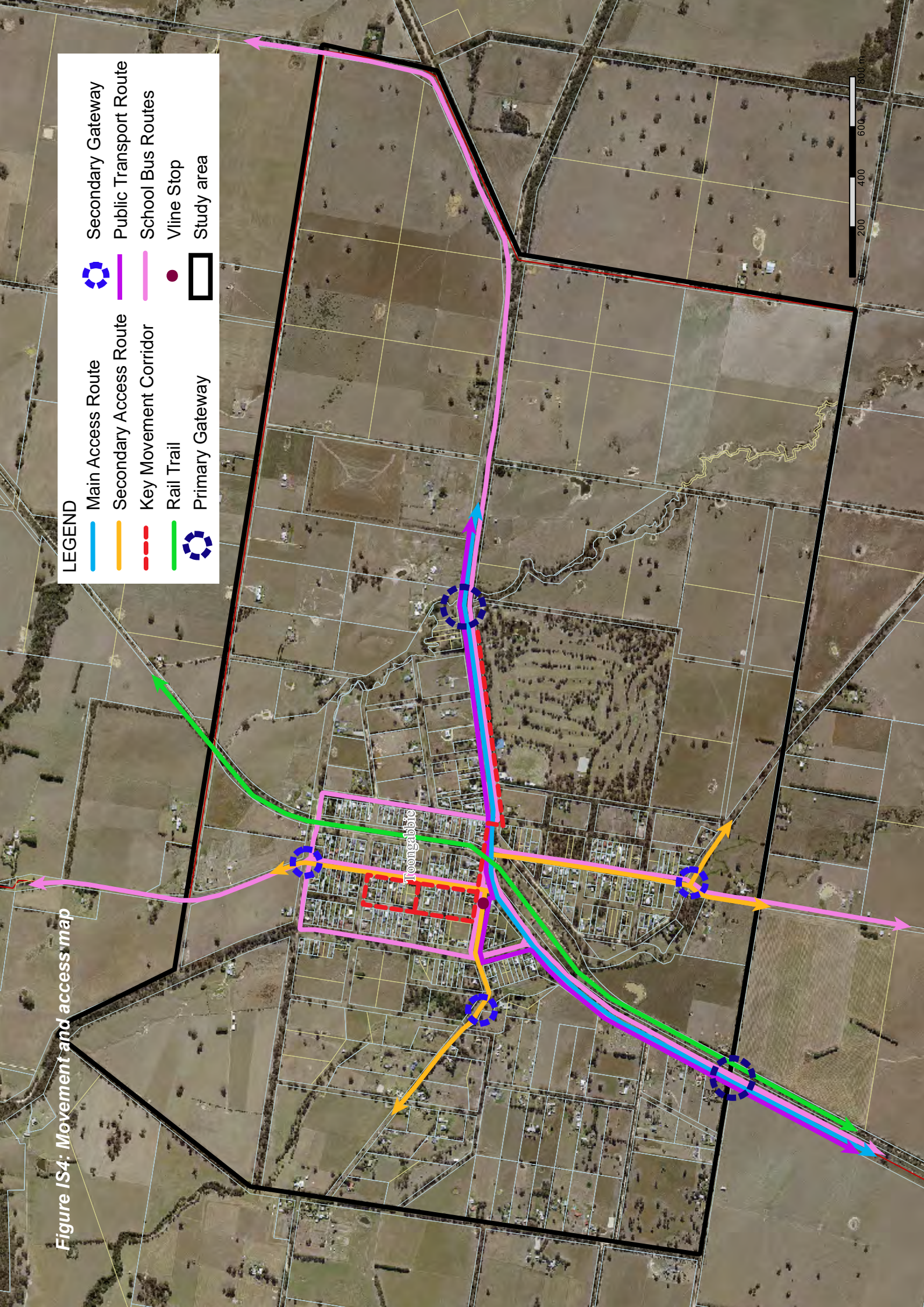
3.2.4 BICYCLE INFRASTRUCTURE

There is little bicycle infrastructure provided in Toongabbie. The Gippsland Plains Rail Trail provides good intra-town connectivity, however there are no on-road cycle paths and limited footpaths for bicycles to be ridden safely in town. There is a shared path between the Village Green and Hazel Street and between Victoria Street and the Toongabbie Recreation Reserve along Traralgon-Maffra Road however, this does cross the road at Goodwin Street.

While, *Tracks, Trails & Paths Strategy – Latrobe. Be in it. 2016*, indicates that there is an existing bicycle lane along Hill Street, during the site visit, no evidence was found of this.

DoT states that Toongabbie is well suited to active transport options and they supports initiatives to get more people using active transport. The *Victorian Cycling Strategy 2018-28* aims to get more people on bicycles through the provision of safer, low-stress, better connected networks. DoT supports the use of off-road infrastructure for the key linkages and are happy to work with Latrobe City Council as they update the bicycle plan in 2020/21 and identify and upgrade the path network in Toongabbie, building on the foundation provided by the Gippsland Plains Rail Trail as a key connector.

Figure IS4: Movement and access map



3.3 Road Management

Regional Roads Victoria is the authority responsible for arterial roads including Traralgon-Maffra Road which is shown as Road Zone Category 1 (RDZ1). All other roads are managed by Latrobe City Council. Roads that form part of the municipal boundary including Afflecks Road, Toongabbie-Cowwarr Road and Antons Lane have a shared maintenance responsibility with Wellington Shire Council.

According to the *Boundary Roads Agreement Wellington 2006*, Latrobe City Council is responsible for the maintenance of the boundary roads as outlined in Table IS3.

Table IS3: Shared boundaries road management

Road	Road Management Area
Guyatts Road	Intersection of Traralgon - Maffra Road & Guyatts Road, east to intersection of Guyatts Road & River Road
Guyatts Road East	Intersection of Guyatts Road & Hendersons Road, west to where the road terminates.
Guyatts Road East	Intersection of Guyatts Road East & Hendersons Road, east to intersection of Guyatts Road East & Antons Lane
Antons Lane	Intersection of Guyatts Road East & Antons Lane, north to intersection of Traralgon - Maffra Road & Antons Lane
Toongabbie-Cowwarr Road	Intersection of Toongabbie - Cowwarr Road & Afflecks Road, north to intersection of Toongabbie - Cowwarr Road & Sheila Court

Afflecks Road is managed by Wellington Shire

Council in the agreement. A table with full details is located in Appendix 2.

The City Assets division of Latrobe City Council has advised that as a condition of large subdivisions, Latrobe City Council requires that roads be upgraded, at the developer's cost, to a standard as outlined in the *Infrastructure Design Manual (as amended)* which usually involves the road being kerbed, sealed and channelled in urban areas. They have advised that work informing different standards for small towns has not been undertaken. This essentially means that new roads would be required to be sealed, kerbed and channelled. However, this would only apply if the subdivision layout needed new access points for lots. For example, if 52 Ries Street decided to subdivide the site into 10 lots and the access to half of those lots was onto the unmade road reserve for Ries Street, then that road would be required to be built to the same standard at the southern portion of Sparks Lane, as in sealed, kerbed and channelled. As this may not be the preferred rural character for Toongabbie which is discussed further in the draft *Consultation Report 2020*, further work may be required for a standard to be designed for small rural towns. The *Latrobe City Urban Design Guidelines Streetscape Guidelines* which describes the design standards is in Appendix 3.

3.3.1 ROAD MAINTENANCE

Initial consultation with the community highlighted that the potholes and lack of sealed roads is an issue for Toongabbie residents. As such, the maintenance of the roads has been explored in this section. This section does not directly relate to the Structure Planning process, however, as consultation highlighted that there was a concern with the road conditions and level of servicing this directly impacts the perceived

liveability. Should future development occur, the increase in traffic will contribute to the quicker deterioration of the road network which would further exacerbate community concerns. As such, it is important background information in considering new growth fronts and infill development.

There are seven road maintenance categories (RMC) and three footpath maintenance categories (FMC) as discussed in *Road Management Plan 2017 - 2021*. A separate hierarchy system has been established for the management of Council's pathways which include both footpaths and shared paths. Pathways are classified into:

- High Usage (FMC-H);
- Medium Usage (FMC-M); and
- Low Usage (FMC-L).

A brief description of each hierarchy class is detailed in Table IS4.

Road maintenance has the following

classifications:

- Link Road;
- Collector Road;
- Sealed Access road with a speed limit greater than 60 km/h and all unsealed Access Roads;
- Sealed Access Road with a speed limit less than or equal to 60 km/h
- Minor Access Road; and
- Limited Access Road.

This hierarchy differs from the road classification hierarchy and has a maintenance category (RMC) attached. The descriptions for each of these maintenance categories is described in Table IS5. The schedule for when maintenance is carried out for each category and the response time frames are shown in Appendix 4. Further details can be found in *Road Management Plan 2017 - 2021*. There are a number of areas along Traralgon-Maffra Road where who the responsible authority is for maintenance purposes is unclear and requires further investigation. These include the entrance to the Toongabbie General Store off Traralgon-Maffra Road as it sits within the road

Table IS4: Footpath maintenance categories

<i>Hierarchy Type</i>	<i>Footpath Maintenance Category (FMC)</i>	<i>Description</i>
High Usage	FMC-H	Central Business Districts of the following major townships including Moe-Newborough, Morwell, Churchill and Traralgon. Main streets of the townships of Boolarra, Glengarry, Toongabbie, Tyers, Yallourn North and Yinnar.
Medium Usage	FMC-M	Heavily pedestrianised areas: - minor shopping areas, collector paths and some shared bicycle/pedestrian paths.
Low Usage	FMC-L	Constructed paths in residential and commercial areas, and rural residential areas; including concrete, asphalt, and gravel paths.

reserve but does not form part of the arterial road, nor is it privately owned. The other is the informal parking at the front of the Toongabbie Recreation Reserve which sits in the road reserve but similarly does not form part of the arterial road and is not owned by the land manager.

Regional Roads Victoria has advised that under the *Road Management Act 2004 Code of Practice - Operational Responsibility for Public Roads*, Department of Transport is responsible for the through lanes and shoulders of Arterial Roads in urban areas. Department of Transport does

not have a maintenance responsibility for other formed areas of the road reserve not available for through traffic, such as parking areas.

Latrobe City Council and the landowner for the Toongabbie General Store are currently working to form a shared maintenance agreement.

Table IS5: Road maintenance categories

<i>Hierarchy Type</i>	<i>Road Maintenance Category (RMC)</i>	<i>Description</i>
Link	RMC1	<ul style="list-style-type: none"> • High usage strategic Freight linkage routes. • Heavy vehicle linkage from the State Arterial Road network to local commercial or industrial focal points. • Also includes heavy vehicle bypass routes of major urban centres.
Link Collector	RMC2	<ul style="list-style-type: none"> • High usage strategic Collector routes. • Rural/Urban collector routes from local access roads to community centres or popular focal points. • High usage connector routes to the Arterial road network.
Sealed Access >60km/h	RMC3a	<ul style="list-style-type: none"> • Medium usage property access routes. • Standard constructed road providing property access to rural developed areas incorporating at least 3 rateable properties with occupied houses. • Medium usage access to rural properties generating regular and consistent vehicle usage. • Bus Route minimum standard.
Unsealed Access	RMC3a	<ul style="list-style-type: none"> • Medium usage property access routes. • Standard constructed road providing property access to rural developed areas incorporating at least 3 rateable properties with occupied houses. • Medium usage access to rural properties generating regular and consistent vehicle usage. • Bus Route minimum standard.

<i>Hierarchy Type</i>	<i>Road Maintenance Category (RMC)</i>	<i>Description</i>
Sealed Access <60km/h	RMC3b	<ul style="list-style-type: none"> • Medium usage property access routes. • Standard constructed road providing property access to rural developed areas incorporating at least 3 rateable properties with occupied houses. • Medium usage access to rural properties generating regular and consistent vehicle usage. • Bus Route minimum standard.
Minor Access	RMC4	<ul style="list-style-type: none"> • Low usage property access routes. • Occasional usage property access routes. • Standard constructed road that provides access to rural developed areas incorporating 1 or 2 rateable properties with occupied houses. • Standard constructed road with 2 or more farmland or plantation rateable properties. • Non standard constructed road that provides access to rural developed areas incorporating at least 3 rateable properties with occupied houses.
Limited Access	RMC5	<ul style="list-style-type: none"> • Low usage property access route streets/lanes. • Occasional usage access to rural properties generating spasmodic vehicle usage. • Standard constructed road that provides alternate/ secondary side or rear property access to urban residential or commercial allotments. • Standard constructed road servicing a rateable property with a single unoccupied house on farmland/plantation. • Non standard constructed road that provides property access to rural developed areas incorporating up to 1 or 2 rateable properties with occupied houses. • Non standard constructed road with 2 or more farmland/ private rateable properties.

A meeting was held with the Latrobe City Council's City Assets team on 18 July 2019, at which it was established that if the community agreed to no kerbing along with the sealing of the roads throughout the town to protect the rural character that it could be possible to upgrade the unsealed roads within town over the next 10-15 years however, this is dependent on budget allocations and agreements with residents.

Under Council's private street construction scheme a principle of equity is adopted where owners of property along any particular street that is proposed to be upgraded are required to attribute a portion of the cost of the upgrade under a special contribution scheme. Council undertakes consultation on who in the street is willing to opt-in to the scheme and if a large enough percentage of homeowners are willing to contribute then a motion is presented to Council to undertake the upgrade. If the motion is adopted by Council then a second round of consultation is undertaken before proceeding.

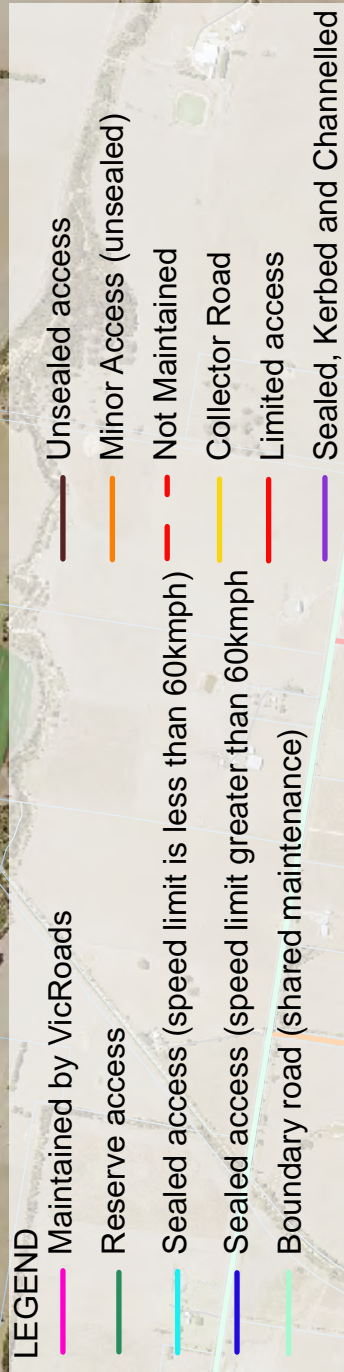
It was discussed how the cost of sealing, kerbing and channelling was much higher than only sealing the road and that meant it would likely mean a special charge scheme would be applied to all properties within the township and that it would likely take 50 or more years before the project would near completion due to the budget allocation each year for road projects. The cost difference in the two street profiles is largely due to the difference between adding material onto a road versus whether a road needs to be reconstructed. For example, a residential street may need down as the current state of the surface may need to be evened out.



Photo: Omeara Street between Ries Street and Heywood Street.

Source: McKenzie, T., 2019.

Figure IS5: Road maintenance hierarchy



3.4 Existing Traffic Conditions

3.4.1 TRAFFIC VOLUMES - TRARALGON MAFFRA ROAD

VicRoads has previously taken traffic counts between Glengarry and Toongabbie. The following terms are used in the extract below:

- Chainage - the distance along the road between which the traffic volume was recorded
- Location - the road and generally the nearest intersecting roads
- Direction - direction of traffic flow for which the volume applies
- LGA - the local government area of the location

The following abbreviations are used in the table below:

- NE BD – North East bound
- SW BD – South West bound
- CV – Commercial Vehicles including car and caravans, small trucks and heavy vehicles

Table IS6 is an extract from *VicRoads' Traffic Volume Info Feb 2017*.

The traffic volumes heading towards Toongabbie have increased by 70 movements on average per year over the 10 year period between 2006 and 2016, however, the average daily traffic count has remained steady at 1800 movements for the three years between 2014 and 2016. Which implies that there is a decline in traffic along this route. On average per year there is a population increase in traffic of one to two percent in Victoria, which would see a corresponding increase in traffic movements. If the traffic movements have not increased by this one to two percent and have remained steady then there is a slight decline in the population

of the surrounding area. However, there could be a number of factors that contribute to this which could include slow to moderate population growth, and/or the lack of commercial activity or industrial activity in the area. Commercial vehicles account for approximately 13 percent of the traffic movement in 2016 heading towards Toongabbie.

The traffic volumes heading towards Glengarry have increased on average by 60 movements per year over the ten year period. However, the traffic volumes increased by 100 movements between 2015 and 2016. Commercial vehicles account for 7 percent of all vehicle movements in 2016. Commercial Vehicle movements have not increased at the same rate as the average daily traffic.

Table IS6: VicRoads traffic counts

Chainage	Location	Direction	LGA	2006	2013	2014	2015	2016
9.09 Km - 16.17 Km	Traralgon-Maffra Road (Glengarry North)	NE BD	Latrobe	1,100* (130 CV)	1,600 (230 CV)	1,800 (120 CV)	1,800* (230 CV)	1,800* (240 CV)
44.36 Km - 51.44 Km	Traralgon-Maffra Road SW BD between Main Street & Glengarry North Road	SW BD	Latrobe	1,200* (120 CV)	1,600 (230 CV)	1,700 (120 CV)	1,700* (120 CV)	1,800* (130 CV)

Source: VicRoads, 2017.

3.4.2 TRAFFIC VOLUMES - LOCAL ROADS

Latrobe City Council has also undertaken its own traffic counts spanning between 2004 and 2017.

The following abbreviations have been used:

ADT – average daily traffic

%HV – the percentage of the average daily traffic that heavy vehicles account for

While the vehicle counts in Table IS7 do not provide an analysis of vehicle counts over time, it does show that the heaviest used streets are Victoria Street (including Toongabbie - Cowwarr Road) and Main Street (including Traralgon - Maffra Road) which highlights their status as a collector road and arterial road, with Sparks Lane following behind. Victoria Street also has the school on it which would account for the increased number of vehicles. There is no account as to why Sparks Lane has the third highest tally.

The other collector roads - King Street and Stringer Road do not have associated traffic counts.

The highest percentage of heavy vehicle usage occurs on Hill Street and Afflecks Road. However this is not indicative of the number of trucks using the road network when you compare numbers. Traralgon - Maffra Road would have the highest number of heavy vehicles counted with the average daily count approximately 129 vehicles. In comparison, Afflecks Road has approximately 4 heavy vehicles using it on average.

Table IS7: Latrobe City traffic counts

<i>Street Name</i>	<i>Location</i>	<i>Date</i>	<i>ADT</i>	<i>%HV</i>
Stewart Street	Between Scott St and Victoria St (40km/h zone)	June 2004	54	4
	Between Scott St and King St	June 2004	35	3
Hendersons Road	110m east of River Road	Oct 2004	95	5
Guyatts Road	100m east of Hendersons Road (gravel)	Nov 2006	11	2.7
	300m west of River Road (gravel)	Nov 2006	76	4.4
Hill Street	40m east of King Street (gravel)	Nov 2006	36	15
Traralgon - Maffra Road	Between Goodwin St and Stringer Rd (at school crossing)	Sept 2006	1846	7
	350m west of Antons Lane	Jan 2011	1830	8
Sparks Lane	60m north of Traralgon - Maffra Road	Nov 2008	247	4
Harris Lane	560m north of Guyatts Road (gravel)	April 2009	33	6
	900m north of Guyatts Road (gravel)	April 2009	32	6
	220m south of Humphreys Road (gravel)	April 2019	32	5
Afflecks Road	30m east of Toongabbie - Cowwarr Road (gravel)	Oct 2009	53	9
	40m west of Toongabbie - Cowwarr Road (gravel)	Oct 2009	17	24
Toongabbie-Cowwarr Rd	340m north of Sheila Court	Dec 2015	469	8
Wykes Road	170m east of Fox's Road	Aug 2016	32	5
Victoria Street	90m north of Cowen Street (opp # 6)	May 2016	844	10
	50m north of Stewart Street (opp #22)	May 2016	729	7
	60m north of Hazel Street (opp # 42)	May 2016	661	5
Nicholsons Road	100m north of Cemetery Rd (gravel)	Aug 2017	70	8

3.4.3 VEHICLE ACCIDENTS

There have been 3 recorded accidents between 2013 and 2018 in Toongabbie. These have occurred at the intersections of Afflecks Road and Toongabbie-Cowwarr Road, Goodwin Street and Traralgon-Maffra Road and King Street and Traralgon-Maffra Road. All of these accidents were between cars and were not fatal. It indicates that generally the streets are reasonably safe with very few accidents occurring and no locations in the study area reaching black spot or black length accident levels.

Black Spot Program

For individual sites such as intersections, mid-block or short road sections, there should be a history of at least three casualty crashes over a five-year period. For lengths of road, there should be an average of 0.2 casualty crashes per kilometre per annum over the length in question over five years.

The requirement of a history of crashes ensures that those sites that have a recurrent problem are targeted first for treatment.

The Black Spot Program also recognises that there are road locations that could be considered as 'accidents waiting to happen'. Therefore, some program funds may be used to treat sites where road traffic engineers have completed a Road Safety Audit and found that remedial work is necessary. This allows an opportunity for proactive safety works to be undertaken before casualties occur.

While it is seen as a fairly safe environment, the entrances to roads off Traralgon-Maffra Road, particularly Stringer Road, Goodwin Street and King Street were highlighted as issues by the community. As such, further consultation could

be undertaken with Regional Roads Victoria to improve the perceived safety of the area and implement traffic calming measures if needed.

DoT is open to exploring the options identified in this assessment such as traffic calming measures and speed zone changes.

3.5 Implications for Growth

DoT has advised that as communities grow they want through traffic, especially freight, to not go through the middle of town. Toongabbie currently has this type of scenario. This causes amenity and connectivity issues for the township. The urban development to the south of the Traralgon-Maffra Road is currently low density residential, and any future urban expansion will be significantly constrained by the flood overlay. DoT strongly recommend that all future urban and rural residential development be to the north and north-west of Traralgon-Maffra Road, creating a settlement like Glengarry. This would also keep the school and store accessible to the bulk of the population without having to cross the Arterial Road (Traralgon-Maffra Road).

DoT also advises that although Arterial Road frontage provides opportunities for retail and commercial development it also brings amenity and safety issues. In planning for the future of Toongabbie, there is the option of redirecting future community and commercial development away from the busy Arterial Road (Traralgon-Maffra Road) towards the quieter King & Cowen Streets. Cowen Street currently links the existing Toongabbie General Store and the Mechanics Institute and has a wide (60m) road reserve making it ideal for boulevard development linked with ample parking and village centre development. If it warranted it, a service road could also be provided on Cowen Street. The 60m road easements also provide excellent opportunities for shared paths, and active transport. Early planning can enable establishment of a preferred streetscape over time and allow trees to reach maturity. Redirecting the town centre away from the curve in Traralgon-Maffra Road also has the obvious added road safety benefits.



Photo: Harris Lane between Guyatts Road and Cemetery Road.

3.6 Issues and Opportunities

3.6.1 SUMMARY OF ISSUES

Toongabbie has a number of issues relating to transport and traffic which significantly contributes to the perceived liveability of Toongabbie. These include:

- The road standards not currently meeting the *Infrastructure Design Manual* design standards for a residential area. Only the roads that have speed limits of at least 60km/h have been sealed throughout the town, along with Cowen Street as it services a bus route. It is possible that applications for new development would be required to build new access streets to a standard that is not in keeping with the preferred rural character of Toongabbie;
- While Toongabbie has extensive road reserves, these have not been developed and as such contribute to the lack of permeability and connectivity;
- There are only three Vline services operating each way between Toongabbie and Sale and Toongabbie and Traralgon. In contrast, Boolarra, which has a similar population and is a similar distance from the nearest service centre, has 6 services a day each way operated by Latrobe Valley Bus Lines. The limited services mean that it is not easy for residents to move between towns without a car. However, there are school buses that operate.
- The school buses are using roads that are not sealed on some of the routes through town which is not preferable.
- The lack of footpath connectivity between the town's main facilities.
- The lack of connected bike paths.

3.6.2 OPPORTUNITIES

In terms of the road network, the most cost effective and plausible upgrade to unsealed streets is a sealed road, with no kerbing for the streets within the urban area. As there is no street profile for small towns. This work will need to be undertaken. It would be very similar to the design construction standards outlined in the *Infrastructure Design Manual* for Low Density Residential and Rural Living areas.

A different standard would apply to the areas outside of the township boundary.

An increase in bus services will allow for greater mobility for ageing communities, and for young adults who would possibly like to go and access entertainment facilities in Traralgon. It also gives greater opportunity for more people to commute into town using public transport. Council can work with Latrobe Valley Bus Lines to advocate for services to be provided within town.

Improved connectivity in the form of shared pathways around the school; and to the major landmarks in Toongabbie including the Village Green, the Toongabbie General Store, and the Toongabbie Recreation Reserve should be provided. A key movement corridor can be included in the structure plan. It will also contribute to identifying where priority areas are within town for new or upgraded roads and footpaths. There is also an opportunity for greater provisions of bicycle parking at key locations.

Latrobe City Council and Regional Roads Victoria could explore measures that improve visibility of the street entrances off Traralgon-Maffra Road.

Furthermore, an opportunity exists to direct

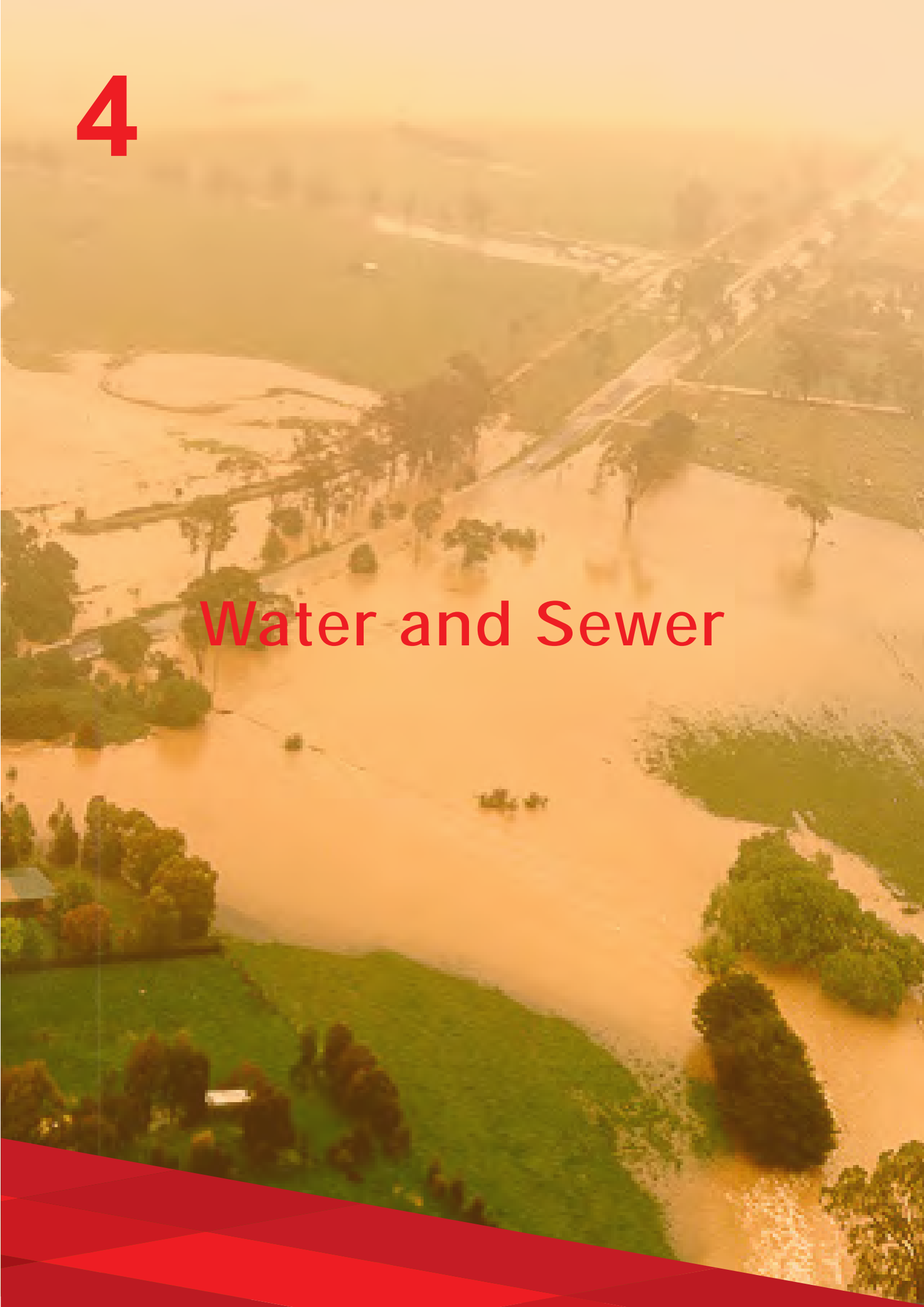


future commercial growth towards Cowen Street and King Street if needed, away from Traralgon Maffra Road.

No.	Recommendations
1.	Undertake further consultation with small towns to establish a preferred road character.
2.	Write a policy on requirements for road construction standards in small towns, assuming that all the small towns reach an agreed outcome.
3.	Amend the addendum to the <i>Infrastructure Design Manual</i> on the road standards within small towns.
4.	Write a Toongabbie Sequencing Strategy that outlines where the priority upgrades for roads and footpaths will be and the timing of works acknowledging that these may not proceed if residents of those streets do not agree.
5.	Work with Latrobe Valley Bus Lines to advocate for more bus services between Toongabbie and Traralgon.
6.	Direct commercial growth to Cowen Street with the option to extend King Street through policy in the Latrobe Planning Scheme.
7.	Latrobe City Council and Regional Roads Victoria could explore measures that improve visibility of the street entrances off Traralgon-Maffra Road due to the perceived safety issues and community concern.

4

Water and Sewer



4.1 Objectives

The objectives for this assessment include:

- To consider water and sewer infrastructure constraints and opportunities on residential growth opportunities;
- To consider flooding and drainage issues; and
- Identify any recommendations that could be incorporated into the Toongabbie Structure Plan.

4.2 Sewer

Gippsland Water is the servicing authority for reticulated sewer in Latrobe.

4.2.1 SEWER NETWORK

Toongabbie is part of the Traralgon Waste System. The sewerage from Toongabbie gravitates to the town's sole sewerage pump station (SPS), the waste is then pumped through a 7.8 km, 100 mm rising main to the Glengarry township which is then pumped from the Glengarry SPS to the Marshalls Rd East SPS then pumped to the Gippsland Water Factory (GWF).

A detailed schematic of the wastewater system profile for Toongabbie is found in Appendix 5.

The sewer district for Toongabbie is shown in yellow outline in Figure IS6 along with the potential growth fronts. The sewer district does include a portion of land to the east of Sparks Lane that is currently zoned Farming Zone - Schedule 1. This portion is in the blue (Precinct B/C) section within the yellow boundary in Figure IS6. It also includes a property in the Precinct G/J that is also currently zoned Farming Zone - Schedule 1.

4.2.2 SEWER CAPACITY

Capacity for each key component that services the Toongabbie Reticulated Sewer System is outlined below:

Toongabbie Sewer Pump Station (SPS)

The existing Toongabbie SPS consists of two pumps of 4.5 L/s capacity each and a wet well of 18kL of storage. The existing Toongabbie SPS has enough capacity to cater for an additional 40 connections in the Toongabbie Sewer system. If the existing residential area in the Toongabbie township is subdivided to the average lot size of 2000 metres square (additional 99 connections (This calculation did not take into account the land supply analysis which was undertaken at a later date), an upgrade to the SPS would be required. If this occurs, the upgrade should be of an ultimate growth scenario and capture the full potential of growth within the sewer district. An SPS upgrade could be an upgrade of the pumps and rising main, additional on-site storage or a combination of the two.

Glengarry Sewer Pump Station (SPS)

The Glengarry SPS is currently at capacity and has had historic spills in wet weather events. There is a project in the current *Gippsland Water Corporate Plan* to construct an additional 220kL of storage at the site which will contain any additional wet weather inflows from Toongabbie and Glengarry.

Marshalls Road Sewer Pump Station (SPS)

Marshalls Rd East SPS will be replaced by the future Marshalls Rd North SPS which is developer driven for The Rise (Traralgon-Maffra Rd). The SPS will be built for ultimate requirements of the system and therefore there are no capacity issues at this facility.

Gippsland Water Factory

The Gippsland Water Factory is located along Old Melbourne Road to the north of the Morwell Township and treats domestic sewerage from Toongabbie, Glengarry, Traralgon, Boolarra, Yinnar, Churchill, Morwell and Yallourn North.

The Gippsland Water Factory also treats industrial waste from Australian Paper and Yallourn Energy. There is a current remaining capacity of 2ML for domestic sewerage to be treated by the Gippsland Water Factory. Taking into account all future residential growth in Morwell, Churchill and Traralgon growth plans, there is a remaining capacity of 1.20 ML for domestic sewerage, however this is to be shared among all further potential growth including the Morwell-Traralgon Employment Corridor which may include growth with industrial high users in the Food and Fibre precinct, and any residential growth in Glengarry, Yallourn North, Boolarra, Yinnar and Toongabbie.

Gippsland Water has undertaken investigations into conceptual plans to increase the capacity of the Gippsland Water Factory to cost greater than \$100 million.

4.2.3 SEWER PROVISION

Gippsland Water's Customer Charter states that they must service any new customers within a residential zone. This is an important consideration for a structure plan when considering whether the proposed growth can be catered for under a particular zone.

Priority is given to servicing General Residential Zoned or Neighbourhood Residential Zoned land. If there are capacity restrictions in the system, Gippsland Water will "reserve" this capacity for the existing GRZ or NRZ land before entertaining the idea of servicing other zones.

For Toongabbie, Gippsland Water has stated that there are approximately 2 additional sewer connections per year.

Residentially Zoned Land

Based on the minimum residential lot size of 1000 square metres, there is the potential for a total of 405 potential customers in Toongabbie, or an additional 189 connections to the current system.

Based on current growth rates, it would take at least 90 years for all residential land to be infilled for sewer services. This type of slow growth is considered to be 'incremental growth'. Incremental growth is funded by Gippsland Water, which includes any SPS and rising mains that require upgrade due to that incremental growth. However, as the growth is slow, it is unlikely that these upgrades will occur over the life of this structure plan.

Large scale development sewer requirements like those required for the Glengarry East Development Plan are funded by the developer in full inclusive of any sewer mains and SPS's required for the development. However, this is unlikely to occur in Toongabbie as the current extent of the residential land does not allow for large scale subdivisions. Nor is any further land likely to be released for standard residential due to the land supply indicating that there is no current need for more standard residential land.

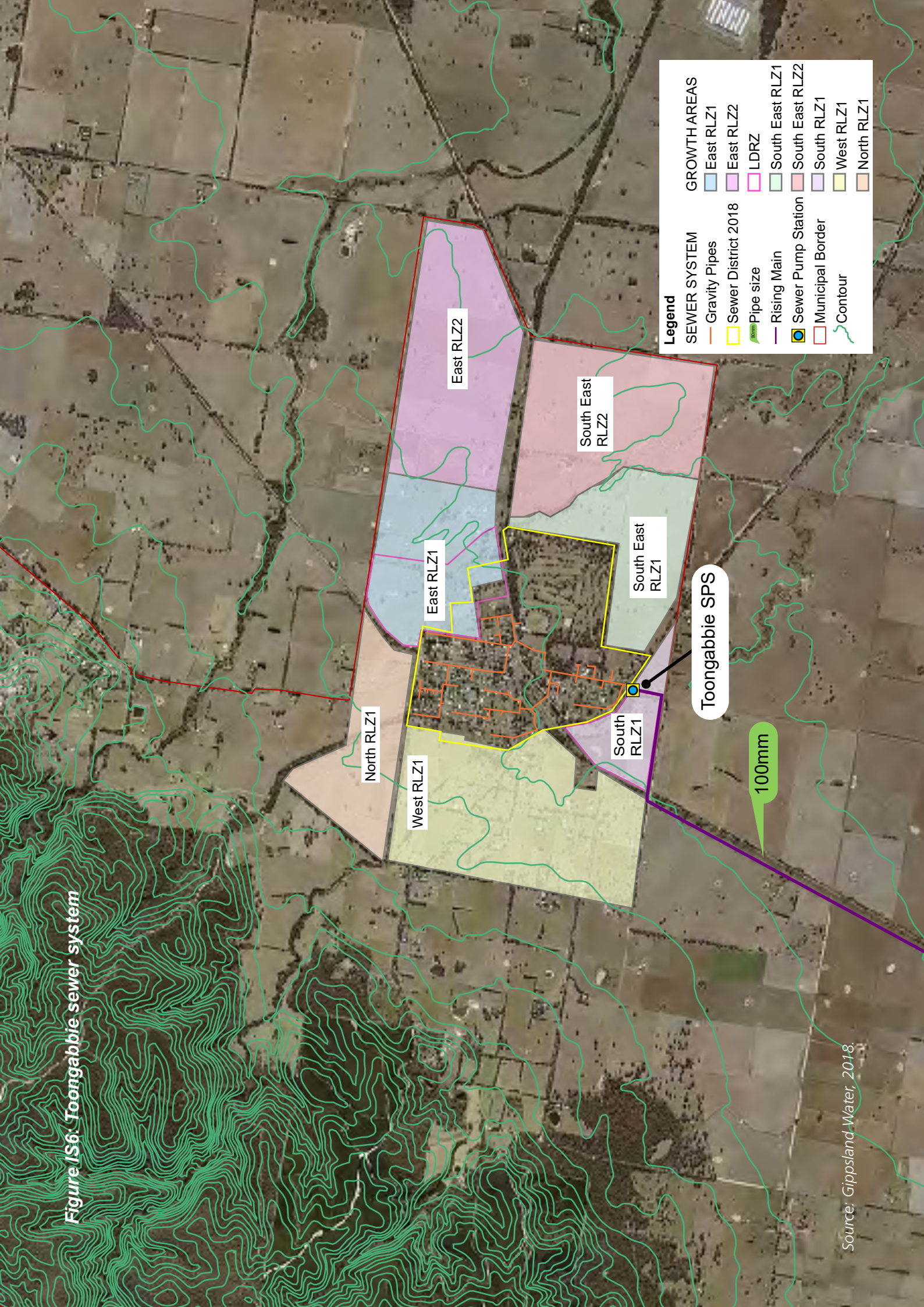
Gippsland Water will assess sewer connection rates in Toongabbie and implement appropriate system upgrades to cater for the growth.

Proposed Rural Living Land

The proposed Rural Living Zones (RLZ1 and RLZ2) are located outside of the Gippsland Water Sewer District and will remain un-serviced by sewer as



Figure IS6: Toongabbie sewer system



per the Latrobe Planning Scheme Clause 35.03-2. Growth in these areas must be serviced by septic tanks.

Proposed Low Density Residential Zones

In accordance with Gippsland Water's Low Density Residential Policy, all Low Density Residential Zoned (LDRZ) land must be able to be serviced to provide equity to all land owners.

The two areas proposed to be rezoned to LDRZ that are outside the residentially zoned area of Toongabbie have been assessed under this policy and does not meet the first criteria of sufficient downstream network and treatment capacity to cater for the entire catchment.

In addition to system capacity, the ability to be able to command the system is also an issue with servicing the proposed LDRZ areas. As, some areas cannot obtain a sewer service due to the nearby sewer infrastructure already being at the minimum depth required for the sewerage to gravitate to the Toongabbie SPS. This means that to service these areas, additional pumps will need to be built along with the extension to current sewer mains. It is not feasible to extend these sewer mains without the need for additional SPS's to service the localised LDRZ areas. This would

mean that any new LDRZ areas must be serviced by septic tanks.

Gippsland Water has advised that in Toongabbie servicing areas outside of the current sewer district does not meet the financial criteria for servicing land.

Summary of Sewer Requirements

A summary of the potential sewer connections is shown in Table IS8. Gippsland Water has calculated the full potential growth on the basis of the following minimum lot sizing:

- Residential - 1000 square metres (on the basis of the size of some of the smaller lots within Toongabbie)
- Low Density Residential - 4000 square metres (on the basis that it cannot be serviced by the existing sewer network, as it is outside the sewer district)
- Low Density Residential - 2000 square metres (on the basis that it can be serviced by the existing sewer network)
- Rural Living - 2 Hectare minimum as per Schedule 1 in the Latrobe Planning Scheme.

The total potential for lots for low density

Table IS8: Potential sewer capacity needed

Zone	Connected to Sewer		Not connected to Sewer	
	Existing	Potential additional lots	Existing	Potential additional lots
Existing Residential	216	94	38	57
Areas considered for LDRZ that are currently residentially zoned	3	59	6	0
Proposed Precinct B	15	13	9	65
Proposed Precinct C	2	0	15	23
Proposed Precinct H	0	0	41	26
Proposed Precinct J	0		5	0

Source: Gippsland Water, 2019

residential areas and standard residential areas is 223 lots that could potentially be connected to sewer under the provisions set out in the Latrobe Planning Scheme. It is evident that the current sewer system cannot service the total potential lots, and alternatives should be explored.

A cost analysis for water and sewer upgrades can be found in Appendix 6.

4.2.4 ALTERNATIVES FOR SEWER

According to Gippsland Water, Toongabbie has the ability to service another 40 reticulated sewer connections. Land Supply Analysis in the draft *Toongabbie Structure Plan Background Reports - Context Report 2020* indicates potential for an additional 331 dwellings at 1000 square metres within the residentially zoned areas. While the development rate of 4.5 dwellings per annum suggests that there will be little to no capacity to service the Toongabbie district with reticulated sewerage without further upgrades to the system within approximately nine years, on the assumption that all the growth is occurring within town. However, by Gippsland Water's data it is approximately 2 dwellings per year within the township area itself. It implies that there will be enough sewer capacity for the next twenty years if growth continues at the same rate.

If the study precincts are rezoned to a Rural Living Zone it does not impact on the ability to service the township itself as each lot would be required to be on a septic system. However, alternatives for the town sewer district may need to be explored to enable sustainable growth options in the long-term.

Septic Tanks

Latrobe City Council are responsible for the approval and on-going oversight of on-site

wastewater management systems (traditionally described as 'septic tanks' and more recently described as 'On-site Systems') within the municipality. On-site systems are the traditional method for managing sewerage and other forms of wastewater on properties that are not connected to a Gippsland Water reticulated (or town) sewerage system. They are also the preferred method of wastewater management for new developments in low density residential (4,000 square metres), and rural living zonings.

Lots outside of the Toongabbie sewer district will need to include a septic tank on site. In the *Domestic Wastewater Management Plan 2019* lots above 2000 square metres were assessed on each site's land capability constraints such as soil characteristics, slope, landslip and proximity to creeks, drains and groundwater bores to determine the suitability for having a septic system on site.

Each lot was then assigned a risk score which coincided with a risk classification for being able to contain its effluent disposal envelope on-site. The on-site hazard classifications are outlined in Table IS9.

Areas of Toongabbie that are close to waterways, generally have a high risk classification (shown in Figure IS7). This includes lots within all of the study precinct. One small lot is not compliant as it cannot contain its effluent system on-site due to the size of the property being less than 4000 square metres.

However, a high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

Table IS9: On-site hazard classifications

Classification	Description
Low Risk	Few/minor constraints to on-site wastewater management and low risk receiving environment. Periodic (e.g. 3 years) oversight as per current Septic Tank Permit conditions likely to manage risk.
Medium Risk	Individual and/or cumulative hazards slightly elevate the likelihood and/or consequence of on-site system failure. A higher level of design, construction, maintenance and oversight (e.g. annual inspection) input may be necessary to manage risk and meet regulatory objectives for health and ecosystem protection.
High Risk	Individual and/or cumulative hazards significantly elevate the likelihood and/or consequence of on-site system failure. Best practice design, construction, maintenance and oversight essential to manage risk and meet regulatory objectives for health and ecosystem protection.
Very High Risk	Significant Land Capability constraints (steep slope / landslip risk) across the majority of suitable land available within the property. On-site containment may be possible subject to advanced engineering and oversight where the provision of an off-site solution is cost prohibitive.

Source: Asquith et al, 2018.

Zoning for Sustainable Growth

Under the current suite of residential zones only the Low Density Residential Zone and the Township Zone have any provision to allow alternatives to reticulated sewer, water and electricity if they are not available. The suite of residential zones includes:

- General Residential Zone;
- Residential Growth Zone;
- Neighbourhood Residential Zone;
- Township Zone;
- Mixed Use Zone;
- Low Density Residential Zone

In essence, within the township boundary of Toongabbie, under the current zoning all new dwellings must be connected to all reticulated services.

If the ability to connect to these services is limited

then the ability to facilitate growth is also severely limited. The Low Density Residential Zone and Township Zone offer some flexibility to allow development if the services are not available. This option should be further explored through the Toongabbie Structure Plan process to facilitate growth in a manner that is sustainable.

Localised Treatment Plant

An alternative option which has not been delivered in Latrobe City before is a localised treatment plant. Yarragon has a similar sewerage option that is treated in Moe.

In *Options for an Innovative Wastewater Management Scheme for Tyers (2008)*, a concept for a community wastewater system was developed where wastewater could be pumped to a central pit and then could be reused for things such as irrigation for sports fields or for



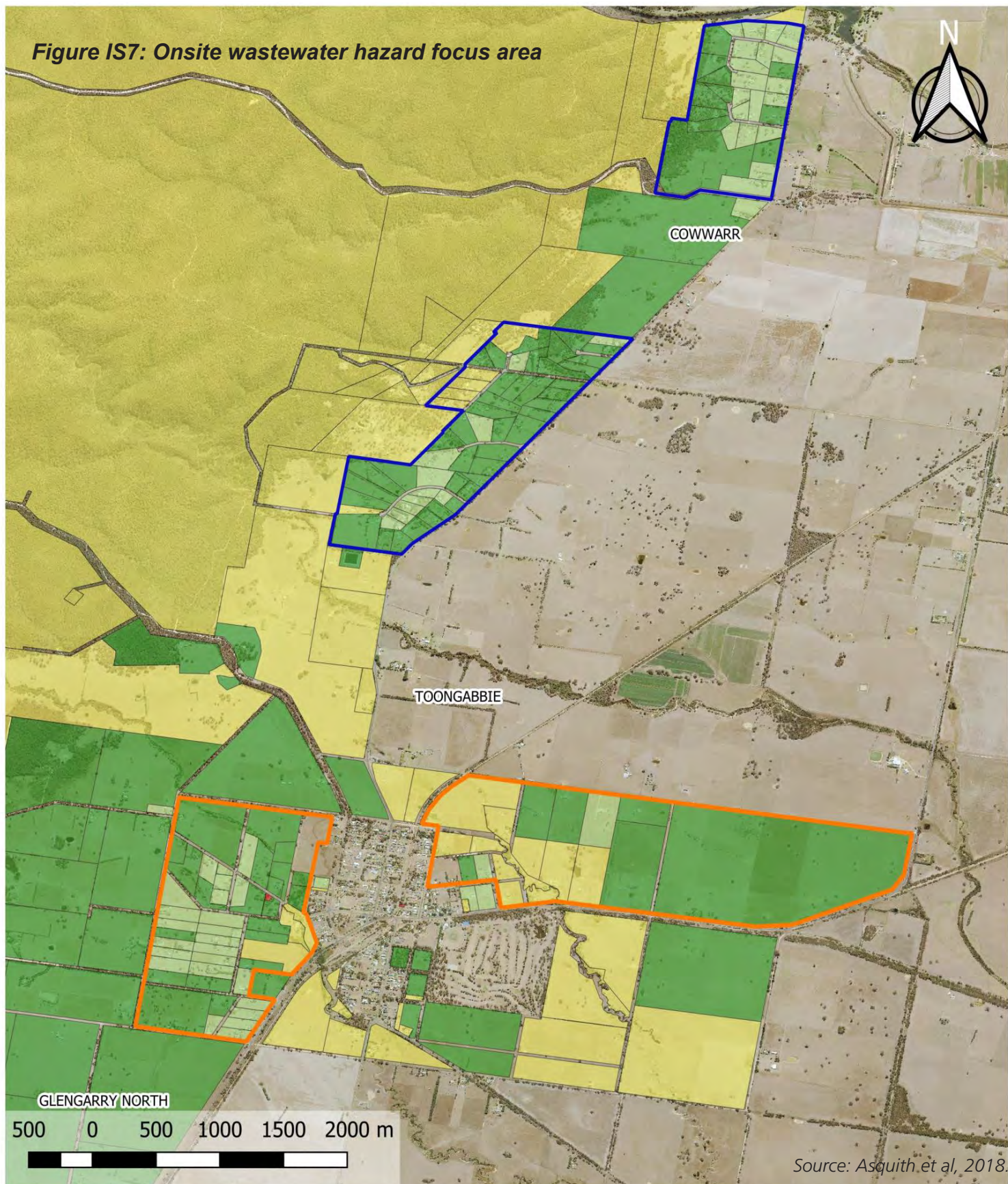
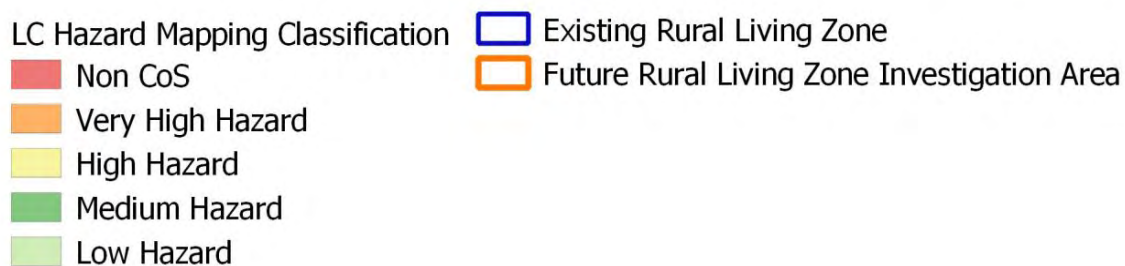


Figure 5-4 Land Capability Hazard Focus Area: Toongabbie / Cowwarr



surrounding agricultural land. Both a whole town and a partial town concept were considered.

To relieve the burden on the current sewer system, similar options could be explored for Toongabbie. However, considering that Toongabbie is relatively flat, low gravity options should be considered in conjunction with the community wastewater system. It is noted that it is against Gippsland Water's policy to have 'mixed' systems such as pressure sewer and traditional gravity. As such, the entire township would need to change to the alternative option.

Gippsland Water has advised that:

A new wastewater treatment plant (WWTP) for Toongabbie would require buffers, and EPA approvals. Lagoon based treatment and discharge to farmland, golf course, recreation reserve or similar may be worth investigating if there is a future trigger to replace the rising main between Toongabbie and Glengarry and will result in a lower lifecycle cost than upgrading the current system.

However, this is a long term consideration as there is still capacity in the sewer district and growth can be managed through low density housing options which do not have to be connected to reticulated services. Further consultation with the community would need to be undertaken to explore this option in entirety.

*Photo: Open drain off Campbell Street.
Source: McKenzie, T., 2019.*



4.3 Water

Gippsland Water is the servicing authority for raw and potable water for Latrobe City.

4.3.1 WATER NETWORK

The water district is shown in Figures IS8 and IS9 as outlined in yellow. The Toongabbie Water District includes Cowwarr, Rosedale, Glengarry and Tyers.

Toongabbie is serviced by the Morwell Water Treatment Plant (WTP); the WTP also services the townships of Tyers, Toongabbie, Cowwarr and Rosedale.

Toongabbie is serviced via an 11 km, 250 mm distribution main from the Tyers WTP. The water is then boosted up to the Toongabbie Tank via the River Road Treated Water Pump Station (TWPS) through a 12.5 km, 200 mm distribution main, with the total distance from WTP to customers in Toongabbie being at least 23.5kms.

The Toongabbie tank is a 750kL steel tank which services the townships of Cowwarr and Toongabbie. There are currently 370 connections in Toongabbie and 115 connections in Cowwarr with a total peak summer demand of 631kL/day from the Toongabbie Tank.

4.3.2 WATER CAPACITY

Historically, growth in the system averages 16 connections per year, with the majority of the growth occurring in Rosedale and Toongabbie.

The Tyers WTP has a capacity of 6.5ML per day. The 750kL Toongabbie Tank has capacity for approximately an additional 45 connections in Toongabbie and Cowwarr. An additional 45 connections increases the total peak summer demand of the Toongabbie Tank to 689 kL/day.

Any development beyond the capacity of 750 kL per day will require system augmentation. The Water Reticulation Supply Profile can be found in Appendix 7.

4.3.3 WATER PROVISION

Gippsland Water's customer charter states that customers must have a minimum pressure of 14m at the pressure at the customer meter or property boundary. The Top Water Level (TWL) of the Toongabbie Tank is 119m and therefore Gippsland Water has said that it is not advisable to promote growth in areas greater than 100m in elevation. All of the study precincts are within the 100m contour which allows for static pressure.

Although all growth areas are within the area where customers will meet the Charter's stated pressure, the water mains on the outskirts of Toongabbie township are of small diameter and all dead end mains. At times of peak summer demand, these smaller diameter dead end mains currently experience dynamic pressures close to the lower allowable limit of 14m due to upstream network usage, any additional growth will exacerbate these issues. The growth proposed will require these water mains to be upgraded at least one pipe size with potential interconnections with the existing system. Table 13 highlighting some of the issues in each study precinct. Gippsland Water has stated that they have not completed any hydraulic modelling for this exercise and therefore hydraulic capacities of these pipes are dependent on the proposed growth in the area.

Figure IS8: Current water system



Figure JS9: Toongabbie water system

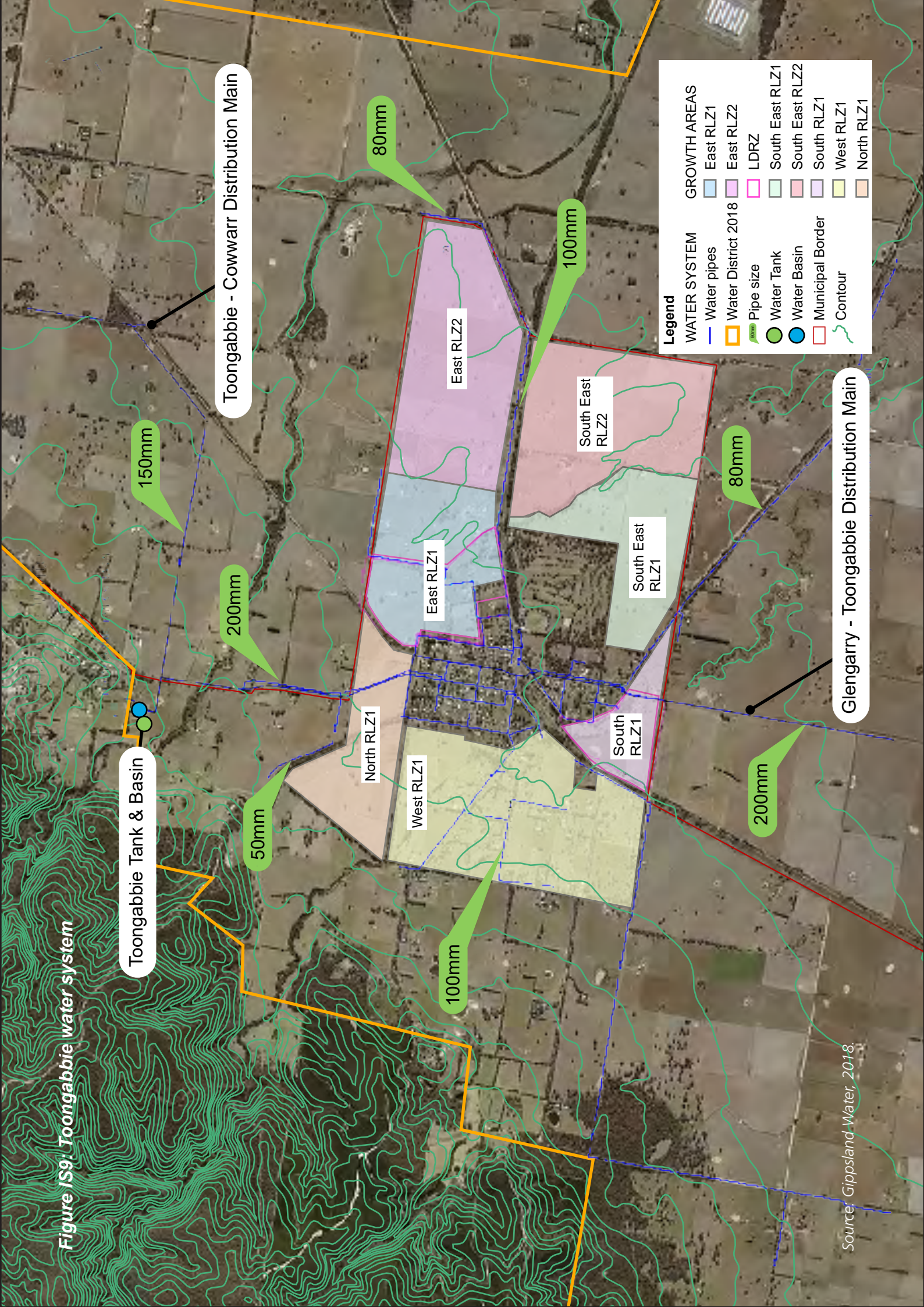


Table IS10: Water issues by precinct

Study Precinct	Current Pipe Details	Issues
Precinct A	Water Main on Old-Walhalla Road Laid in 1981 50mm diameter PVC main	There are no water mains to the south of the North Area west of the Hill St and Old-Walhalla Rd intersection.
Precinct C	Traverses north of Packett Road, then east on Afflecks Road 100mm Main	To service this area, would require a main extension from Afflecks Rd south to Traralgon-Maffra Rd and also west to Hill St.
Precinct D	80mm diameter PVC pipe on Traralgon-Maffra Road 100mm main on Afflecks Road	The 80 mm main on Traralgon-Maffra Rd is not sufficient to service this area. It would need a considerable upgrade. It would be beneficial for the 100mm main on Afflecks Rd to be upsized and extended to service the RLZ2 Area.
Precincts E and F	80mm diameter PVC pipes on Traralgon-Maffra Road and Hendersons Road	These mains do not have capacity to service the South East Growth Areas and would require a considerable upgrade.
Precinct G/J		New water mains and extensions are required to service this area.
Precinct H	Laid between 1980 and 1988 100mm diameter PVC pipes	The dead ends along Harris Lane are prone to low pressures in peak summer demands and would consider main extensions and interconnections to eliminate the dead end mains on Harris Lane when growth occurs.

Source: Gippsland Water, 2019

Proposed Poultry Farm

Gippsland water has stated that there has been interest in land to the south of Hendersons Rd and Grahams Rd intersection for a proposed Poultry Farm. The Poultry Farm development requires the equivalent of 25% of Toongabbie's water supply to operate. Given the volume requested for the operation of the proposed poultry farm of 55 ML, Gippsland Water's Tyers Water Supply System cannot service the full amount of the requested potable water volume, but can supply a domestic connection.

Therefore, information provided in Table IS10 in regards to servicing of the proposed Toongabbie

growth, has not taken into account the volume of potable water required to operate the Poultry Farm.

Residentially Zoned Areas

Gippsland Water must service any new customers within the residential areas. Based on the minimum lot size of 1000 metres squared, this equates to a total of 555 potential customers in Toongabbie, an additional 185 connections to the current system.

Based on current growth rates, it would take at least 10 years for all the residential land to be infilled.

Gippsland Water will assess water connection rates in Toongabbie and implement appropriate system upgrades to cater for this residential growth.

Proposed Rural Living Areas

The future rural living zones (RLZ1 and RLZ2) areas in Toongabbie will require an alternative potable water supply (i.e rainwater tanks) for domestic and firefighting purposes. Gippsland Water has stated that due to the sparse placement of rural living developments, it is unlikely to be commercially viable for Gippsland Water to provide reticulated water and ongoing maintenance for these development areas.

Gippsland Water suggested that the proposed rural living lots are serviced by rainwater tanks.

Proposed Low Density Residential Areas (LDRZ)

The areas which are currently residentially zoned and included in the study as possible areas to be rezoned to Low Density Residential Zone (LDRZ) will be able to be serviced due to the close proximity of existing water mains as well as the proposed LDRZ precinct to the south and farming zoned part of the east precinct. Short water main extensions will be required to service these areas.

Gippsland Water has said that the cost to service the low density areas will be at full cost to developers.

However, Gippsland Water will allow new connections to the reticulated water from the Low Density Residential Areas due to the amount of time it would take to infill existing residential areas at the current growth rate, comparatively small area of LDRZ and proximity to trunk water assets despite the fact that the number of lots that could connect to water exceeds the 45 available water connections.

Summary of Water Requirements

A summary of the potential water connections is shown in Table IS11. Gippsland Water has calculated the full potential growth on the basis of the following minimum lot sizing:

- Residential - 1000 square metres (on the basis of the size of some of the smaller lots within Toongabbie)
- Low Density Residential - 4000 square metres (on the basis that it cannot be serviced by the existing sewer network, as it is outside the sewer district and affects the subdivision potential)
- Low Density Residential - 2000 square metres (on the basis that it can be serviced by the existing sewer network and can be subdivided into smaller lots)
- Rural Living - 2 Hectare minimum as per Schedule 1 in clause 35.03 of the Latrobe Planning Scheme.

The total potential for lots for low density residential areas and standard residential areas is 236 lots that could potentially be connected to water under the provisions set out in the Latrobe Planning Scheme.

It is evident that the current water system cannot service the total potential lots, and Gippsland Water will be required to augment the system at an appropriate time to increase capacity.

Table IS11: Potential water connections

Zone	Connected to Water		Not connected to Water	
	Existing	Potential additional lots	Existing	Potential additional lots
Existing Residential	370	110	26	49
Areas considered for LDRZ that are currently residentially zoned	3	59	6	0
Proposed Precinct B	28	8	2	18
Proposed Precinct J	3	59	0	0
Proposed Precinct H	43	20	19	6
Proposed Precinct C	21	15	4	2

Source: Gippsland Water, 2019

4.3.4 ALTERNATIVES FOR WATER

Gippsland Water has indicated that with the water supply requiring significant upgrades and only being able to support infill growth in town without those upgrades would essentially mean that locations within the residentially zoned land would be given preference over other zoned land. It is noted that this is the same for sewer provision.

As such, there may need to be alternatives to a reticulated water service outside of the township area. This may mean water tanks and/or water bores.

However, ultimately with climate change, and the insecurity of adequate rainfall, these may only be short-term solutions until the upgrades have taken place.

Water Bores

Aside from rainwater tanks, the other alternative may be to have a groundwater bore.

Visualising Victoria's Groundwater

Visualising Victoria's Groundwater (VVG) adapts new technologies and leverages high capacity

broadband to visualise Victoria's groundwater systems, contributing to groundwater research and ultimately, the sustainable management of groundwater resources. The major focus of the research project is to provide easy access to all of the groundwater bore data that is normally available to the public. This is achieved by directly linking to the repositories of data that are managed by various government departments, agencies and research institutions and displaying the bores on a map, with links to the individual data for each bore.

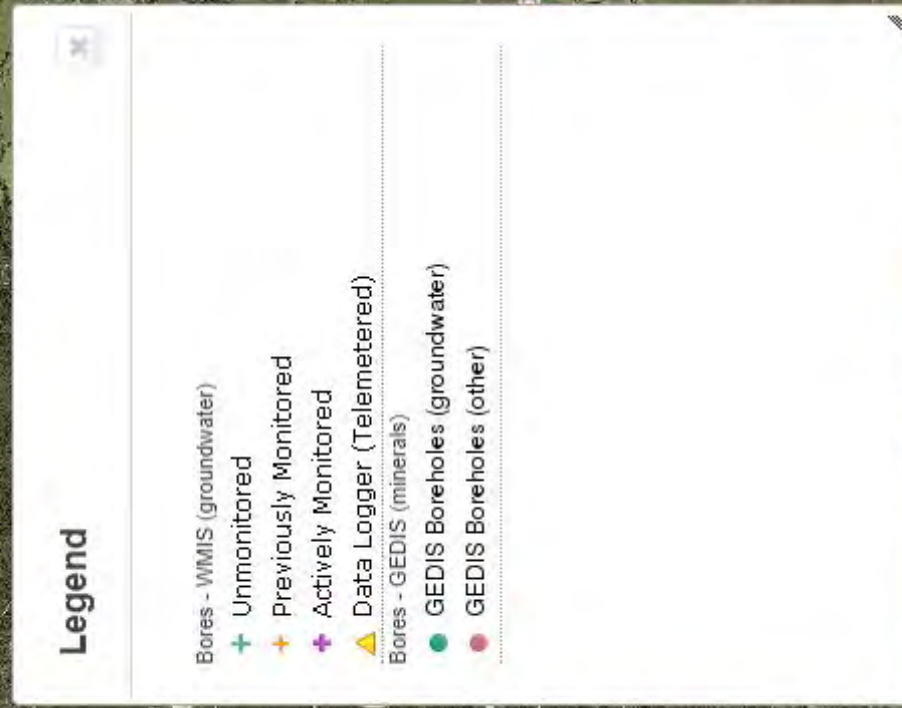
According to VVG, the study area contained 10 bores (Victorian Water Measurement Information System (WMIS)), six of which are groundwater bores with no mineral springs and four mineral bores (Geological Exploration Development Information System (GEDIS)). Three of these are for coal exploration; one is for petroleum. Details are shown the Table IS12, while the locations are shown in Figure IS10.

Table IS12: Bore details

<i>Bore ID</i>	<i>Status</i>	<i>Year Constructed</i>	<i>Depth (M)</i>	<i>Purpose</i>	<i>System</i>
329684	Unmonitored	1981	433.4	Coal	GEDIS and WMIS
329685	Unmonitored	1982	400	Coal	GEDIS and WMIS
96241	Unmonitored	1920	30.5	Groundwater	GEDIS and WMIS
96242	Unmonitored	1920	30.5	Groundwater – Domestic and Stock Water Supply	GEDIS and WMIS
96255	Unmonitored	1965	0	Groundwater	GEDIS and WMIS
WRK983420	Unmonitored	2008	93.3	Groundwater	WMIS
WRK979210	Unmonitored	2007	100	Groundwater	WMIS
881481	Unmonitored	1886	53.3	Petroleum	GEDIS
96280	Unmonitored	1982	6.31	Groundwater	GEDIS
926877	Unmonitored	1982	400	Coal	GEDIS

Source: Daulhaus et al, 2012.

Figure IS10: Bore locations



There are a number of considerations for a water bore to be used for water that is suitable for human consumption and whether it is financially viable. These include:

- The salinity of the water;
- Whether it is considered a potable water supply under the Environment Protection Authority (EPA) listed beneficial uses; and
- The depth of the bore that needs to be dug.

The ground water salinity for the area is between 500-100 mg/L in the northern-most section and between 1000-3500 mg/L for the rest of the study area which is not suitable for humans but it is suitable for stock such as cattle and sheep. It means that the northern part of the Precincts C and D, Precinct A and the northern section of Precinct H could use groundwater bores. The salinity for the study area is shown in Figure IS11.

The groundwater total dissolved solids for the study area is between the ranges of 1-500 which means that it is suitable or acceptable as potable water as specified in the beneficial uses in Figure IS12 and Table IS13.

The water table depth varies across the study area. The majority of the study area has the water table between 10 and 20 metres deep with the northern section containing extreme depths with the water table being around 50 metres deep. A small section in the south side of the site which aligns with a creek has the depth to water table being at 5 metres. This is relatively shallow for a water bore. The depth to the water table is shown in Figure IS13.

Based on the Visualising Victoria's Groundwater model, there does not appear to be any significant groundwater constraints that would inhibit future development. However, the

following issues would need to be considered in the planning and design of any development:

- The shallow depth of the water table in some precincts means that excavations may intersect the water table and cause groundwater to flow into underground structures. This water would subsequently need to be collected and disposed of, or alternatively underground structures (e.g. basements) would need to be fully lined to prevent inflows.
- The depth of the watertable at the site would need to be confirmed through further investigations to determine whether a shallow watertable is an actual constraint to development.
- The salinity of the water table aquifer at the site would need to be confirmed through further investigations to determine whether this is an actual constraint to development.

Table IS13: Beneficial uses of groundwater

Beneficial Use	Segments (mg/LTDS)				
	A1 (0 - 500)	A2 (501 - 1000)	B (1001 - 3500)	C (3501 - 13,000)	D (Greater than 13,000)
Maintenance of ecosystems	✓	✓	✓	✓	✓
Potable Water supply					
Desirable	✓				
Acceptable		✓			
Potable mineral water supply	✓	✓	✓		
Agriculture, parks and gardens	✓	✓	✓		
Stock watering	✓	✓	✓	✓	
Industrial water supply	✓	✓	✓	✓	✓
Primary contact recreation	✓	✓	✓	✓	
Buildings and Structures	✓	✓	✓	✓	✓

Source: EPA, 2018.

Figure IS11: Water table salinity

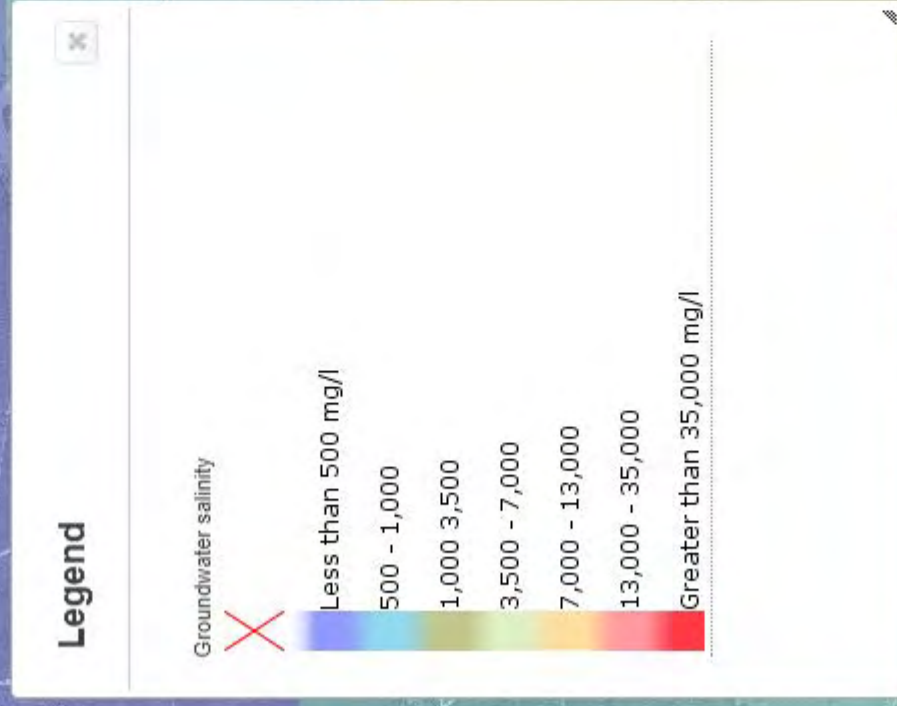


Figure IS12: Beneficial uses

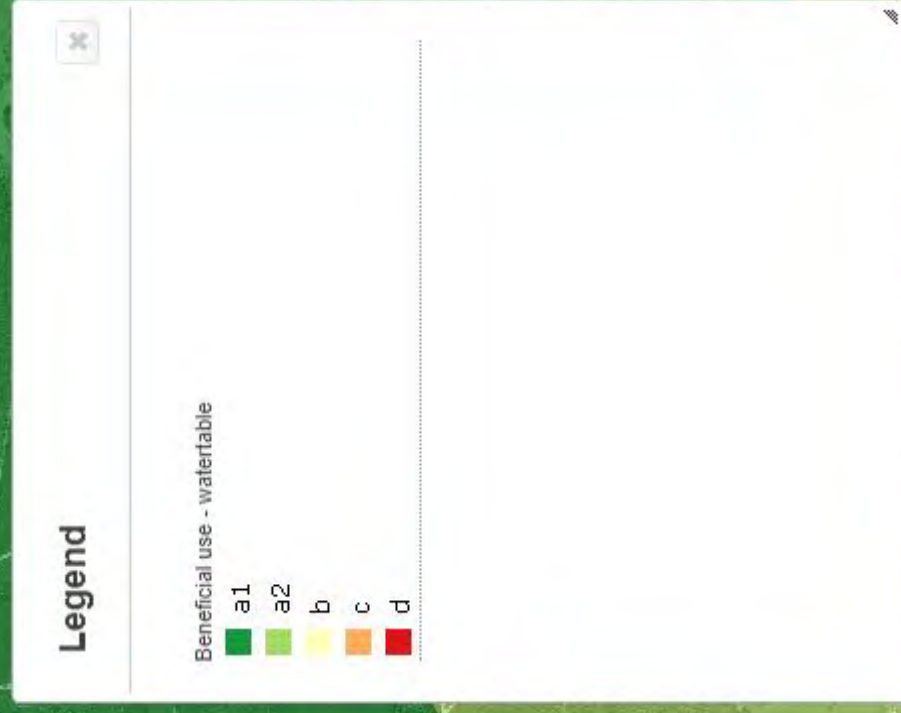
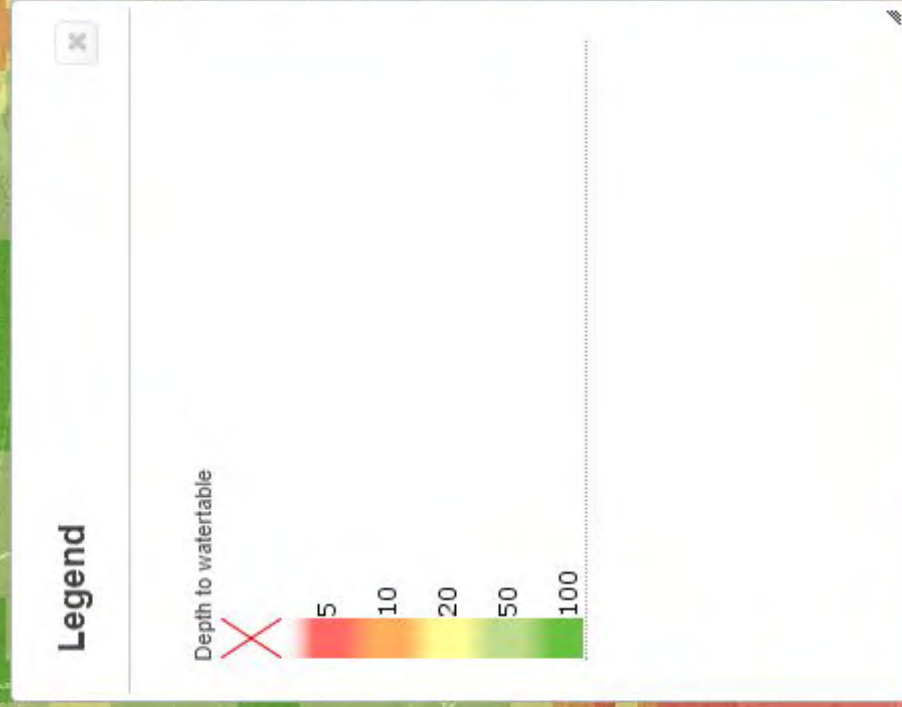


Figure IS13: Depth to water table



4.4 Flooding and Waterways

West Gippsland Catchment Management Authority (WGCMA) is a government organisation responsible for managing the water resources in West Gippsland and is the referral authority for development within a Land Subject to Inundation Overlay and Floodway Overlay.

Advice from the WGCMA is as follows:
A number of designated waterways are located within the study area including Rosedale and Toongabbie Creeks. All designated waterways require protection through the creation of reserves which require an ecological buffer of 30 metres either side of the designated waterway from the top of the bank (shown in Figure IS14), or a buffer based on a flood study which identifies the 1% Annual Exceedance Probability (AEP) flood extent, whichever is the greater.

4.4.1 WATERWAYS

Clause 14.02-1S (Catchment planning and management) of the Planning Policy Framework (PPF) seeks to assist the protection and restoration of catchments, water bodies, groundwater and the marine environment through the following strategies:

- *Ensure the continued availability of clean, high-quality drinking water by protecting water catchments and water supply facilities.*
- *Consider the impacts of catchment management on downstream water quality and freshwater, coastal and marine environments.*
- *Retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway to:*
 - *Maintain the natural drainage function, stream habitat and wildlife corridors and landscape values,*
 - *Minimise erosion of stream banks and*

verges; and

- *Reduce polluted surface runoff from adjacent land uses.*
- *Undertake measures to minimise the quantity and retard the flow of stormwater runoff from developed areas.*
- *Encourage measures to filter sediment and wastes from stormwater prior to its discharge into waterways, including the preservation of floodplain or other land for wetlands and retention basins.*
- *Ensure that works at or near waterways provide for the protection and enhancement of the environmental qualities of waterways and their instream uses.*
- *Ensure land use and development proposals minimise nutrient contributions to water bodies and the potential for the development of algal blooms.*
- *Require appropriate measures to restrict sediment discharges from construction sites.*
- *Ensure planning is coordinated with the activities of catchment management authorities.*

The West Gippsland Catchment Management Authority's *Waterway Strategy (2014-2022)* also states that "*riparian corridors along waterways play an important role in maintaining and improving waterway health. The maintenance and restoration of riparian corridors are essential to provide the appropriate environmental conditions*". Ephemeral waterways or natural drainage corridors serve as conduits for conveying and treating rainfall runoff.

While some minor waterways may have low environmental values, their function in conveying and treating runoff from surrounding catchments into major waterways plays a significant floodplain management and river health role.

Figure IS14: 30m buffer around waterways



4.4.2 FLOODING

The estimated 1% AEP flood extent which is generally shown in the Planning Scheme as the Land Subject to Inundation Overlay and proposed Floodway Overlay are shown in Figure IS15. Details for each precinct are shown in Appendix 8.

There are a number of waterways throughout the area and there is likely to be significant flooding around these waterways during a 1% AEP flood event. This flooding is likely to limit the area suitable for development. The West Gippsland Catchment Management Authority's *Flood Guidelines - Guidelines for Development in Flood Prone Areas 2013* state that where flood depth during a 1% AEP flood event is likely to exceed 0.3 metres over the development site or 0.3 metres over the vehicle route from the property, a proposal that seeks to intensify development through the creation of additional lots or dwellings is not supported as it would increase the amount of people and property exposed to the flood hazard.

In regards to flooding, WGCMA has stated that existing areas of Toongabbie are subject to a significant flood risk from Toongabbie Creek and tributaries that flow into the town from the north. A flood risk study should be considered as part of the feasibility assessment for future residential development as it may be possible to reduce the impact of flooding through the existing areas while opening up areas for future residential development.

Clause 13.03-1S of the PPF requires emergency facilities (including hospitals, ambulance stations, police stations, fire stations, residential aged care facilities, communication facilities, transport facilities, community shelters and schools) to be

located outside the 1% AEP flood extent and, where possible, at levels above the Probable Maximum Flood (PMF). With the exception of the Mechanics Hall, Toongabbie's community facilities are generally outside of the flood extent.

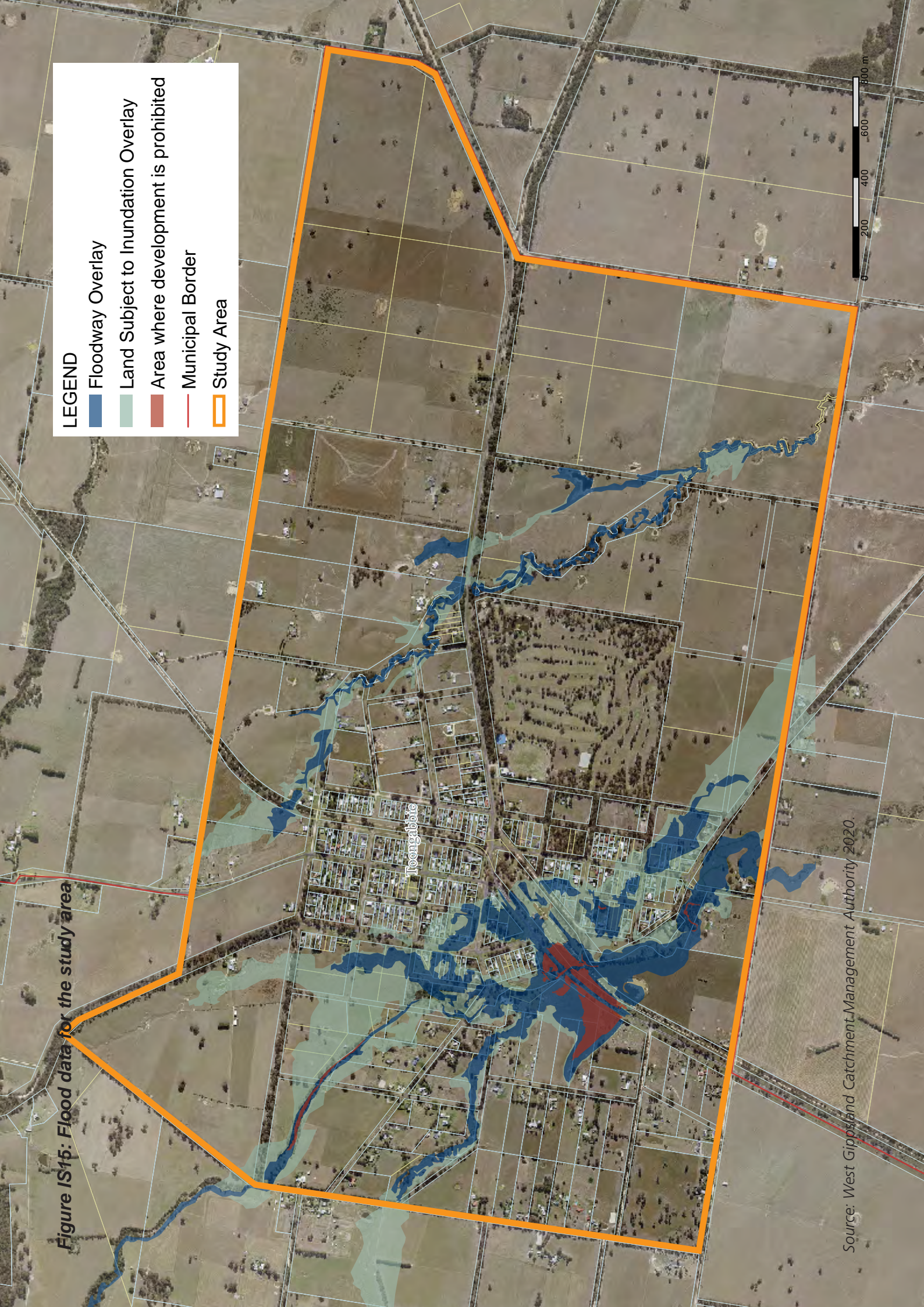
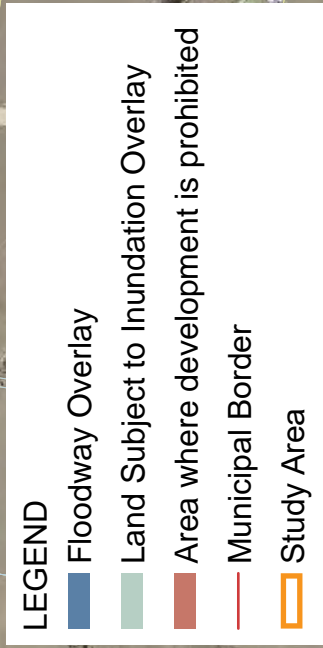
The flooding extent will impact on the areas outside of the township and whether lots created can support a septic system that is outside of the 1% AEP flood extent. Within town, the *Live Work Latrobe Housing Strategy 2019* states that incremental growth areas should not be supported where there are flooding risks due to the increased risk to life and property damage.

A summary of the flood risks for each precinct is provided in Table IS14.

Table IS14: Flooding risk by precinct

<i>Study Precinct</i>	<i>Flooding Risks</i>
Precinct A	The south-eastern corner of 35 Old Walhalla Road and portions of the eastern side of the precinct are affected by the flooding extent. If these lots were developed for rural living purposes, lots on the east side may not be able to support a septic system.
Precincts C and D	The eastern precincts are largely unaffected by the flooding extent with it being contained outside of private property boundaries. The corner of the precinct north of Hill Street and east of the Gippsland Plains Rail Trail is partially affected by the flood extent. The two properties directly east of Rosedale Creek along Traralgon-Maffra Road are partially affected by the flooding extent, however, it is not expected to significantly affect subdivision or development opportunities.
Precincts E and F	The south-west corner of Precinct E, north of Hendersons and Guyatts Road has a significant portion of the land affected by the flood extent. Depending on the subdivision layout, some of the proposed lots may not be able to support a septic system. Other areas within the precinct should be able to manage the risks associated with flooding through subdivision design.
Precinct G/J	The north of the precinct, just south of Toongabbie Creek and the lot between Hendersons Road, River Road and Guyatts Road are significantly affected by flooding. Depending on whether Low Density Residential or Rural Living were supported would change the outcome on whether the subdivisions would be able to support septic systems, particularly on the lot at 21 River Road.
Precinct H	The properties within the north east corner of the precinct between King Street, Hill Street and the Toongabbie Creek are significantly affected by the 1% AEP Extent. Some of these lots may not be able to support a septic system. The floodway overlay is proposed to be applied to the two lots immediately north of the cemetery.
Within town	The western portion of the township has significant flooding constraints. A large portion of these lots are already developed, but for those lots that are not the design will need to take into account the flood extent. The lots between Henderson Road, Heywood Street, Gadd Street and Stringer Road would also need to be connected to reticulated services as, the larger lots would likely be unable to support septic systems.

Figure IS15: Flood data for the study area



4.4.3 STORMWATER

Intensification of development and the subsequent increase in impervious surfaces has the potential to impact on designated waterways, water quality and quantity associated with the land as well as on receiving waterways.

Increased flooding is also likely downstream of and adjacent to any rezoned area due to increased hard surfaces leading to increased stormwater runoff.

Water quality is also likely to be impacted due to the increased volume of stormwater. Stormwater quality infrastructure such as constructed wetlands, swales and bio-retention systems may be required to manage the expected sediment and nutrient loads. Latrobe City Council does not support bio-retention systems.

This has the potential to increase recharge to groundwater, which may have two consequences.

1. Increased discharge to nearby surface water features, which could potentially have a negative impact on the ecological health of local waterways as a result of increased salinity (SKM, 2009 in SKM, 2013); and
2. Threaten the beneficial use of the groundwater

WGCMA recommends that an assessment of the water quality infrastructure requirements should be included in the opportunities and constraints process for future residential growth in Toongabbie. The process should also consider Integrated Water Management to ensure all aspects of the water cycle are considered early in the feasibility phase.

SKM (2009 in SKM, 2013) state that *“the increased proportion of hard impermeable surfaces associated with the development of the site is likely to decrease local recharge to the underlying aquifers in winter and early spring, which could in turn reduce discharge to nearby surface water features. This could potentially have a negative impact on the ecological health of local waterways.”*

Several opportunities exist in relation to the use of groundwater at the site, reducing reliance on mains water. These include:

- Installation of bores for stock and domestic uses, such as watering gardens; and
- Installation of bores for irrigation of public reserves or ovals.

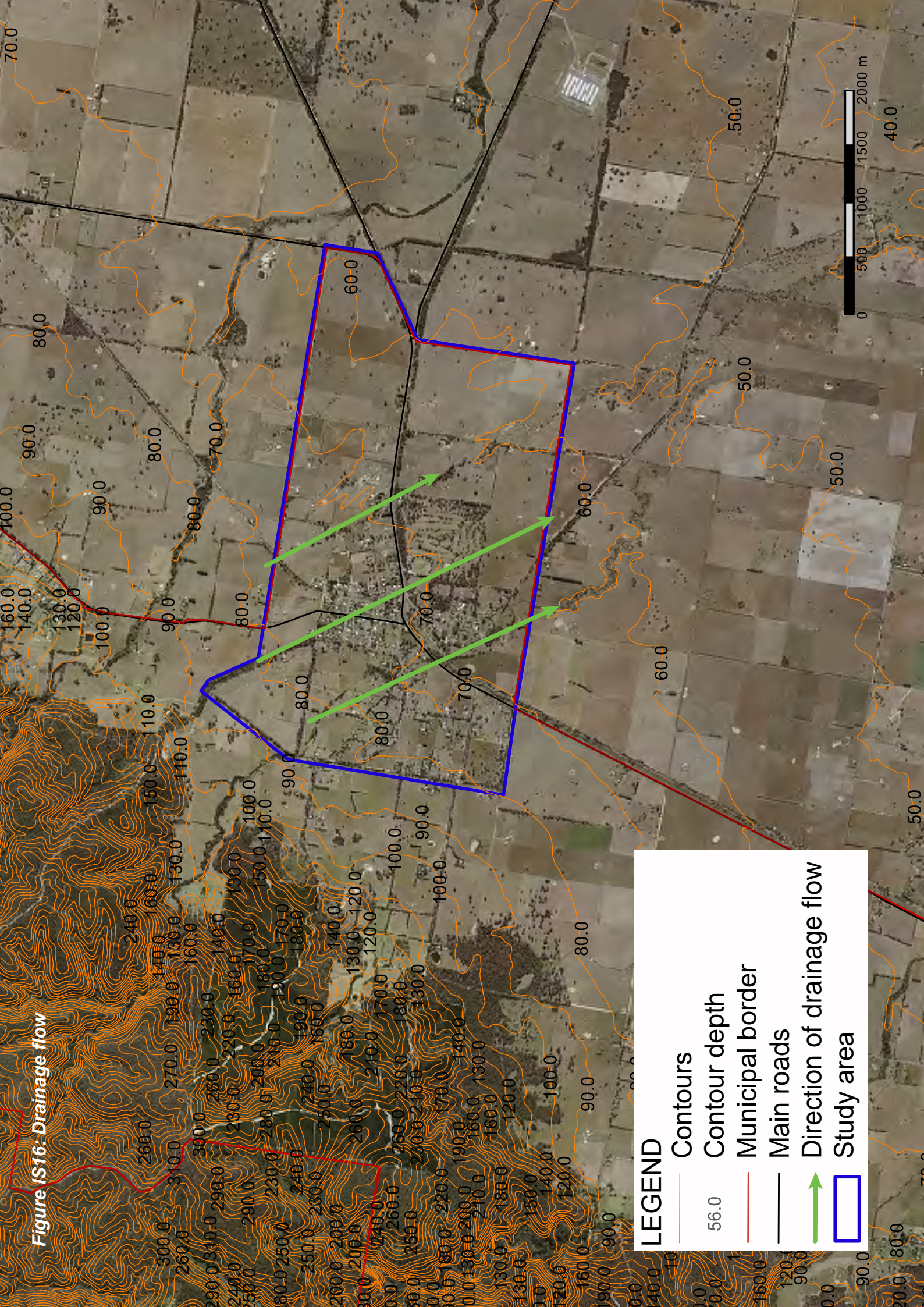


Figure IS16: Drainage flow

LEGEND

Contours

Contour depth

Municipal border

Main roads

Direction of drainage flow

Study area

A horizontal scale bar with a black and white alternating pattern. It is marked with the numbers 0, 500, 1000, 1500, and 2000, followed by the unit 'm'.

4.5 Drainage

Latrobe City Council is responsible for managing all local roads and drainage within Toongabbie. Strategic Planning spoke with the City Assets Department on 18 July 2019.

Toongabbie slopes down towards the south east as shown in Figure IS16.

Toongabbie has three separate piped drainage systems (shown in Figure IS 20) which include:

1. The first drainage system to be installed in Toongabbie was around the school. It has pipes that run along Stewart Street, between Scott and Campbell Street, up Scott Street to the top of the primary school. This finished on Campbell Street and flows into an open drain. The size of the pipe at the end of Campbell Street is 975mm in diameter. It does not drain in line with the natural contours. As such, the open drain on Campbell Street holds water rather than flows naturally with the contours. The open drain then flows into Rosedale Creek. While the open drains may provide some filtration there is no evidence of how the quality of the water is contributing to the health of the waterways.
2. The second system starts on Sparks Lane, runs partially along Traralgon-Maffra Road to the east and then down Stringer Road, where it finishes at Hendersons Road and Toongabbie Creek to join with Toongabbie Creek. Although the first two systems are relatively close, they do not form part of the same drainage system as it was constructed with an incompatible pipeline that is 300mm in diameter and as such, while it could connect it cannot carry the volume of water that the Campbell Street pipe can.
3. The third system extends around from Cowen Street, behind the General Store, before travelling south east along Traralgon-Maffra

Road towards Toongabbie Creek. The start of the pipe is 600mm in diameter and finishes as an 825mm diameter pipe. This drains into Toongabbie Creek. This could be filtered through the Toongabbie wetlands, however there is no evidence that this occurs.

Drainage options in the future would be dependent on the outcomes of an integrated water management strategy. During the consultation sessions with the Toongabbie residents, three drainage profiles were explored (shown in Figure IS17 to Figure IS19), which included:

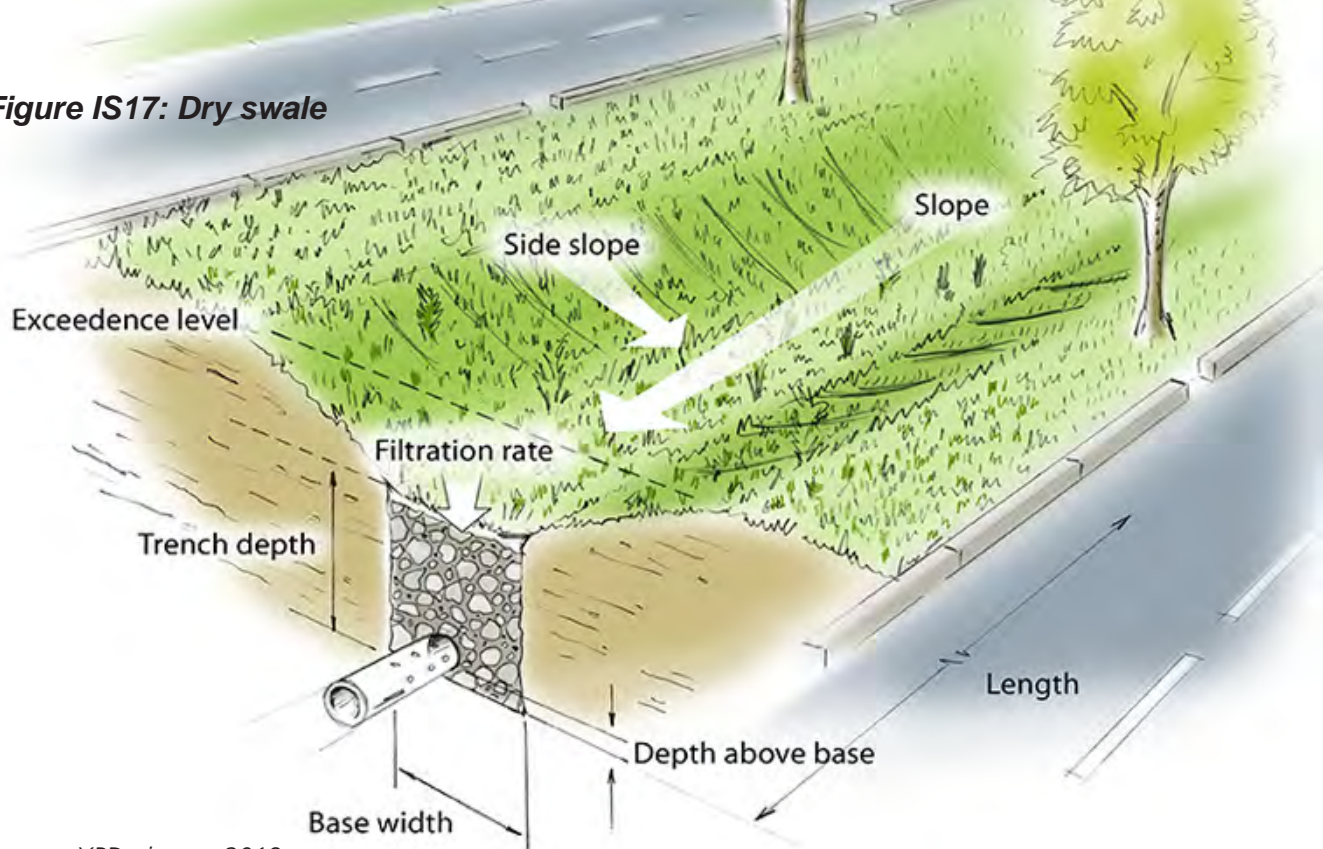
- Kerb and channel;
- Open swale drain with a pipe underneath (Dry Swale); and
- Open swale drain.

The stakeholders involved in community consultation indicated that they would be happy with the top two options throughout the town. While they indicated that the 'dry swale' is in keeping with a preferred rural character, they also thought that roads that carried a higher level of traffic, like Victoria Street should be sealed, kerbed and channelled. The feasibility and implementation of each of these options is likely to be explored in an integrated water management strategy.

As mentioned in the traffic and transport section, it would also be dependent on the number of people on any given street that are willing to contribute to the upgrade of the street.

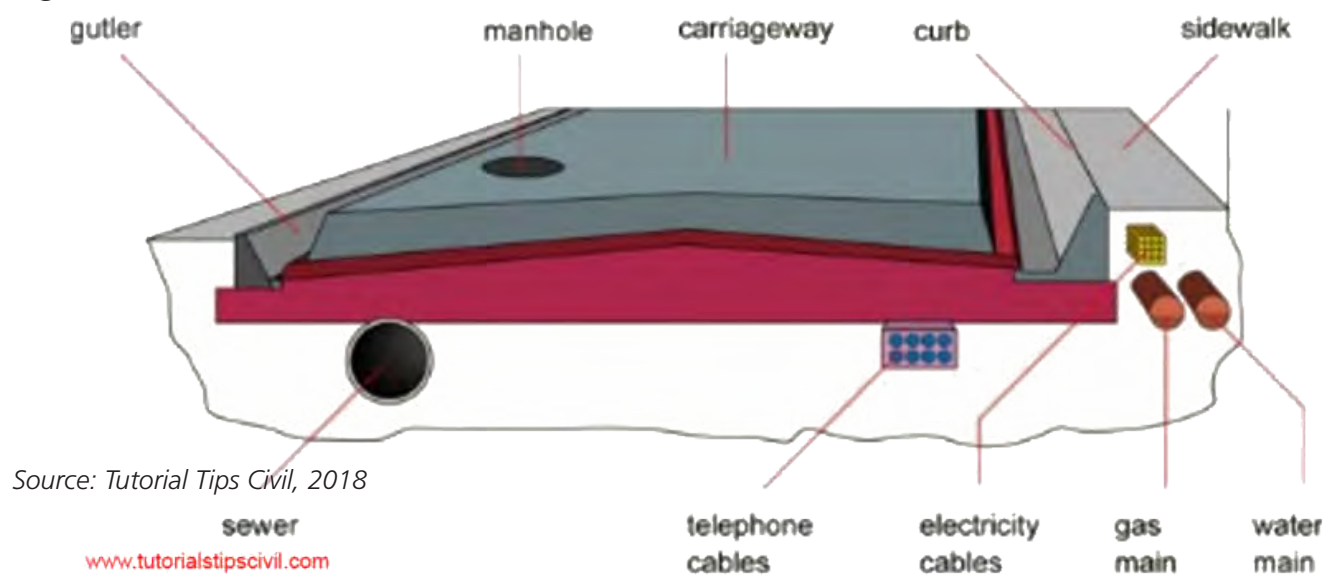
Any streets given priority over other streets may not proceed if residents along that street opted not to contribute.

Figure IS17: Dry swale



Source: XPDrainage, 2019

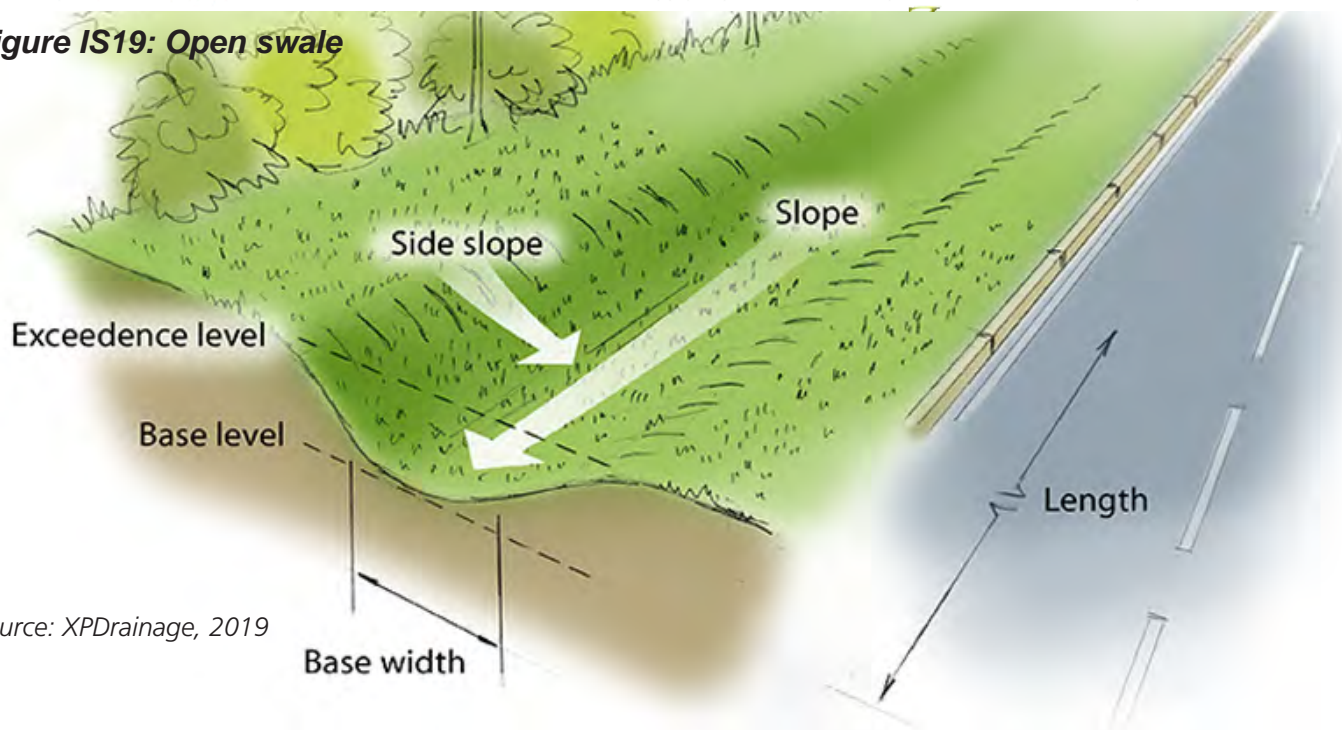
Figure IS18: Kerb and channel



Source: Tutorial Tips Civil, 2018

www.tutorialstipscivil.com

Figure IS19: Open swale



Source: XPDrainage, 2019

Figure IS20: Drainage map



LEGEND

- Drainage system
- Residentially zoned area
- Property
- Title
- Municipal boundary

0 100 200 300 400 m

4.6 Issues and Opportunities

4.6.1 SUMMARY OF ISSUES

Gippsland Water has stated that it has the ability to service 45 more water connections and 40 sewer connections. As such, based on current growth rates it means that it can service approximately 10 years of growth before requiring significant upgrades. However, during the peak summer period, these smaller diameter dead end mains currently experience dynamic pressures close to the lower allowable limit of 14m due to upstream network usage and additional growth will exacerbate these issues. The growth proposed would require these water mains to be upgraded at least one pipe size with potential interconnections with the existing system.

A detailed study of the waterways in Toongabbie has not been undertaken according to WGCMA. As such, it is not possible to comment on the quality of the waterways. Furthermore, the waterways throughout Toongabbie are either on private land or have been incorporated into farmland and as such the riparian corridors have been allowed to be degraded through grazing activity, and pest and weed control. This was witnessed through site visits conducted as a part of the *draft Toongabbie Structure Plan Background Reports - Flora and Fauna assessment 2020*.

The extent of the flooding will likely impact on rezoning options due to the ability to connect to reticulated services, particularly for sewer provision.

The application of the Floodway Overlay will also limit development opportunities within town. Further discussions should be held with WGCMA to explore what the development opportunities are in town. It is noted that the flood overlays

are proposed to be updated in an amendment to the Latrobe Planning Scheme in the 2020/2021 financial year.

The drainage network in Toongabbie has a number of issues identified through the consultation process. These include:

- The lack of connectivity between the three closed drainage systems which becomes an issue because the open drains do not clear water in a fast and effective manner allowing water to pool;
- Stormwater runoff is not necessarily filtered adequately before entering the waterways. Although there is a lack of information on how the water quality is being affected; and
- The open drains, particularly along Campbell Street require extensive maintenance and do not drain easily leading to stagnant water patches.

4.6.2 OPPORTUNITIES

Significant upgrades would need to occur to support growth within the township boundary based on its current zoning. There is the possibility of rezoning land with the residentially zoned area which would limit the number of connections in the service district in the long term, these include:

- Rezoning all or a portion of the Neighbourhood Residential Zone to a Low Density Residential Zone which would have a minimum subdivision size of 2000 square metres in line with the average lot size in town if it was connected to reticulated services or 4000 square metres if it was not.
- Rezoning the Neighbourhood Residential Zone - Schedule 4 to a new Neighbourhood

Residential Zone - Schedule 5 which could have a minimum lot size of 1000 square metres as there is no proposed minimum lot size under the Neighbourhood Residential Zone – Schedule 4 which would currently allow for an additional 297 dwellings.

While rezoning is an option to partially mitigate the need for significant infrastructure upgrades, alternatives for both water and sewer will need to be further explored in the future.

WGCMA have recommended undertaking an integrated water management plan along with Latrobe City Council to explore:

- The feasibility of a flood retarding basin to the north west which would limit floodways throughout the town allowing for greater development potential;
- Investigating re-vegetation works along the 30 metre riparian corridors of the waterways that run throughout town – this could also connect into building walking trails along the creeks.
- Investigating options for filtering drainage and stormwater runoff to ensure better water quality for the creeks.
- Investigating drainage options and how to better manage the drainage system so that it effectively drains water away and stops pooling in the open drains.
- Options for the larger open drains and how the issues raised can be effectively mitigated.

No.	Recommendations
1.	Explore zones that can sustainably manage the infrastructure requirements for the town through the structure plan for Toongabbie.
2.	Seek advice from WGCMA on supported development opportunities within the township in flood affected areas.
3.	Work with WGCMA, Gippsland Water to draft an integrated water management strategy for Toongabbie.

5

Electricity and Gas



5.1 Objectives

The objectives for this assessment include:

- To consider electricity and gas infrastructure constraints and opportunities on residential growth opportunities;
- To consider any alternatives if needed; and
- Identify any recommendations that could be incorporated into the Toongabbie Structure Plan.

This assessment was undertaken by consulting with SP Ausnet and APA Gas.

5.2 Electricity

SP Ausnet is the authority regarding electricity within Latrobe City Council.

5.2.1 ELECTRICITY NETWORK

Toongabbie is part of the Traralgon to Maffra electricity network. The electricity runs from the Traralgon Zone Substation (TGN Zone Sub) to a feeder (TGN31) in Glengarry where the supply splits in two directions. One line services Tyers and the nearby Matthews Quarry, while the other runs towards Toongabbie and onto Maffra where there is a second feeder through copper wires.

When routine repairs occur, the electricity supply can be shut off in one direction but continue to supply electricity as it runs in the opposite direction between the two feeders.

A detailed schematic of the electricity network system profile for Toongabbie is found in Appendix 9.

Figure IS21 shows the lines within the study area and immediately surrounding land.

5.2.2 ELECTRICITY CAPACITY

The TGN31 feeder is a 22 kilovolt (kV) feeder, it feeds the line between Glengarry and Toongabbie which has a capacity of 130 Amps (A) with a current loading of 60A which leaves an additional 70A of capacity. The electricity supply to Toongabbie and district is currently within the design capacity of the network. There are approximately 10 years of load increase available in the network with the current incremental growth.

The line running from Traralgon to Glengarry has a total capacity loading of 320A with a current loading of 110A leaving an additional 210A of capacity.

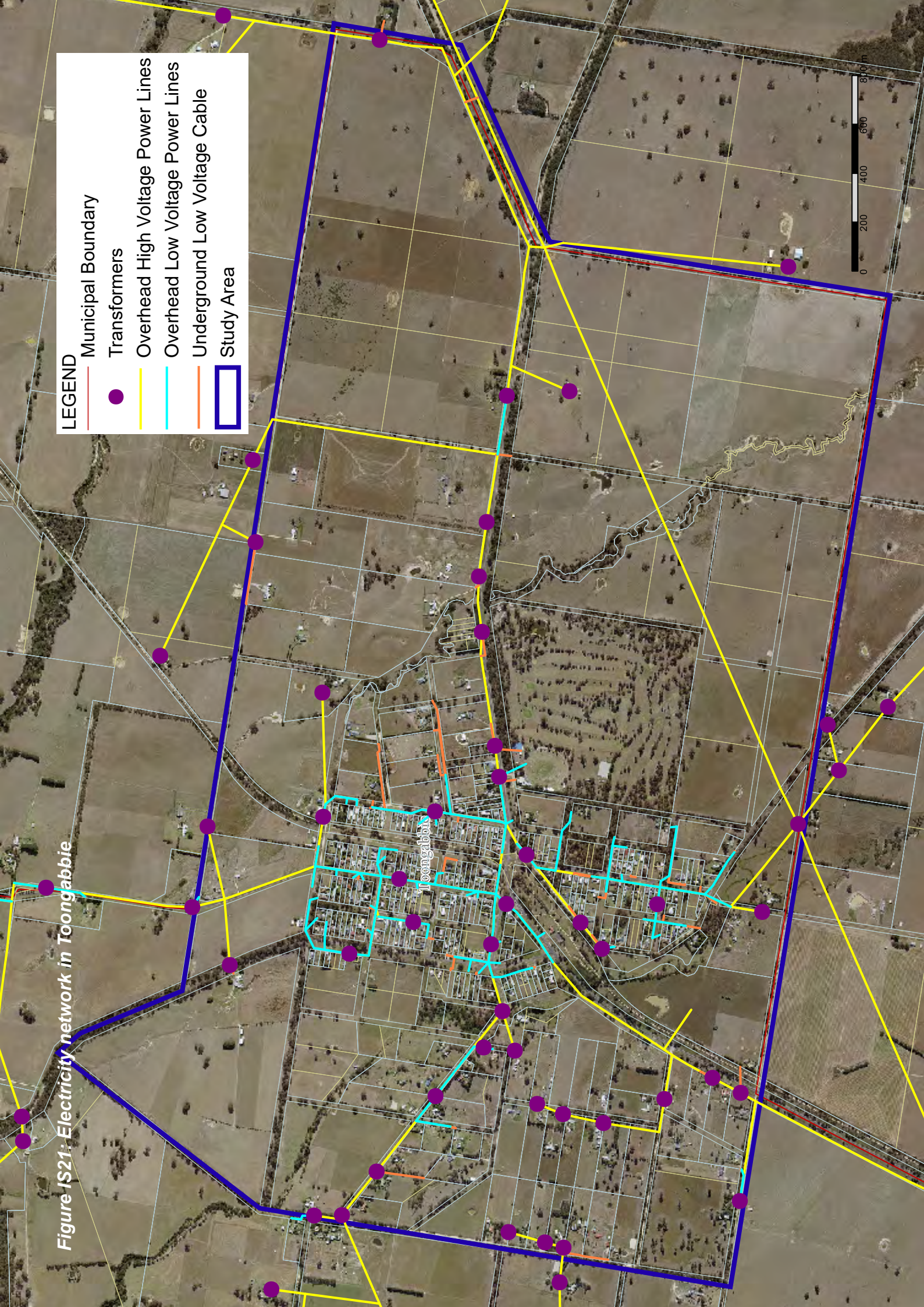
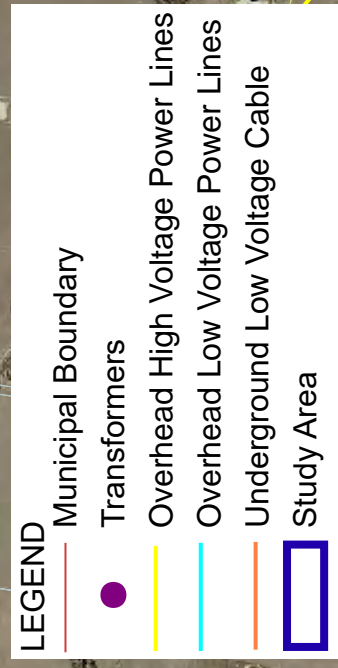
The load in Toongabbie is currently less than 60A.

5.2.3 ELECTRICITY PROVISION

SP Ausnet have stated that Toongabbie may need a transformer upgrade particularly on the southern side of the town as some of the low voltage lines are quite a distance from the transformer which means that it is near the end of its capacity to service homes with a reliable supply. This particularly affects the larger parcels of land along Heywood Street should they choose to subdivide.

SP Ausnet notes that any line upgrades within town require underground cables rather than electricity poles due to the bushfire risk and the possible asset loss in the event of a bushfire. Historically, network upgrades occur when a single large customer is connected to the network and absorbs all of the available capacity. SP Ausnet ensure that any significant new load will initiate works that will provide the appropriate capacity to the new load and retain

Figure IS21: Electricity network in Toongabbie



spare capacity for the incremental load increases.

As each upgrade presents different requirements, the cost of upgrade works are difficult to estimate without a full review and design. The electricity network is radial in design, resulting in larger loads and hence capacity closer to the Zone Sub Stations and reducing in capacity at the extremities of the feeders. Hence the upgrade is dependent on the distance from the Zone Sub Station and the size of the load. The cost of network upgrades is dependent on the load increase, distance and length of upgrade and if significant network assets are required.

There are currently a number of industrial projects on the feeder that will have far greater influence on the network loads than the incremental residential load increase. However if there is to be significant urban residential subdivision then that will also initiate a network study to determine the impact on the feeder loads and capacity.

5.2.4 ALTERNATIVES FOR ELECTRICITY

The Latrobe Valley Authority (LVA) in their *Jobs and Investment Prospectus* for renewable energy states that “there is a strong growth potential for international and local companies looking to invest in clean energy generation in the Latrobe Valley and surrounding areas...The Latrobe Valley currently has renewable energy generation capacity of 113.6 megawatts (MW), including solar, hydro and biomass.”

As there are significant constraints on infrastructure provision, and on the ability to be able to provide timely upgrades, renewable energy is one area that is an attractive alternative option for small towns without the need for significant capital works investments.

SP Ausnet has noted that Toongabbie would be a

viable candidate for alternative electricity network options, particularly a microgrid, as it has supply in both directions which means that it could allow for the electrical supply from the main lines to bypass the community if it was not needed.

Microgrids

A Microgrid is a local energy grid that can operate autonomously from the traditional grid during severe weather events, emergency situations, or routine maintenance. While a traditional grid connects homes, businesses, and other buildings central to power sources, microgrids operate using local energy sources such as combine heating and power, photovoltaics (solar panels), and wind systems.

Microgrids eliminate waste, increase power efficiency, provide power to critical facilities in blackout events, provide support to bulk power grids, offer lower wholesale power prices for customers, and lower emissions. Additionally, microgrids serve as a catalyst for economic development by utilising local and clean energy sources.

Microgrids could be considered should the network reach capacity and an upgrade to the network is not feasible. In Toongabbie, this could be achieved in the form of rooftop solar panels feeding into central battery storage. Yackandandah have a very similar program to this, where all of the community buildings have solar panels that generate the majority of the output for the town.

It is not expected that electricity capacity will be an issue over the next 20 years.

5.3 Gas - Servicing

APA Networks is the authority who deals with gas servicing within Latrobe City Council.

5.3.1 GAS NETWORK

There is currently no gas connection to Toongabbie. APA Networks has stated that the rules around providing gas to a consumer or area require, among other things, that an economic assessment of the project be positive. In other words, it depends on the overall balance between the cost of providing the service and the likely revenue that would result. It would then be feasible to run a gas connection from the closest point which is south of Glengarry to Toongabbie.

5.3.2 GAS PROVISION

Pipeline infrastructure from the south of Glengarry to Toongabbie would be around 16.5km long; a main of this length would likely cost several million dollars to construct, just to reach the township. This is not taking into account internal reticulation and service connection costs.

5.3.3 ALTERNATIVES FOR GAS

If gas connections were a priority for the community before reaching the minimum threshold for pipeline infrastructure, APA Networks have stated that there is the possibility of connecting to a remote liquid natural gas satellite town which could be further explored rather than investing in pipeline infrastructure as the costs of LPG and LNGs are comparable. LNG can be transported by truck as well. However, this would need a suitable site for it to be located and given the bushfire risk in the area, this option may not be advisable.

5.4 Issues and Opportunities

5.4.1 SUMMARY OF ISSUES

There is currently enough electricity capacity to support growth over the next 15 years (the life of a town structure plan).

There is currently no gas service in Toongabbie.

5.4.2 OPPORTUNITIES

While there is enough spare capacity to cater for incremental growth within Toongabbie, there is the opportunity for the town to move towards a microgrid for the town which would ensure that the town's energy needs are sustainable as it continues to grow.

No.	Recommendations
1.	Advocate for sustainable energy options within the town as reticulated services continue to be experience a level of stress.

6

Telecommunications



6.1 Objectives

Telecommunications was raised as an issue through the consultation process. While it does not directly relate to possible future growth scenarios, it does contribute to the perceived liveability of an area and towards the safety of the residents during emergency events such as flood and bushfire events. The objectives for this assessment include:

- To consider telecommunications constraints; and
- Identify any recommendations that could be incorporated into the Toongabbie Structure Plan.

6.2 Telecommunications

This assessment was undertaken by consulting with Telstra and by undertaking a desktop assessment on tower locations and signal strength.

6.2.1 MOBILE TOWER NETWORK

There are two main providers for mobile coverage in Latrobe, Telstra and Optus. Telstra has three towers north of Traralgon (shown in Figure IS22) which provides mobile coverage to Toongabbie and includes:

- eNB ID 532124 - south of Glengarry
- eNB ID 530733 - near the Marshalls Road estate in Traralgon
- eNB ID 532109 - near Lower Cairnbrook Road in Flynn

Similarly, Optus has three towers that provide some service to Toongabbie (shown in Figure IS23) which includes:

- eNB ID 84488 - in Tyers

- eNB ID 83226 - south east of Glengarry
- eNB ID 84220 - south west of Heyfield

6.2.2 MOBILE COVERAGE

To better understand the highlighted poor coverage in Toongabbie, cellmapper.net.au provides a map with the location of the current mobile towers and the signal strength along key routes. The dark green has the best coverage while the red areas have little to no coverage. This is shown in Figures IS22 and IS23.

According to these maps, Telstra's mobile phone coverage is poor north of Traralgon-Maffra Road within the Toongabbie township, while Optus has very poor coverage across the entire study area but does service the rural living precincts in Toongabbie and Cowwarr better than the Telstra towers do. Telstra has stated that there are no current plans to install new or upgrade telecommunications towers.

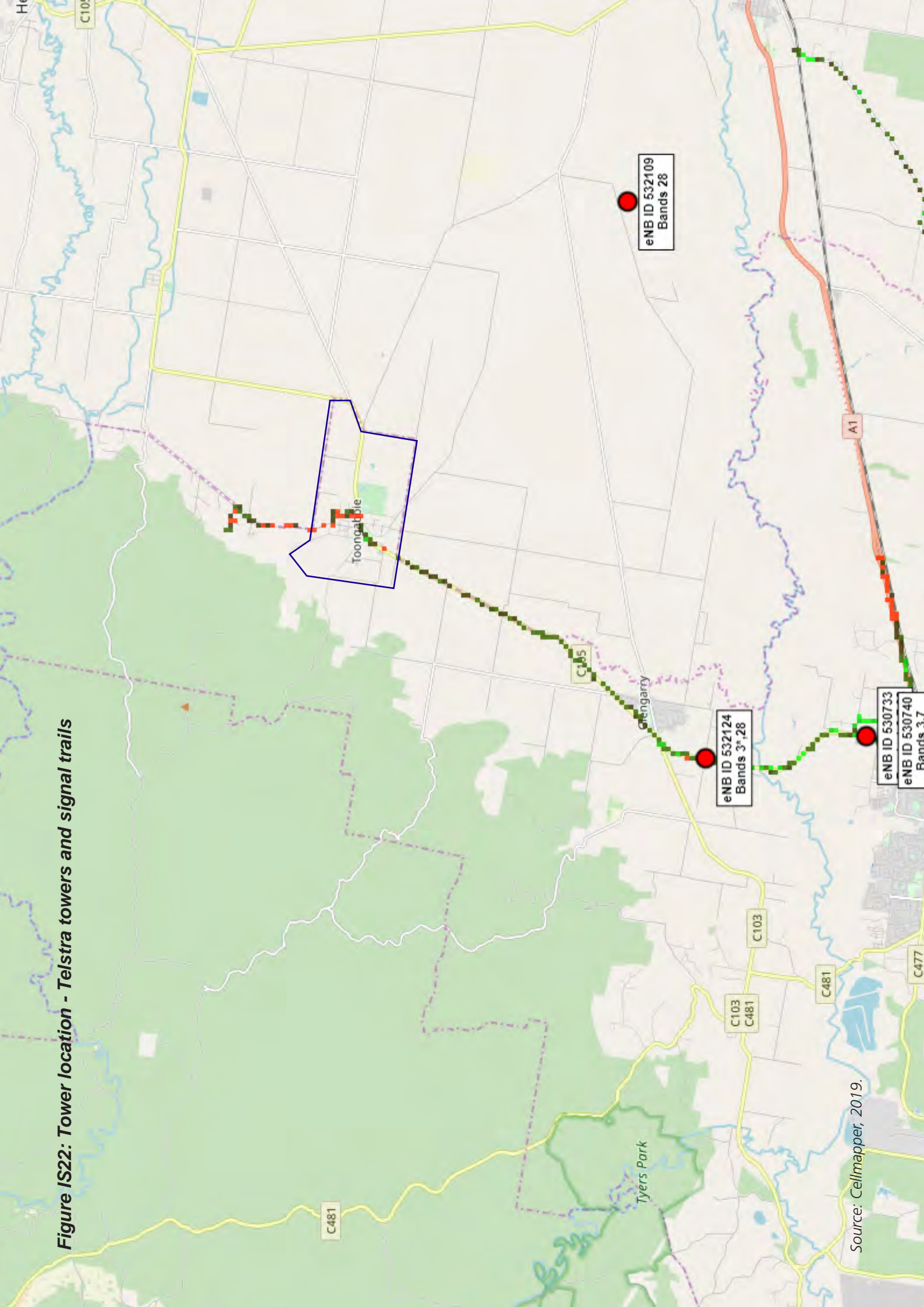
Mobile Black Spot Program

The Federal Government's Mobile Black Spot Program is an expansion of mobile coverage in regional and remote Australia. Areas which will receive new mobile network coverage have been announced in multiple rounds since 2015, starting with Round 1, and most recently with Round 4 announced in March 2019.

Telstra have stated that they are investigating the possibility of putting Toongabbie on the Commonwealth black spot program but this is still in the preliminary stages. No further information was provided on what this entails.

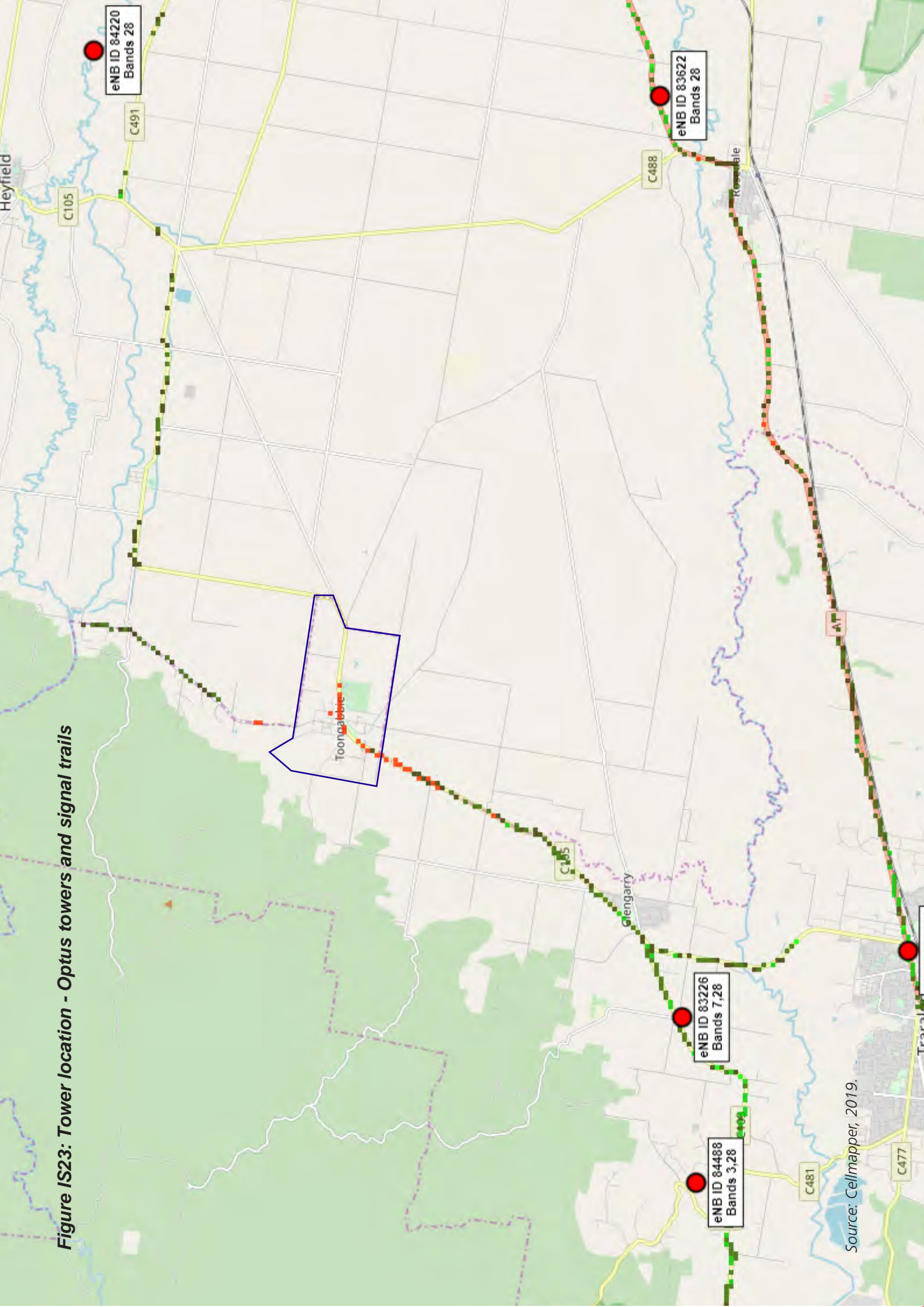


Figure IS22: Tower location - Telstra towers and signal trails



Source: Cellmapper, 2019.

Figure IS23: Tower location - Optus towers and signal trails



6.3 Issues and Opportunities

No.	Recommendations
1.	Advocate with Telstra and Optus to provide better mobile coverage in Toongabbie.



Photo: Gippsland Plains Rail Trail
Source: McKenzie, T., 2019

7

Recommendations



For the purpose of this report the following timeframes apply:

- Short-term: 0 - 4 years
- Medium-term: 5 - 9 years
- Long-term: 10+ years

<i>No.</i>	<i>Action</i>	<i>Responsible Authority</i>	<i>Timeframe</i>
1	Rezone land that can sustainably manage the infrastructure requirements for the town through the structure plan for Toongabbie.	LCC	Short-term
2	Write a policy on requirements for road construction standards in small towns.	LCC	Short-term
3	Amend the addendum to the Infrastructure Design Manual on the road standards within small towns pending further consultation with the other small towns within the municipality.	LCC	Short-medium term
4	Prepare a Sequencing Strategy that outlines where the priority upgrades for roads and footpaths will be, and the timing of works.	LCC	Medium-term
5	Work with Latrobe Valley Bus Lines (LVBL) and Public Transport for Victoria (PTV) to advocate for more bus services between Toongabbie and Traralgon.	LCC LVBL PTV	Medium-term
6	Explore traffic calming measures and measures to improve sighting of intersections on the entrances to streets off Traralgon-Maffra Road.	VicRoads, LCC	Long-term
7	Draft an integrated water management strategy for Toongabbie that incorporates drainage assets, flood retention and future demand for infrastructure.	LCC, WGCMA Gippsland Water	Short-term
8	Advocate for sustainable energy options within the town as reticulated services continue to be experience a level of stress.	LCC	Long-term
9	Advocate with Telstra and Optus to provide better mobile coverage in Toongabbie.	LCC	Medium-term
10	Seek advice from WGCMA on supported development opportunities within the township in flood affected areas.	LCC WGCMA	Short-term
11	Direct commercial growth to Cowen and King Streets	LCC	Ongoing

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Appendices



Appendix 1

Road Network

Afflecks Road

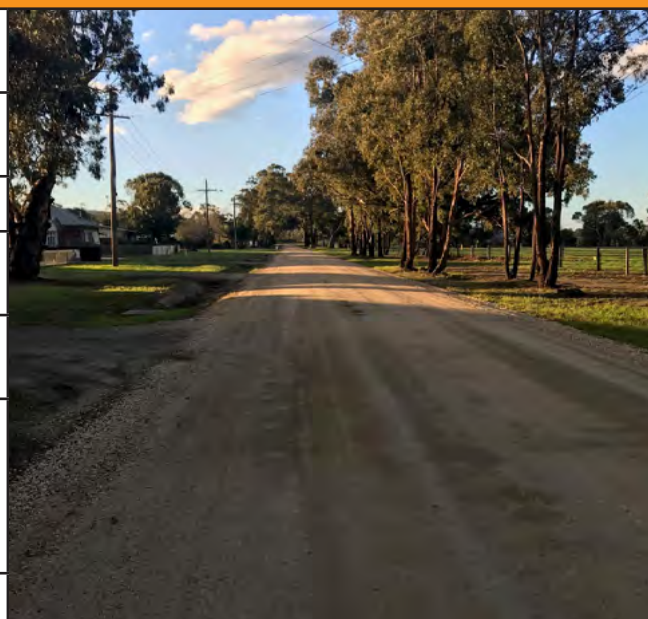
Description	Carriageway width	5.1m	
Single lane, two-way unsealed gravel road with sealed entrances at Toongabbie-Cowwarr Road and Traralgon Maffra Road. It runs between Old Walhalla Road to Traralgon-Maffra Road at the north of Toongabbie township. It becomes a dirt road between Nippe Lane and Traralgon Maffra Road.	Reservation width	20.3m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100 km per hour (km/h) as an unmarked rural road.	
	Seal	No, gravel	

Antons Lane

Description	Carriageway width	5.0m	
Antons Lane is a boundary road between Wellington Shire Council and Latrobe City Council. It is a two-way, single lane, dirt road. It runs north-south between Traralgon-Maffra Road and Guyatts Road. It does continue travelling further south towards Hendersons Road.	Reservation width	21.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road.	
	Seal	No, dirt.	

Campbell Street

Description	Carriageway width	4.2m
Campbell Street is a single lane, two way, no through, compacted gravel street that runs east off Sparks Lane. It has open swale drains that run along the shoulder on the northern side.	Reservation width	30.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	50km/h as it is an unmarked local road.
	Seal	No, gravel




Cemetery Road


Description	Carriageway width	8.7m
Cemetery Road Runs east-west between Traralgon – Maffra Road and Harris Lane. It is a two-way, single lane, gravel road.	Reservation width	20.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	100km/h as an unmarked rural road
	Seal	No, gravel




Cowen Street

Description	Carriageway width	6.6m	
Cowen Street is a single lane, two way street that runs east-west between King Street and Victoria Street. It has a V/Line bus stop on the southern side of the Victoria Street end next to the General Store. It has several trees planted in the road reserve that are listed as a part of the Toongabbie Heritage Precinct.	Reservation width	60.0m	
	Kerbing	No	
	Footpath provision	Between the Village Green and Victoria Street and around the Village Green towards King Street	
	Bicycle provision	No	
	Speed limit	50km/h as an unmarked local road	
	Seal	Yes	

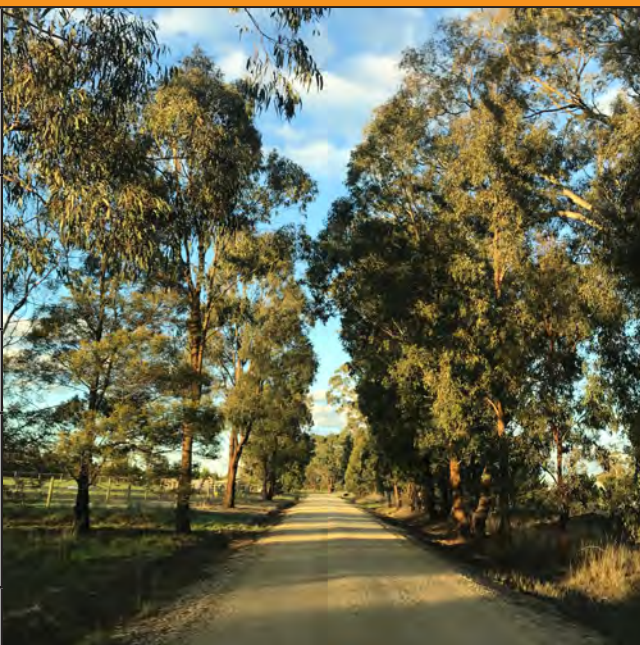
Gadd Street

Description	Carriageway width	5.0m	
Runs east-west between Hower Street and Stringer Road. It is a single lane two way unsealed road.	Reservation width	30.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as it is an unmarked local road.	
	Seal	No, gravel.	

Gales Lane

Description	Carriageway width	3.0m	
Gales Lane runs south off Humphrey Road. It is a two-way, single lane, gravel, no through road. It is a limited access road for 10 and 14 Gale Lane. There is an unmade road reserve that runs north of Gale Lane from Humphrey Road to the top of the study area.	Reservation width	21.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road.	
	Seal	No, gravel	

Gilbert Street

Description	Carriageway width	5.0m	
Gilbert Street is a single lane, two way, no through, gravel street that runs east off Sparks Lane.	Reservation width	21.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as it is a local road.	
	Seal	No, gravel	

Goodwin Street

Description	Carriageway width	4.2m
Informal single track used as an unmarked two way gravel road that runs north south between Traralgon-Maffra Road and Hill Street. The section between Stewart Street and Hill Street is used as a throughway without a real road being established.	Reservation width	30.4m
	Kerbing	No
	Footpath provision	No, although it runs parallel to the Gippland Plains Rail Trail
	Bicycle provision	No, same as above
	Speed limit	50km/h as it is an unmarked local road
	Seal	No, gravel





Guyatts Road

Description	Carriageway width	4.6m
Guyatts Road runs between Harris Lane and River Road as an unsealed dirt road. It then starts again as Guyatts Road East where it intersects with Hendersons Road and runs to Antons Lane as an unsealed gravel road with limited access.	Reservation width	20.4m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	100km/h as an unmarked rural road
	Seal	No, gravel



Harris Lane

Description	Carriageway width	5.5m	
<p>Harris lane runs north-south between Guyatts Road and Cemetery Road runs east-west between Harris Lane and Traralgon-Maffra Road. It is a single lane, two-way, dirt road. The western extension of Humphrey Road. It is a single lane, two-way, dirt road. Between Guyatts Road and Cemetery Road it is an unmaintained track, while north of Humphrey Road it becomes a no through road. Harris Lane is included in the Municipal Fire Management Plan as a firefighting access route.</p>	Reservation width	20.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road	
	Seal	No, gravel; link section is dirt	


Hazel Street

Description	Carriageway width	5.0m	
<p>Hazel Street runs east-west between King Street and Goodwin Street. It is a single lane, two-way, gravel street. It has sealed entrances where it intersects with Victoria Street.</p>	Reservation width	30.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h	
	Seal	No, gravel	

Hendersons Road

Description	Carriageway width	7.9m	
Hendersons Road travels south-west off the intersection of Stringer Road and Hower Street. It is a single lane, two-way street.	Reservation width	28.5m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road	
	Seal	Yes	

Heywood Street

Description	Carriageway width	4.7m	
Runs north-south between Hendersons Road and Traralgon-Maffra Road on the south side of the town next to the golf course. It is an unsealed unmarked two way street.	Reservation width	21.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as an unmarked local road	
	Seal	No, gravel	

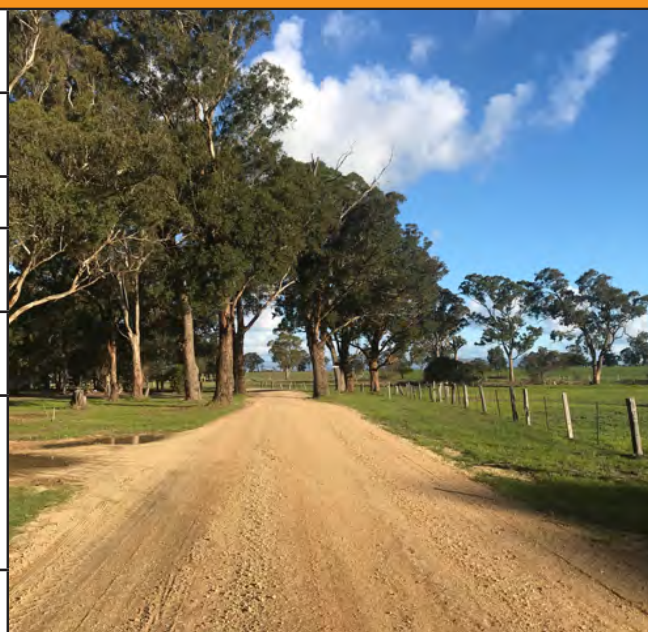
Hill Street

Description	Carriageway width	4.5m
Hill Street runs east-west between Old Walhalla Road and Sparks Lane. The reservation continues to Rosedale Creek but this has not been built. It is a single lane, two-way, gravel road between Old Walhalla Road and Victoria Street and turns into a two-way, single lane, dirt road that runs into Sparks Lane. At Victoria Street, the two halves of Hill Street do not directly sit across from each other.	Reservation width	37.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	50km/h as it is an unmarked local road
	Seal	No, gravel



Hower Street

Description	Carriageway width	5.0m
Hower Street runs along the western border of the southern section of the town. It runs from the intersection of Stringer Road with Traralgon-Maffra Road around to the intersection of Stringer Road, River Road and Hendersons Road. It is an unsealed, unmarked two-way street.	Reservation width	22.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	50km/h as it is an unmarked local road
	Seal	No, gravel



Humphrey Road

Description	Carriageway width	5.0m	
<p>Humphrey Road is a single lane two-way road. It connects Toongabbie with the nearby plantation to the west. It crosses the Toongabbie Creek with a concrete bridge that has no barriers. It is sealed until it intersects with Harris Lane and then becomes unsealed.</p>	Reservation width	18.8m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	60km/h until after the Toongabbie Creek crossing and then 100km/h after that.	
	Seal	Yes, until just after Harris Lane where it becomes an unsealed gravel road	

King Street

Description	Carriageway width	4.0m
King Street runs north south between Traralgon Maffra Road and Old Walhalla Road. It is a single lane two way street. The intersection at Traralgon – Maffra Road splits left and right but still allows two-way traffic. An unsealed service lane runs north south on the west side of King Street between Cowen Street and Main Street and another runs east west on the west side of King Street running parallel with Main Street.	Reservation width	53.4m
	Kerbing	No
	Footpath provision	Gravel path along right side of King Street next to the Mechanics Institute and the Grand Stand.
	Bicycle provision	No
	Speed limit	60km/h
	Seal	Yes





Nicholsons Road


Description	Carriageway width	5.5m
Nicholsons Road runs north-south between Page Lane and Cemetery Road. It is a single lane, two-way, gravel road. It has a deep open drain that runs along the western side of the road.	Reservation width	20.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	100km/h as an unmarked rural road
	Seal	No, gravel



Nippe Lane

Description Nippe Lane runs north-south between Afflecks Road and Traralgon –Maffra Road. It is a single lane, two-way, gravel lane. Nippe Lane also runs south of Traralgon-Maffra Road towards Guyatts Road as a single lane, two way lane; however it is an unmaintained link road once it passes past the dwelling at 1880 Traralgon-Maffra Road.	Carriageway width	5.0m	 
	Reservation width	53.2m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road.	
	Seal	No, gravel	

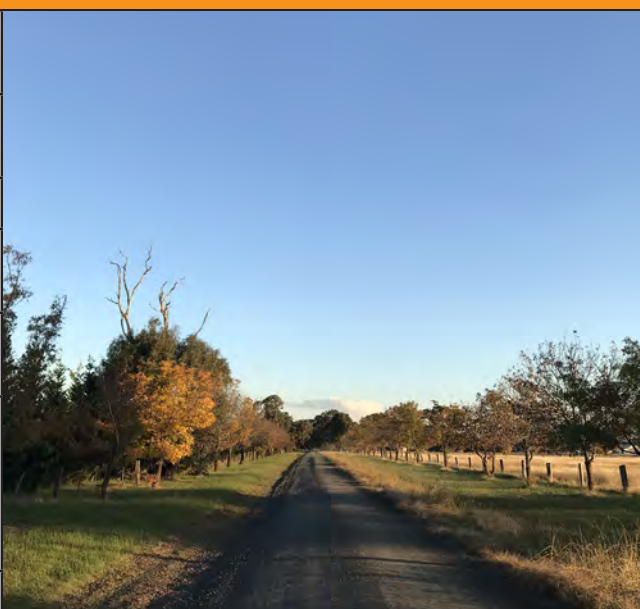
Old Walhalla Road

Description Single lane two way sealed road between Hill Street and 120 Old Walhalla Road where it becomes an unsealed dirt road. It is heavily vegetated with high quality vegetation. It is the old route between Toongabbie and Walhalla.	Carriageway width	4.5m	
	Reservation width	53.2m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h	
	Seal	Yes	

Omeara Street

Description	Carriageway width	3.6m	
Omeara Street runs east of Stringer Road as a two way, single lane dirt track. Although it has a formal name it operates like an informal dirt track.	Reservation width	20.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as an unmarked local road	
	Seal	No, dirt	

Packett Road

Description	Carriageway width	5.9m	
Packett Road runs south of Afflecks Road, between The Gippsland Plains Rail Trail and Nippe Lane, as an unmarked two way, single lane gravel road.	Reservation width	20.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	100km/h as an unmarked rural road	
	Seal	No, gravel	

Page Lane

Description	Carriageway width	5.0m
Page Lane is a single lane, two street that runs south off Humphrey Road before running west, past Gale Lane. It does have a reserve that runs north west towards Harris Lane but this has not been built and does contain a significant patch of vegetation.	Reservation width	20.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	100km/h as an unmarked rural road.
	Seal	No, gravel



Ries Street

Description	Carriageway width	4.0m
An unsealed dirt road that is unmarked single track two-way no through road with a turning circle at the end of the street. It runs south off of Timmins Street. It partially runs south off of Traralgon-Maffra Road. However, this appears to act more like a private road.	Reservation width	30.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	50km/h as an unmarked local road
	Seal	No, gravel



River Road

Description	Carriageway width	5.0m
River Road runs south off Hendersons Road as an extension of Stringer Road towards Cairnbrook Road in Glengarry. It is a single lane, two way street. Only the section of the road between Hendersons Road and Guyatts Road is managed by Latrobe City Council.	Reservation width	20.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	100km/h as an unmarked rural road.
	Seal	Yes



Scott Street

Description	Carriageway width	7.9m
Single lane two way gravel road that runs north south between Hazel Street and Stewart Street. It runs beside the primary school.	Reservation width	30.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	40km/h
	Seal	No, gravel





Semmens Street

Description	Carriageway width	4.8m
Semmens Street runs north off Gadd Street and services 10 and 11 Semmens Street. It is a gravel single lane two way street that does not have any line markings.	Reservation width	30.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	50km/h as it is an unmarked local road
	Seal	No, gravel



Sparks Lane

Description	Carriageway width	7.8m	
<p>Sparks Lane is a single lane, two-way street that runs north-south between Traralgon-Maffra Road and Hill Street. There are two distinct sections to Sparks Lane.</p> <p>The southern section is sealed, kerbed and channelled between Traralgon Maffra Road and Campbell Street, while further north of that it is a compacted dirt road with no kerb or channelling.</p>	Reservation width	30.0m	
	Kerbing	Yes between Traralgon-Maffra Road and Campbell Street	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as it is an unmarked local road	
	Seal	Between Traralgon-Maffra Road and Campbell Street it is sealed, while it is dirt for the rest of the street	

Stewart Street

Description	Carriageway width	5.0m
Stewart Street is a single lane, two-way, gravel street that runs between King Street and Goodwin Street. It has sealed entrances where it intersects with Victoria Street. The two entrances on Victoria Street do not intersect directly across from each other.	Reservation width	29.0m
	Kerbing	No
	Footpath provision	Yes, along the northern boundary between Scott and Victoria Street, next to the school.
	Bicycle provision	No
	Speed limit	50km/h as an unmarked local road except between Scott Street and Victoria Street which is 40km/h.
	Seal	No, gravel



Stringer Road


Description	Carriageway width	7.0m
Stringer Road runs north-south between Traralgon-Maffra Road and Hendersons Road. It is a single lane, two way street that does not have line markings.	Reservation width	31.0m
	Kerbing	No
	Footpath provision	No
	Bicycle provision	No
	Speed limit	60km/h
	Seal	Yes



Timmins Street

Description	Carriageway width	5.0m	
Timmins Street runs east-west in the southern section of the town. It runs east of Stringer Road connecting with Ries Street and partially west. The western section is essentially a private road. It is a single lane, two way gravel street that has sealed entrances off Stringer Road.	Reservation width	31.0m	
	Kerbing	No	
	Footpath provision	No	
	Bicycle provision	No	
	Speed limit	50km/h as it is an unmarked local road.	
	Seal	On the entrances only.	

Toongabbie - Cowwarr Road (Victoria Street)

Description	Carriageway width	7.7m	
Toongabbie – Cowwarr Road or Victoria Street within the town is a single lane two way sealed street. It is designated as a Collector Road due to it connecting Toongabbie with Cowwarr township and Cowwarr Weir. It has parking next to the school.	Reservation width	29.0m	
	Kerbing	No	
	Footpath provision	Between 25 Victoria Street and Cowen Street. It is sealed at the Primary school and unsealed between Stewart Street and Cowen Street	
	Bicycle provision	No	
	Speed limit	60km	
	Seal	Yes	

Traralgon-Maffra Road (Main Street)

Description Traralgon – Maffra Road or Main Street within the township is the main road connecting Glengarry, Toongabbie, Heyfield and Maffra. It is a single lane two way sealed road that is managed by VicRoads. It is a designated freight route.	Carriageway width	7.2m	
	Reservation width	60.8m	
	Kerbing	No	
	Footpath provision	Between Victoria St and Sparks Lane and between Stringer Rd and the Golf Course.	
	Bicycle provision	No	
	Speed limit	60km/h in town, 80km/h outside	
	Seal	Yes	

Appendix 2

Shared Boundary Road Management

Schedule 1 - List of Transferred Assets

Roads											
No	Asset	Location	Datum	Start Chainage	End Chainage	Sector length (km)	Ownership	Ownership Demarcation Line	Transfer Road Management Responsibility (Road Authority)	Details of Transfer	Capital Improvement
1	Guyatts Road	Toongabbie	Traralgon Maffra Road	0.00	0.70	0.70	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Traralgon - Maffra Road & Guyatts Road, east to intersection of Guyatts Road & River Road	Shared (to be negotiated)
2	Guyatts Road East	Toongabbie	Hendersons Road	0.00	0.26	0.26	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Guyatts Road East & Hendersons Road, west to where road terminates	Shared (to be negotiated)
3	Guyatts Road East	Toongabbie	Hendersons Road	0.00	1.77	1.77	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Guyatts Road East & Hendersons Road, east to intersection of Guyatts Road East & Antons Lane	Shared (to be negotiated)
4	Antons Lane	Toongabbie	Guyatts Road	0.00	1.39	1.39	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Guyatts Road East & Antons Lane, north to intersection of Traralgon - Maffra Road & Antons Lane	Shared (to be negotiated)
5	Aflecks Road	Toongabbie	Traralgon Maffra Road	0.00	3.43	3.43	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Wellington Shire Council	Intersection of Traralgon - Maffra Road & Aflecks Road, west to intersection of Toongabbie - Cowwarr Road & Aflecks Road	Shared (to be negotiated)
6	Toongabbie - Cowwarr Road	Toongabbie	Aflecks Road	0.00	3.60	3.60	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Toongabbie - Cowwarr Road & Aflecks Road, north to intersection of Toongabbie - Cowwarr Road & Sheila Court	Shared (to be negotiated)
7	Toongabbie - Cowwarr Road	Cowwarr	Aflecks Road	3.60	5.15	1.55	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Wellington Shire Council	Intersection of Toongabbie - Cowwarr Road & Sheila Court, north to intersection of Toongabbie - Cowwarr Road and Cowwarr - Walhalla Road	Shared (to be negotiated)
8	Weir Road	Cowwarr	Toongabbie - Cowwarr Road	0.00	1.34	1.34	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Wellington Shire Council	Intersection of Toongabbie - Cowwarr Road & Weir Road north to where road terminates	Shared (to be negotiated)
9	Grand Ridge Road (west sector)	Grand Ridge	Toora - Gunyah Road	0.00	19.06	19.06	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Latrobe City Council	Intersection of Toora - Gunyah Road & Grand Ridge Road, east to intersection of Grand Ridge Road & Budgetree Road (English Corner).	Shared (to be negotiated)
10	Grand Ridge Road (east sector)	Grand Ridge	Toora - Gunyah Road	19.06	34.66	15.60	50% Wellington Shire Council 50% Latrobe City Council	Centre line of road	Wellington Shire Council	Intersection of Budgetree Road (English Corner) & Grand Ridge Road, east to intersection of Grand Ridge Road & Tarra Valley Road	Shared (to be negotiated)

Appendix 3

Streetscape Urban Design Guidelines

Appendix 4

Road Maintenance Remediation

Maintenance schedule for roads and footpaths

Maintenance Category	Hierarchy Type	Hazard Inspection Time Frame
Roads		
Road Maintenance Category 1 (RMC1)	Link	One (1) inspection every 8 weeks.
Road Maintenance Category 2 (RMC2)	Collector	One (1) inspection every 8 weeks.
Road Maintenance Category 3a (RMC3a)	Sealed Access >60km/h and all unsealed Access	One (1) inspection every 15 weeks.
Road Maintenance Category 3b (RMC3b)	Sealed Access <60km/h	One (1) inspection every 30 weeks.
Road Maintenance Category 4 (RMC4)	Minor Access	One (1) inspection every 30 weeks.
Road Maintenance Category 5 (RMC5)	Limited Access	One (1) inspection each year.
Carparks		
RMC1 to RMC 5	All off-road and on-road carparks	Inspection at the same schedule as the road from which it is accessed.
Footpaths		
Footpath Maintenance Category - High Usage (FMC-H)	High Usage Zone	One (1) inspection every 12 months.
Footpath Maintenance Category - Medium Usage (FMC-M)	Medium Usage Zone	One (1) inspection every 24 months.
Footpath Maintenance Category - Low Usage (FMC-L)	Low Usage Zone	One (1) inspection every 36 months.

Emergency and reactive response times

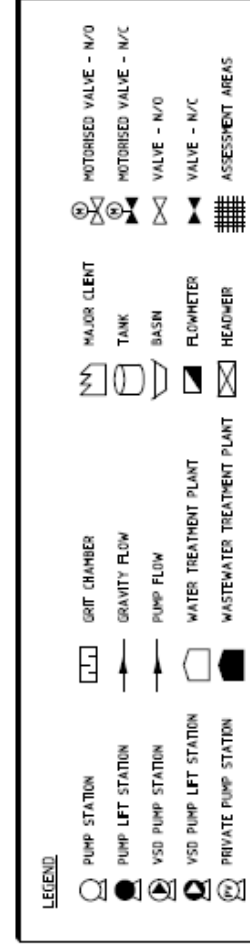
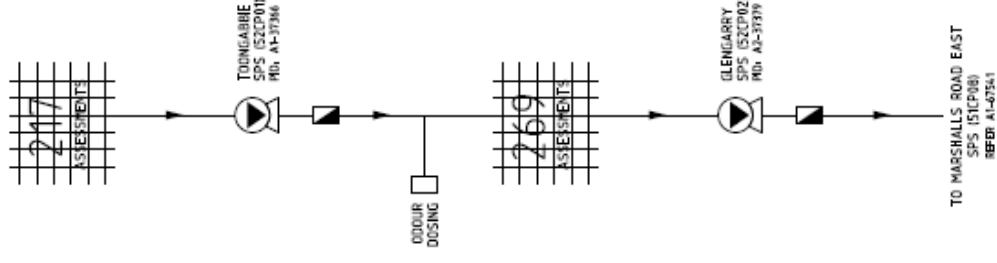
Maintenance Category	Description	Emergency Inspection Times	Response time	Response time from inspection to remedial action	Reactive inspection times	Response time	Response time from inspection to remedial action
Roads							
RMC1	Link	ER	Within 2 hours of inspection notification	Within 2 hours of inspection notification	A	Within 1 day of inspection notification	Within 1 day of inspection notification
RMC2	Collector	ER	Within 2 hours of inspection notification	Within 2 hours of inspection notification	B	Within 2 days of inspection notification	Within 2 days of inspection notification
RMC3a	Sealed Access >60km/h and all unsealed Access	A	Within 1 day of inspection notification	Within 1 day of inspection notification	C	Within 5 days of inspection notification	Within 5 days of inspection notification
RMC3b	Sealed Access <60km/h	A	Within 1 day of inspection notification	Within 1 day of inspection notification	C	Within 5 days of inspection notification	Within 5 days of inspection notification
RMC4	Minor Access	A	Within 1 day of inspection notification	Within 1 day of inspection notification	C	Within 5 days of inspection notification	Within 5 days of inspection notification
RMC5	Limited Access	A	Within 1 day of inspection notification	Within 1 day of inspection notification	C	Within 5 days of inspection notification	Within 5 days of inspection notification
Footpaths							
FMC-H	High Zone Footpath	A	Within 1 day of inspection notification	Within 1 day of inspection notification	A	Within 1 day of inspection notification	Within 1 day of inspection notification
FMC-M	Medium Zone Footpath	A	Within 1 day of inspection notification	Within 1 day of inspection notification	B	Within 2 days of inspection notification	Within 2 days of inspection notification
FMC-L	Low Zone Footpath	A	Within 1 day of inspection notification	Within 1 day of inspection notification	C	Within 5 days of inspection notification	Within 5 days of inspection notification

Appendix 5

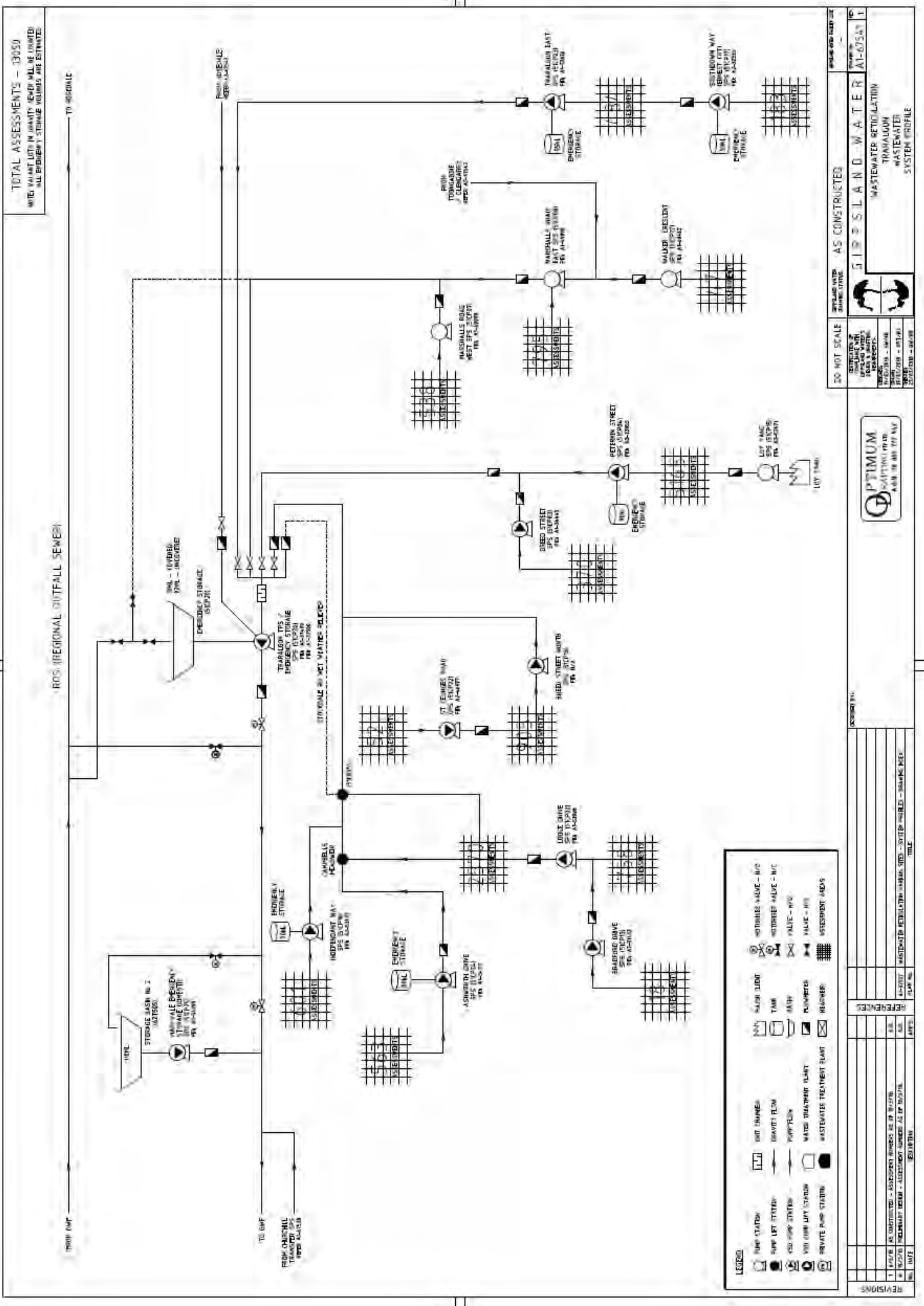
W

TOTAL ASSESSMENTS - 486

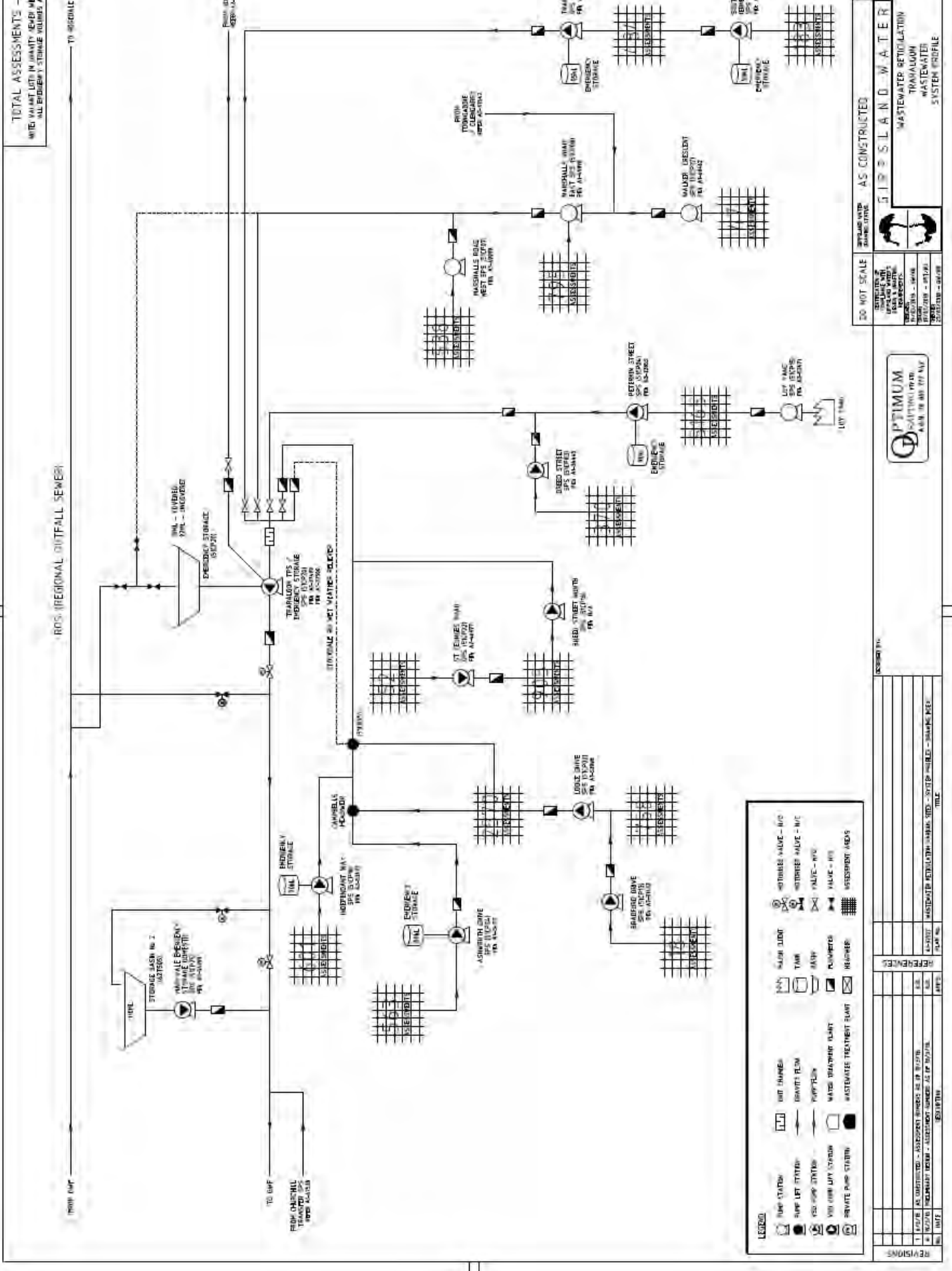
NOTE: VACANT LOTS IN GRAVITY SEWER WILL BE COUNTED
ALL EMERGENCY STORAGE VOLUMES ARE ESTIMATED

[illegible]

DO NOT SCALE	UPSLAND WATER DRAINING STATUS	AS CONSTRUCTED	UPSLAND WATER FALLET CODE
CERTIFICATION OF COMPLIANCE WITH GIPPSLAND'S WASTEWATER REQUIREMENTS	GIPPSLAND WATER		
	WASTEWATER RETICULATION TOONGABBIE / GLENGARRY WASTEWATER SYSTEM PROFILE		
DATE 06/03/2018 - 06/06/2018	DRAWING NO. A2-67542 1		
DRAWN 06/03/2018 - 07/01/2018	REV.		
CHECKED 20/03/2018 - 06/06/2018			



TOTAL ASSESSMENTS - 13050
WATER VOLUME IN QUANTITY - 1000000
TOTAL ASSESSMENTS - 13050



TOTAL ASSESSMENTS - 13050
WATER VOLUME IN QUANTITY - 1000000
TOTAL ASSESSMENTS - 13050

Appendix 6

Cost of Water and Sewer Upgrades

Upgrade costs for water infrastructure by precinct

<i>Study Precinct</i>	<i>Length of Water Main to be constructed or maintained (metres)</i>	<i>Approximate Cost (\$)</i>	<i>Approximate Cost Per New Dwelling (\$)</i>
Precinct A	3799	1,630,000	65,200
Precinct H	7736	3,330,000	128,077
Precinct F	5263	2,260,000	66,470
Precinct C	5102	2,190,000	95,217
Precinct J	5777	2,480,000	46,792
Precinct D	9016	3,880,000	143,704
Precinct E	6865	2,950,000	113,461
Residential Areas potentially rezoned LDRZ	375	160,000	2,712
Other Considerations	Upgrading 23.5km distribution main from Tyers Water Treatment Plant (WTP) to Toongabbie	19,500,000	N/A

Upgrade costs for sewer infrastructure by precinct

<i>Study Precinct</i>	<i>Length of Sewer Main to be constructed or maintained (metres)</i>	<i>Approximate Cost (\$)</i>	<i>Approximate Cost Per New Property (\$)</i>
Residential Areas potentially rezoned LDRZ	1496	780,000	13,220
Other Considerations	Upgrade to Toongabbie SPS and Rising Main	4,890,000	N/A

In addition to that, there may be further costs involved if the Glengarry Sewer Pump Station (SPS) and its rising main may require to be upgraded.

It is not known what exactly the cost of this upgrade is until detailed hydraulic assessments are made. At a minimum, it would cost at least \$5.0 M to upgrade the sewer network.

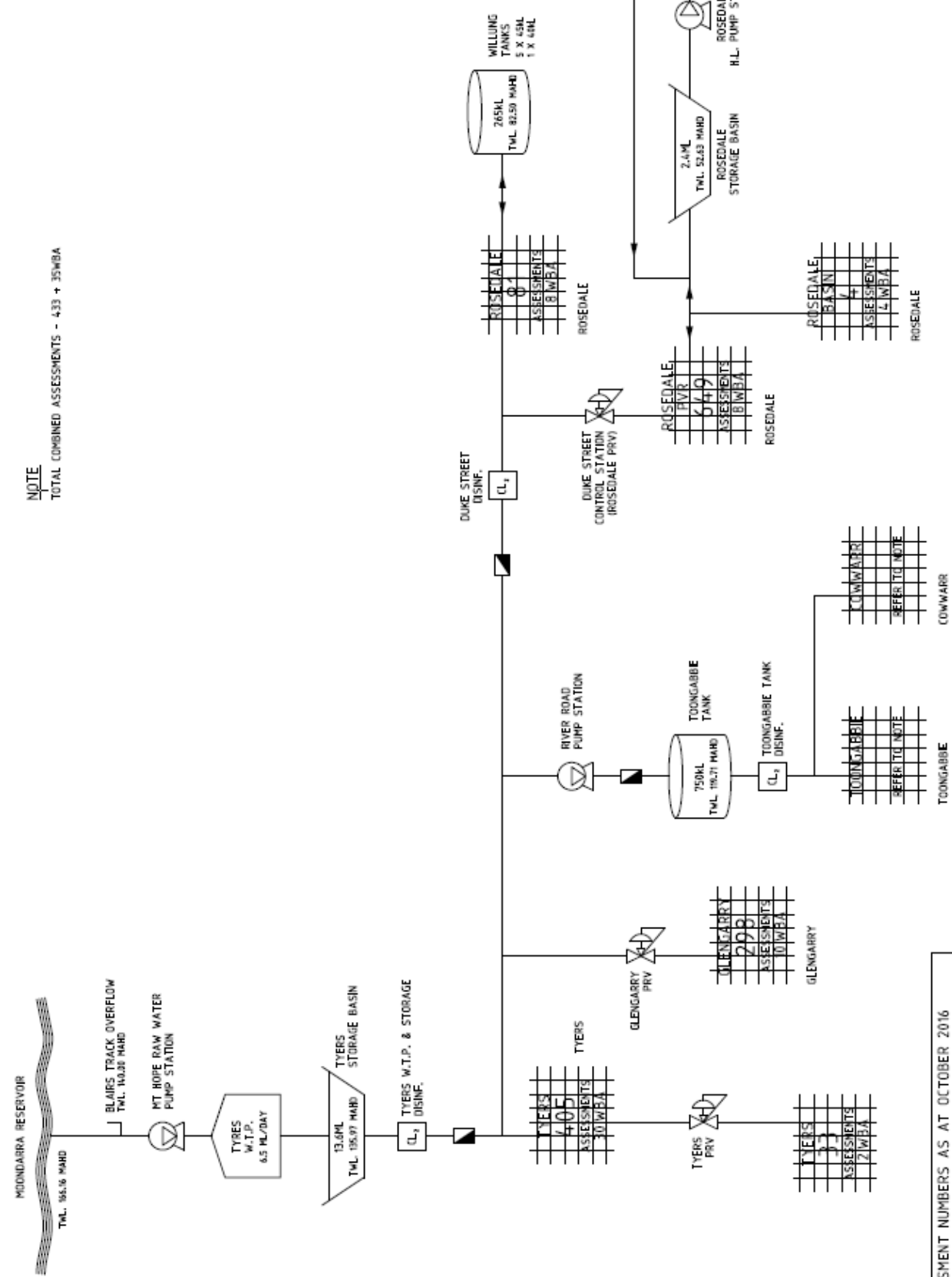
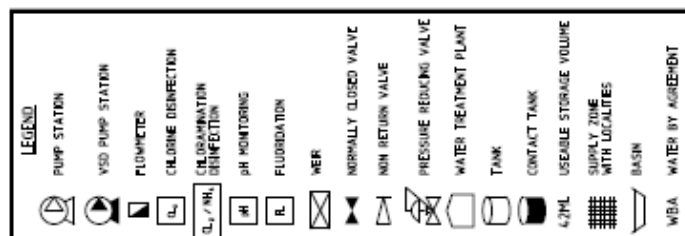
The likely trigger for an upgrade is growth. The upgrade to the system would be based on industry wastewater design criteria. The Toongabbie SPS would require an upgrade when the system peak dry weather flow (PDWF) exceeds the pump capacity of the SPS as a minimum standard.

Toongabbie SPS would require additional storage and either an upgrade to the rising main or additional pumps between Toongabbie and Glengarry.

Appendix 7

W

NOTE
TOTAL COMBINED ASSESSMENTS - 433 + 35WBA



ASSESSMENT NUMBERS AS AT OCTOBER 2016
DATA SOURCE FROM ArcGIS

REV	DATE	DESCRIPTION	APP'D
3	23/6/18	ADDED ASSESSMENT No's & TYERS PVR	J.V.
2	14/1/16	ADDED CHLORINE DISINFECTION SITE NAMES.	E.B.
1	23/2/07	ORIGINAL UPDATE & CHANGED DRG SHT A3 TO A2.	D.W.
0	2/9/04	INITIAL ISSUE.	F.Z.



Transfield Services
Service Provider To
Gippsland Water

CERTIFICATION OF
COMPLIANCE WITH
GIPPSLAND WATER'S
DESIGN & DRAFTING
REQUIREMENTS.
DESIGNED BY
DRAWN BY
CHECKED BY
DATE

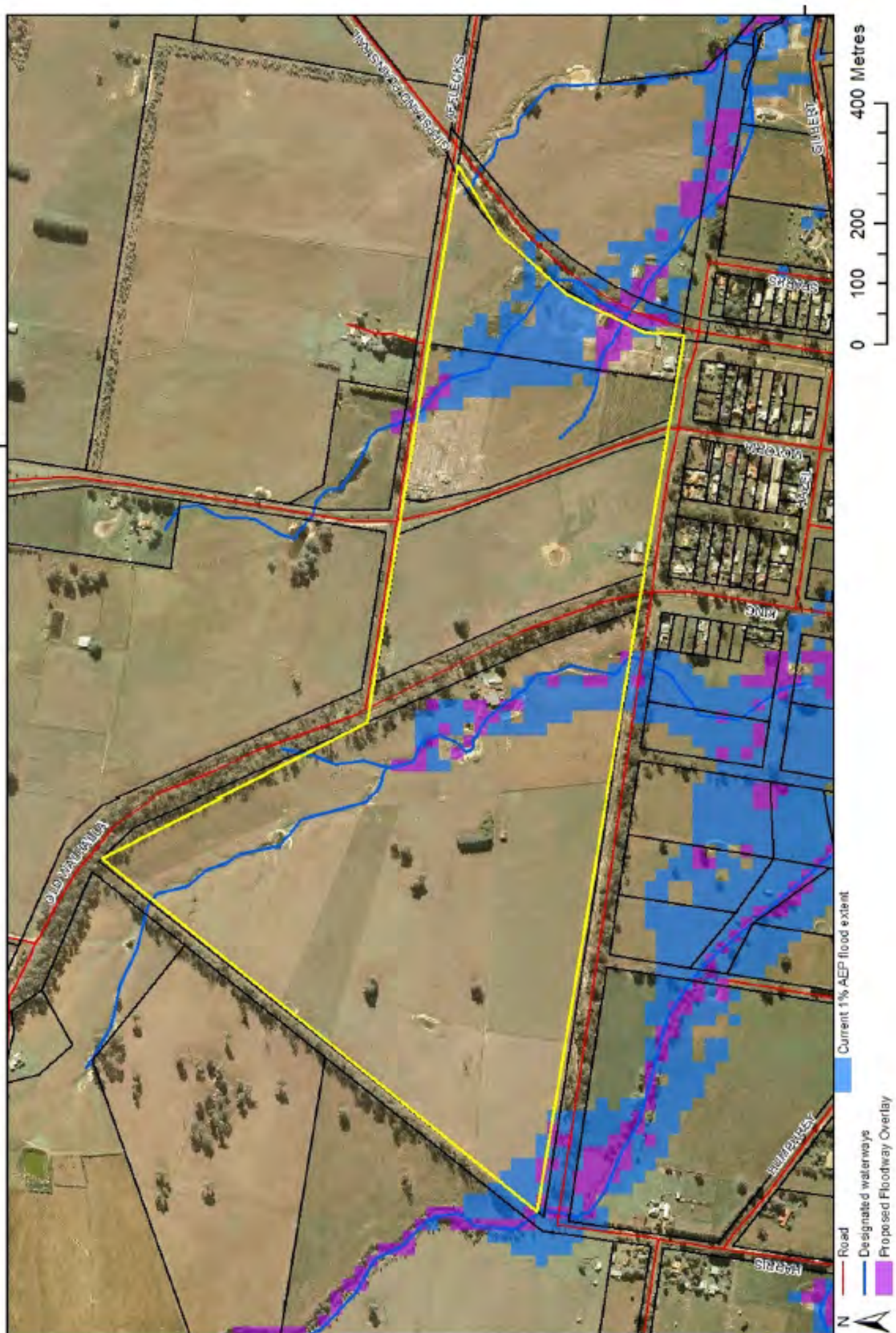


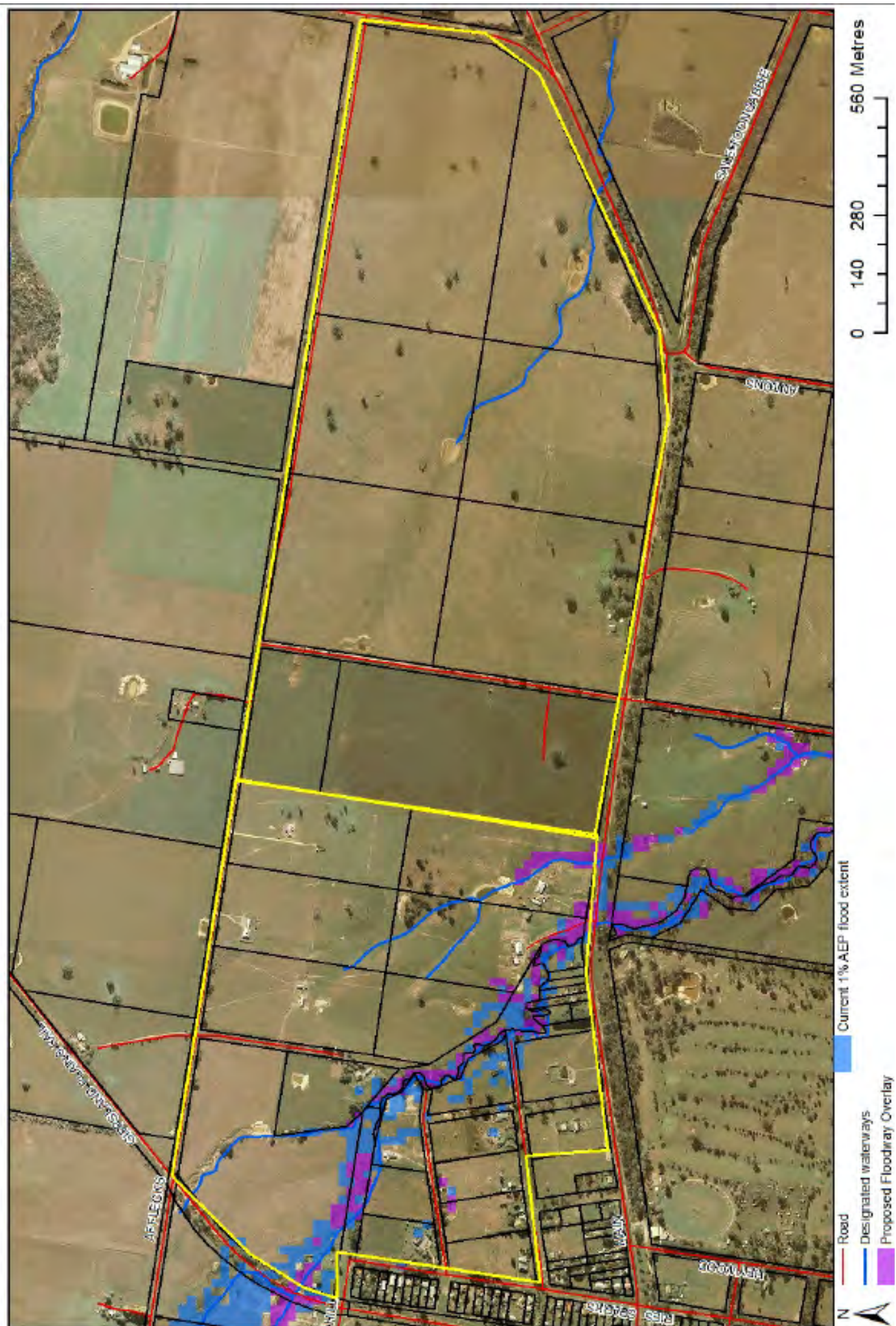
GIPPSLAND WATER
WATER RETICULATION
TYERS / GLENGARRY / ROSEDALE
WATER SUPPLY
SYSTEM PROFILE

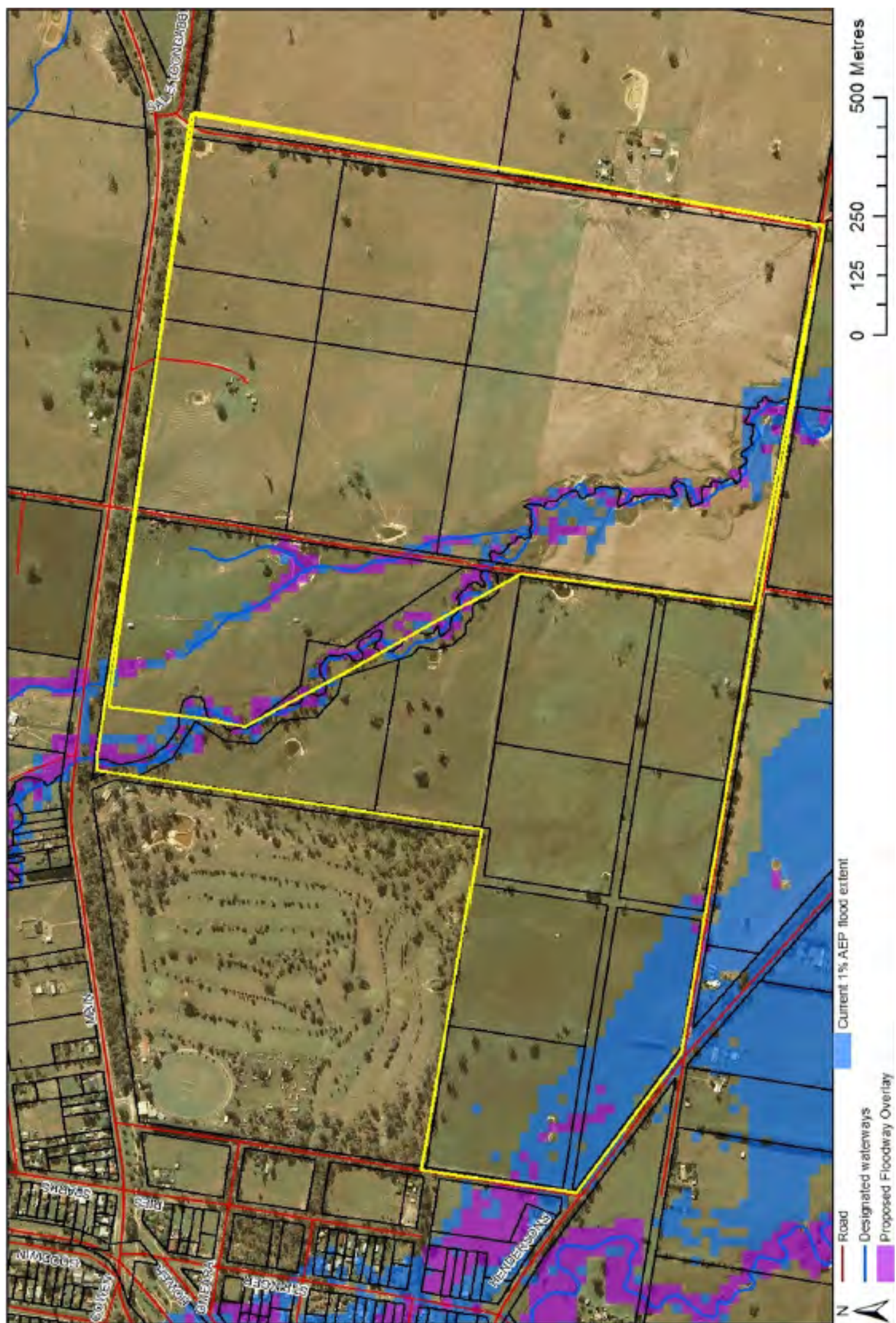
GIPPSLAND WATER SITE CODE
SHEET No.
REV

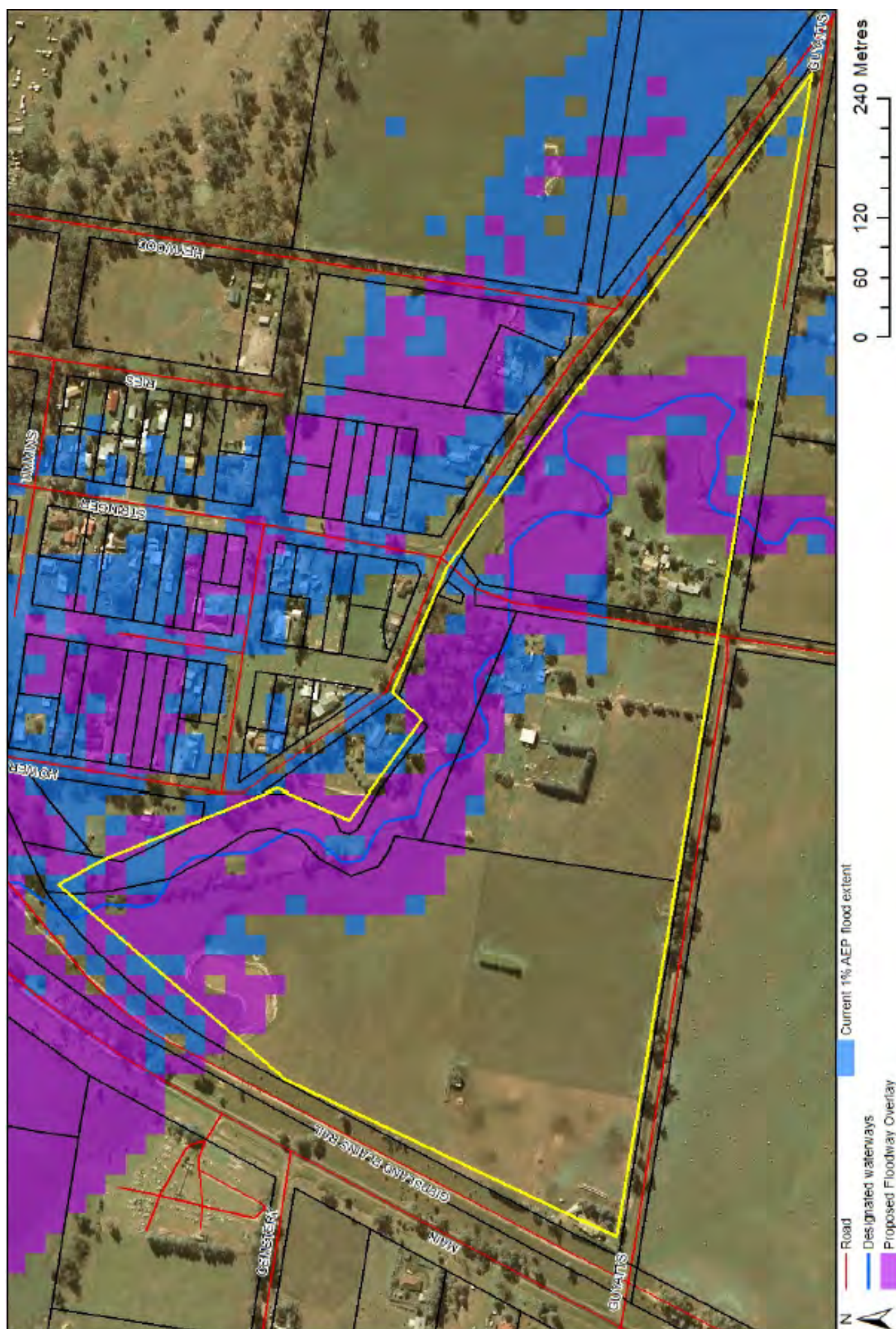
Appendix 8

Flood Data by Precinct

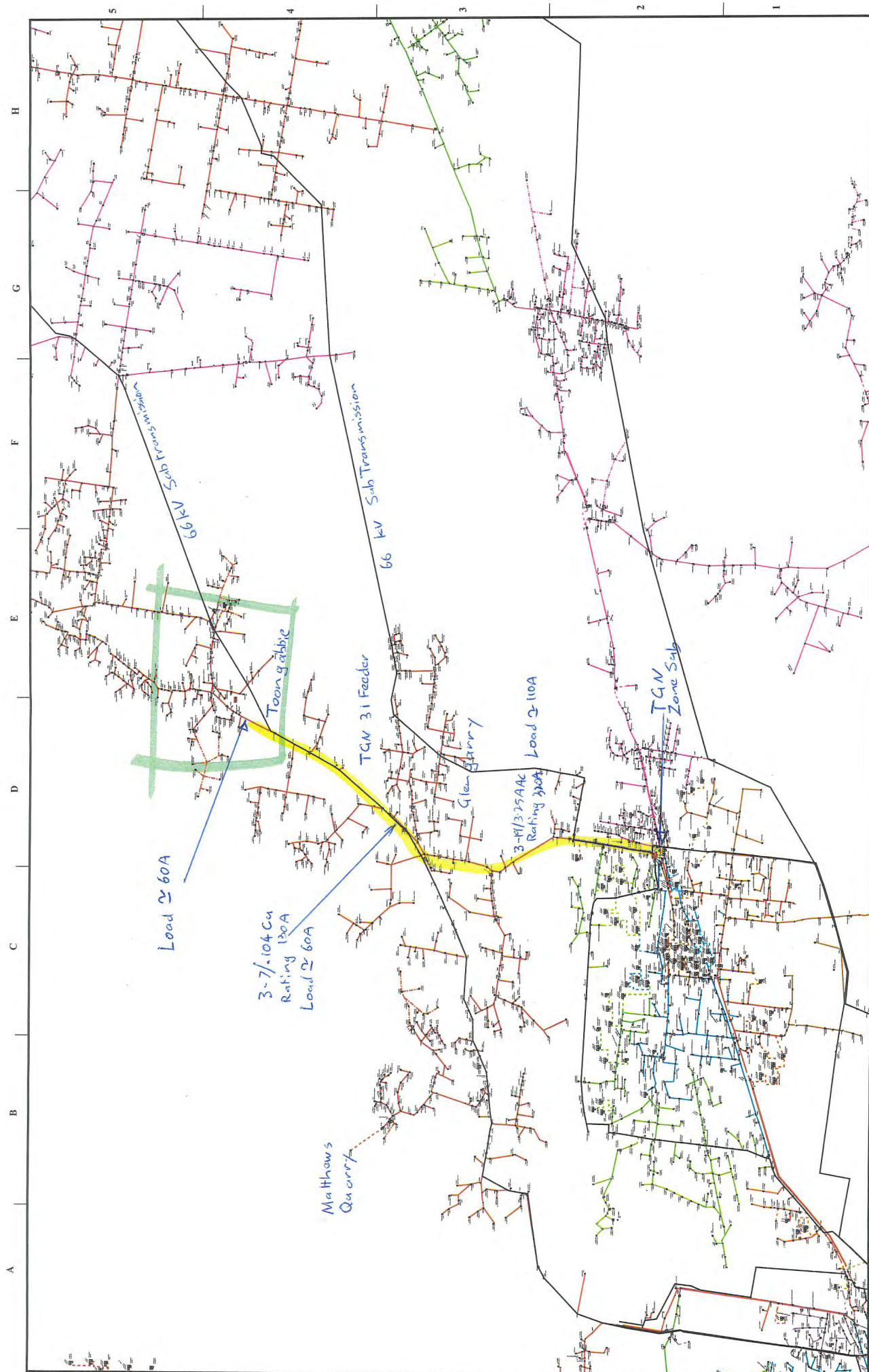








Appendix 9



Vic Roads unset unset unset

Field 1:

Field 2:

NOTICE

Please note that the information contained in AusNet Services GIS system is constantly being updated and the information contained in these plans is subject to change. To the best of our knowledge this information is accurate at the date of issue. AusNet Services does not accept liability for any loss suffered as a result of reliance on the information. If you have any queries, please contact Brian Esposito (03) 9695 6599

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DRAFT

Latrobe*City*

Flora and Fauna Assessment

Toongabbie Structure Plan
Background Report



Latrobe*City*
a new energy

Name	No.	PM Approved	PD Approved	Date
Draft Flora and Fauna Assessment	1	MG	TM	31.01.2019
Draft Flora and Fauna Assessment	2	TM	LD	01.07.2019
Draft Flora and Fauna Assessment	3	TM	LD	18.02.2020

This report was written by Mitchell Gorman, Strategic Planning Intern under the supervision of Tegan McKenzie, Strategic Planning Officer and Ruth Harper, Environment Sustainability Officer (Qualified Vegetation Assessor).

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ACKNOWLEDGEMENTS

The Study Team recognises that the State of Victoria has an ancient and proud Aboriginal history and complex ownership and land stewardship systems stretching back many thousands of years. We would like to acknowledge the Traditional Owners of this land, and offer our respect to the past and present Elders, and through them to all Aboriginal and Torres Strait Islander People.

Executive Summary

Latrobe City Council has prepared a flora and fauna assessment on the Toongabbie township area to inform the preparation of the Toongabbie Structure Plan. The report provides an overview of the flora and fauna within the Toongabbie study area as shown on page 13 and identifies opportunities and constraints which may influence the location, and timing of future growth in Toongabbie.

The study aims to:

- Review relevant flora and fauna information for the area;
- Describe flora values and fauna habitat in the Toongabbie township area, including the vegetation condition; and
- Assess the conservation significance of the study area.

This assessment will inform areas where further development should be limited and where policy can improve upon environmental outcomes as a part of the Toongabbie Structure Plan. It will discuss the potential ecological and legislative implications associated with the Toongabbie Structure Plan and provide recommendations to address or reduce impacts in line with State planning policy and where necessary, highlight where further work will need to be undertaken.

The Toongabbie study area had scattered vegetation patches with relatively high biodiversity values largely located around the golf course, waterways, cemetery and rail trail. Patches were also found in rural farmlands bordering the town. These patches were generally located around wetlands and along fence lines that provide linkages throughout the landscape for birds and other smaller fauna (Frogs, Possums etc.). During the field survey, it was observed that most of these areas appeared degraded and

fragmented, but they provide opportunities for future linkages.

As a result of the flora and fauna assessment and consultation undertaken with the West Gippsland Catchment Management Authority (see Toongabbie Infrastructure and Servicing Assessment for further commentary) key recommendations includes:

- Formally identify possible federally listed critically endangered EVC areas;
- Investigate the application of the vegetation protection overlays for the federally listed EVC areas;
- Improve the quality of key patches of vegetation through pest management, rehabilitation and removal of livestock from areas such as waterways through the development of a waterway management plan in conjunction with West Gippsland Catchment Management Authority; and
- Investigate the possibility of creating vegetation corridors through town to increase fauna mobility and habitat areas. These would be along the waterways and would need to consider the possible increase in bushfire risk.

The structure plan seeks to avoid and minimise impacts on high quality vegetation and integrate vegetation protection measures for high quality patches and corridors while providing direction on opportunities for future growth within the study area. Completing these recommendations will not only allow for the ecosystems to rebuild naturally over time and increase the resilience of flora and fauna in the area, it will provide formal protection and identification in the Latrobe Planning Scheme.

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A photograph of a lush green field with tall grass and small purple flowers. In the background, there are trees and a blue sky with white clouds. A large red number '1' is in the top left corner, and a red geometric pattern is at the bottom.

1

Introduction

1.1 Purpose

The purpose of this report is to inform the development of the Toongabbie Structure Plan. By identifying the areas of conservation value that require further protection from residential encroachment. The extent of conservation and the location will determine which planning scheme tool is the most appropriate.

1.2 Vegetation Assessment

The vegetation assessments were carried out by Ruth Harper, (former) Environment Sustainability Officer, from Latrobe City Council who is a registered Vegetation Assessor with the Department of Environment, Land, Water and Planning (DELWP). Mitchell Gorman, (former) intern with the Strategic Planning Department assisted with the desktop assessment.

The flora and fauna study consists of two parts:

- Desktop Assessment; and
- Habitat Hectare Assessments to verify the desktop assessment of native vegetation on 3 January 2019.

This is in accordance with the DELWP survey methodology as outlined in *Vegetation Quality Assessment Manual - Guidelines for applying the habitat hectare scoring method* (DSE, 2004).

General Flora and Fauna studies were not undertaken at this time, it is recommended that further targeted surveys be undertaken.

1.3 Consultation

Consultation was carried out with the West Gippsland Catchment Management Authority (WGCMA) on 14 February 2019 and a copy of this report was sent to the Department of Environment, Land, Water and Planning (DELWP) for feedback on 16 July 2019.

1.4 Bioregion

The study area is mainly located within the Gippsland Plain Bioregion, which covers large areas of south eastern Victoria from around Melbourne in the west to Lakes Entrance in the east, excluding the Strzelecki Ranges.

The bioregion has a temperate climate, averaging between 500 to 1100mm a year. The majority of rain falls in winter, and the Strzelecki Ranges create a rain-shadow to the east. A number of rivers drain the bioregion including the Avon, Bass, Latrobe, Macalister, Mitchell, Tambo, Tarwin, Thompson and Yarra.

The Gippsland Plains Bioregion contains some of the State's most endangered plant communities including the dominant and significant EVC communities of EVC 55 Plains Grassy Woodland, EVC 132 Plains Grassland, EVC 61 Box Ironbark Forest, EVC 151 Plains Grassy Forest, EVC 53 Swamp Scrub, EVC 16 Lowland Forest and EVC 48 Healthy Woodland.

Small parts of the Highlands- Southern Fall Bioregion are also found within the study area to the west. The Highlands - Southern Fall Bioregion is located in the central part of eastern Victoria, is the southerly aspect of the Great Dividing Range. This Bioregion has dissected uplands with moderate to steep slopes, high plateaus and alluvial flats along the main valleys.

The dominated vegetation is Shrubby Dry Forest and Damp Forest on the upper slopes, with Wet Forest ecosystems dominant in the valleys including Cool Temperate Rainforest in the most protected gullies; Montane Dry Woodland, Montane Damp Forest and Montane Wet Forest ecosystems occur in the higher altitudes.

1.4.1 ECOLOGICAL VEGETATION CLASS (EVC)

Ecological Vegetation Classes (EVCs) are the standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes. Each EVC includes a collection of floristic communities (i.e. lower level in the classification) that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating (DELWP 2017c. Ecological Vegetation Class (EVC)). EVC mapping has been conducted for the whole of Victoria by DELWP, based on modelling. Figure FF2 shows the DELWP mapping of remnant EVCs within Toongabbie which include Swampy Scrub, Plains Grassy Woodland and Box Ironbark Forest EVCs. These three EVCs will be discussed further. In the surrounding area there are a number of other EVCs which include Shrubby Foothill Forest and Lowland Forest in the Great Dividing Ranges and Plains Grassy Woodland/Gilgai Wetland Mosaic along the Gippsland Plains Rail Trail to the south of Toongabbie.

The site has shown to be largely fragmented with the layout of the native vegetation largely positioned around waterways, park reserves and scattered among farmland. Key areas of native vegetation are located around the golf course, cemetery and rail trail.

EVC 55 Plains Grassy Woodland

An open, grassy eucalypt woodland in low rainfall areas occurring on fertile soils on flats and gently undulating plains at low elevations. The understorey consists of a few sparse shrubs over a species-rich grassy and herbaceous ground layer. Widespread and extensive in the past but has now been mainly cleared for agriculture,



resulting in few intact weed-free remnants in Gippsland. Gippsland Plains Grassy Woodland is typically dominated by Forest Red Gum *Eucalyptus tereticornis*. The understorey may include shrubs of Lightwood Acacia (*Acacia implexa*) which has one of the highest fidelity ratings in this EVC, Creeping Bossiaea (*Bossiaea prostrata*) and Cranberry Heath (*Astroloma humifusum*). The ground layer is usually grassy and herbaceous with sedges and lilies also present. Frequent grasses are Weeping Grass (*Microlaena stipoides* var. *stipoides*), Kangaroo Grass (*Themeda triandra*), Stiped Wallaby-grass (*Austrodanthonia racemosa* var. *racemosa*), and Kneed Wallaby-grass (*Austrodanthonia geniculata*). Some of the flowering species include Yellow Rush-Lily (*Tricoryne elatior*), Twining Fringe-lily (*Thysanotus patersonii*) and Vanilla lilies (*Arthropodium* spp.).

EVC 61 Box Ironbark Forest

Gullan (2017) states that:

Box Ironbark Forest is found on flat to undulating landscapes on rocky, auriferous soils, mainly in central Victoria. The altitude range is generally between 150 and 600 m above sea level and the rainfall varies from 500 to 800 mm a year. About 40% of the area once supporting Box Ironbark Forest in Victoria falls on public land while a little under one fifth is represented in conservation parks and reserves (most of which have been created in the past few years). About 55% of all Box Ironbark Forest has been permanently cleared for agriculture, urban development or mining. In most areas Box Ironbark Forest is bordered by Dry Sclerophyll Forest, Red Gum or Grassland ecosystems.

Box Ironbark Forest is characterised by a dense to sparse canopy of box, ironbark and gum-barked eucalypts to 25 m tall, over a sparse understorey of wattles and small-leafed shrubs, small and prostrate shrubs, annual and perennial herbs, and annual and perennial grasses. The principal

trees are Grey Box (*Eucalyptus microcarpa*), Red Box (*Eucalyptus polyanthemos*), Red Ironbark (*Eucalyptus tricarpa*), Yellow Gum (*Eucalyptus leucoxylon*) and Red Stringybark (*Eucalyptus macrorhyncha*). In some areas these are replaced by or grow in association with Yellow Box (*Eucalyptus melliodora*), Long-leaf Box (*Eucalyptus goniacalyx*) or Silver Bundy (*Eucalyptus nortonii*).

Box Ironbark Forest is situated almost entirely within the Victorian goldfields which means that during the gold rush years, 1851 to around 1870, it was subjected to intensive digging and clearing in the goldfields themselves, which was accompanied by extensive timber cutting for buildings, bridges, mine shafts and firewood in areas further afield.

EVC 53 Swampy Scrub

DSE (2012) states that the Swampy Scrub EVC is:

Dense (and potentially up to 10–15 m) shrubby vegetation of relatively fertile swampy flats, dominated by Myrtaceous shrubs (to small trees), ground layer often sparse, aquatic species conspicuous, Sphagnum and/or water-logging tolerant ferns are sometimes present. Formerly widespread in cooler lowland southern areas of Victoria. Species that characterise the EVC include Swamp Paperbark (*Melaleuca ericifolia*), Woolly Tea-tree (*Leptospermum lanigerum*), both of which often form a dense impenetrable thicket, out-competing other species. Swamp Club-rush (*Isolepis inundata*), and Water Ribbons (*Triglochin procera* s.l.). Swamp Scrub can interface with Riparian Forest, Swampy Woodland, Swampy Riparian Woodland, Riparian Scrub and Seasonally Inundated Shrubby Woodland, and local floristics can reflect these transitions. Emergent trees (e.g. Swamp Gum (*Eucalyptus ovata*)) may some times be present.

Figure FF1: Bioregions



Figure FF2: Ecological vegetation classes



2

Regulatory Framework



2.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance. The study area has potential to support, or impact upon, four matters of national environment significance (NES) as indicated by the Protected Matters Search Tool (PMST) for the EPBC Act. The full report is included in Appendix 1. The PMST results are modelled data only and a site assessment is required to determine its presence. Further details are discussed in the Biodiversity Assessment section on page 416.

Table 1: Matters of National Environmental Significance

<i>Matters of National Environmental Significance</i>	<i>PMST Result</i>
Listed Migratory Species	13
Listed Threatened Ecological Communities	1
Listed Threatened Species	28
Wetlands of International Importance (Ramsar)	1

The Toongabbie Cemetery has been identified as a key native grassland remnant of the Gippsland Plains Grassy Woodland and Associated Grassland communities and the field survey identified another potential patch of the same community at 53-57 Humphreys Road, Toongabbie. As such, it is unlikely that the study area supports a significant area of a listed FFG Act community or genetically important population of a listed species. This block of land is within the Public Use Zone neighbouring the operating cemetery to the west and north and contains approximately two

hectares of plains grassland. Further assessments would be required to determine if this patch of grassland would meet the condition thresholds for the nationally listed ecological community by the Department of Environment, and Energy is required to confirm this.

The Cemetery is zoned Public Use Zone - Schedule 5 (PUZ5) the Structure Plan process is unlikely to have any further impacts on the community identified there. Under the EPBC Act, there is a continuing use exemption which allows the existing use to continue without enlargement, expansion or intensification. However, stronger protections can be considered through placing overlays on the land and if confirmed at 53-57 Humphreys Road, Traralgon.

2.2 Environment Effects Act 1978

The Environment Effects (EE) Act 1978 provides for assessment of proposed actions that are capable of having a significant effect on the environment. A project with potential adverse environmental effects that, individually or in combination, could be significant in a regional or state context should be referred.

Under the Ministerial Guidelines for the EE Act, the loss of ten or more hectares of an Ecological Vegetation Class (EVC) with a Bioregional Conservation Status (BCS) of Endangered is a trigger for an EES referral.

Other potential triggers for an EES referral would be:

- Potential long-term loss of a significant

proportion (1-5% depending on conservation status of species) of known remaining habitat or population of a threatened species within Victoria

- Potential loss of a significant area of a listed ecological communities listed under the Flora and Fauna Guarantee Act 1988 (FFG Act); and,
- Potential loss of a genetically important population of an endangered or threatened species listed under the FFG Act.

The extent of endangered EVCs within the study area (i.e. Plains Grassy Woodland and Swamp Scrub) is modelled by DELWP (see Figure FF2) to be 53.74 hectares which includes:

- 9.64 Hectares of Box Ironbark Forest
- 31.98 Hectares of Plains Grassy Woodlands
- 12.12 Hectares of Swampy Scrub

As these areas are largely along roadside verges, and creek beds, it is unlikely that the loss of 10 or more hectares would occur at any one time if further development is allowed through any associated rezoning with this process.

The Structure Plan can be designed to avoid or minimise the impacts on matters of state and national environmental significance.

2.3 Flora and Fauna Guarantee Act 1988

The Flora and Fauna Guarantee Act 1988 (FFG Act) is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.

The Act's objectives aim to conserve all of

Victoria's native plants and animals.

An FFG Act-permit is not required to impact on listed species or ecological communities on private land. The presence of FFG Act-listed species and ecological communities is considered when assessing triggers for an EES referral as discussed above. The full list of species found in Toongabbie, including its status on the Victorian Advisory List under the FFG Act is found in Appendix 2.

Apart from critical habitat, the Act does not generally control impacts on habitats. Instead, the native vegetation clearing regulations provide this role, and their effectiveness is vital to achieving the objectives of the Act.

It should be noted that publicly-owned freehold land is not considered private land for the purpose of section 47 of the Flora and Fauna Guarantee Act 1988. An FFG permit will be required to remove protected and listed flora and plant communities in this instance. This affects 88.04 Hectares within the study area, this does not include the unmade road reserves. For areas like the cemetery which is public land, if it is listed as a critical habitat under the FFG Act, it would require a permit, to remove any flora due to an expansion in the use.

2.3.1 FLORA AND FAUNA GUARANTEE AMENDMENT ACT 2019

The Amendment Act:

- Retains the FFG Act's objective to 'guarantee' the future of Victoria's flora and fauna and updates it to recognise the importance of flora and fauna adapting to environmental change;
- Introduces principles to guide the implementation of the FFG Act, including



consideration of the rights and interests of Traditional Owners and the impacts of climate change;

- Requires consideration of biodiversity across government to ensure decisions and policies are made with proper consideration of the potential impacts on biodiversity;
- Clarifies existing powers to determine critical habitat and improves their protection by encouraging cooperative management;
- Gives effect to a consistent national approach to assessing and listing threatened species, the Common Assessment Method, which will reduce duplication of effort between jurisdictions and facilitate the monitoring and reporting of species' conservation status; and
- Modernises the FFG Act's enforcement framework including stronger penalties.

The Amendment Act comes into effect on 1 June 2020.

2.4 Planning and Environment Act 1987

2.4.1 PLANNING POLICY FRAMEWORK

The purpose of this Act is to establish a framework for planning the use, development and protection of land in Victoria.

The Act sets out procedures for preparing and amending the Victoria Planning Provisions and planning schemes. It also sets out the process for obtaining permits under schemes, settling disputes, enforcing compliance with planning schemes and permits, and other administrative procedures.

The main functions of the Act are to:

- Set the broad objectives for planning in Victoria.
- Set the main rules and principles for how the Victorian planning system works.
- Set up the key planning procedures and legal instruments in the Victorian planning system.
- Define the roles and responsibilities of the Minister, councils, government departments, the community and other stakeholders in the planning system.

Clause 12.01 Biodiversity

The primary objective is to assist the protection and conservation of Victoria's biodiversity. The following strategies have been used:

- Use biodiversity information to identify important areas of biodiversity, including key habitat for rare or threatened species and communities, and strategically valuable biodiversity sites.
- Strategically plan for the protection and conservation of Victoria's important areas of biodiversity.
- Ensure that decision making takes into account the impacts of land use and development on Victoria's biodiversity, including consideration of:
 - Cumulative impacts.
 - Fragmentation of habitat.
 - The spread of pest plants, animals and pathogens into natural ecosystems.
- Avoid impacts of land use and development on important areas of biodiversity.

Clause 12.03 Waterbodies and Wetlands

Under Clause 12.03-1S it states that the objective is to protect and enhance river corridors, waterways, lakes and wetlands. This can be achieved through ensuring that development does not compromise the waterways.

Clause 12.05 Significant environment and landscapes

The objective is to protect and conserve environmentally sensitive areas. While Clause 12.05-2S states that the objective is to protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.

Some of the key strategies to achieve this are:

- Improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas.
- Recognise the natural landscape for its aesthetic value and as a fully functioning system.
- Ensure important natural features are protected and enhanced.

While the flora in Toongabbie is fragmented there is opportunity to improve the linkages between the remnant vegetation.

Clause 13.02 Bushfire

The objective is to strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritise the protection of human life.

In terms of flora and fauna the main strategy for protecting areas of biodiversity conservation value by ensuring settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are important areas of biodiversity.

Clause 14.02 Water

The main objective is to assist in the protection and restoration of catchments, water bodies, groundwater, and the marine environment by:

- Retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway to:
 - Maintain the natural drainage function, stream habitat and wildlife corridors and landscape values,
 - Minimise erosion of stream banks and verges, and reduce polluted surface runoff from adjacent land uses.
 - Undertake measures to minimise the quantity and retard the flow of stormwater from developed areas.
- Ensure planning is coordinated with the activities of catchment management authorities.

West Gippsland Catchment Management Authority (WGCMA) has stated during consultation that an Integrated Water Management Plan should be developed to look at water retardation, drainage and how to improve waterway health. This should also consider bushfire risk to ensure that there is no increased risk for adjacent residents and the broader community.

Clause 52.17 Native Vegetation

In accordance with Section 52.17 of the Latrobe Planning Scheme, the removal of native vegetation would need to be assessed in accordance with the *Guidelines for the Removal, Destruction or Lopping of Native Vegetation 2017* (the Guidelines) which state that the first principle is to avoid the removal of native vegetation is possible, then if that is not possible to minimise the amount of native vegetation that is removed, destroyed or lopped and lastly, to offset the

Table 3: Native Vegetation Location Categories

Category	Definition
Remnant patch of native vegetation	<p>A patch of native vegetation is:</p> <ul style="list-style-type: none"> • An area of vegetation where at least 25 per cent of the total perennial under-storey plant cover is native, or • Any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or • Any mapped wetland included in the Current wetlands map, available in DELWP systems and tools.
Scattered tree	A native canopy tree that does not form part of a remnant patch.

removal of native vegetation. The Guidelines classify native vegetation as either a remnant patch or scattered tree which is defined in the table to the right (Table 2).

The guidelines state that strategic planning is the most effective planning mechanism to protect and manage native vegetation. It states:

Considering how native vegetation will be protected and managed through strategic planning:

- *Allows for identification of areas of higher value native vegetation at a landscape scale;*
- *Allows for indirect and cumulative impacts of use or development on native vegetation to be understood and addressed;*
- *Provides the best opportunity to avoid and minimise impacts on native vegetation by directing use and development away from higher value areas; and*
- *Minimises unnecessary or complex regulation by establishing clear expectations for where use and development can occur, and/or by coordinating approvals and offsets.*

The methods and approaches outlined in the Guidelines should be used to inform strategic planning processes and the application of appropriate planning controls to ensure Victoria's native vegetation is well managed and protected.

The study area has been identified to be contains Plains Grassy Woodland (EVC 55) and Swamp Scrub (EVC 53). Records and aerial imagery also indicates the presence of scattered trees.

A planning permit to remove native vegetation is assessed via either a Basic-, Intermediate- or Detailed-risk pathway. The risk pathway is determined by the extent of native vegetation to be removed, and the location risk (Table 3).

Table 2: Native Vegetation Definitions

Extent of Native Vegetation	Location Category		
	Location 1	Location 2	Location 3
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

If the vegetation to be removed does not meet the definition of a patch or a scattered tree outlined in table 2, the application is considered in the Basic Assessment Pathway.

The study area largely supports Location 1 and 2 (Figure FF3).

The study area is likely to support remnant patches and/or scattered trees; however, large areas of native vegetation exist largely on roadside verges, along waterways, on the Gippsland Plains Rail Trail, in the Toongabbie Cemetery and in road reserves.

A permit would need to be submitted to Council for the removal of any native vegetation if the property is larger than 4000 square metres. As the Location 2 vegetation is largely located on public land, any application for a dwelling would largely be a Basic or Intermediate risk pathway within the study area with the exception of the Gippsland Plains Grassy Woodland EVC located at 53-57 Humphrey Road and at the Toongabbie Cemetery.

The loss of native vegetation would need to be

offset in accordance with the Guidelines in the farming areas; an exemption exists for residential lots that are under 4000 square metres.

This is an important consideration with rezonings along with the Structure Plan will be implemented and what that means for the remnant vegetation within the Study Area.

2.4.2 LOCAL POLICY

Clause 21.03 Environmental and Landscape Values

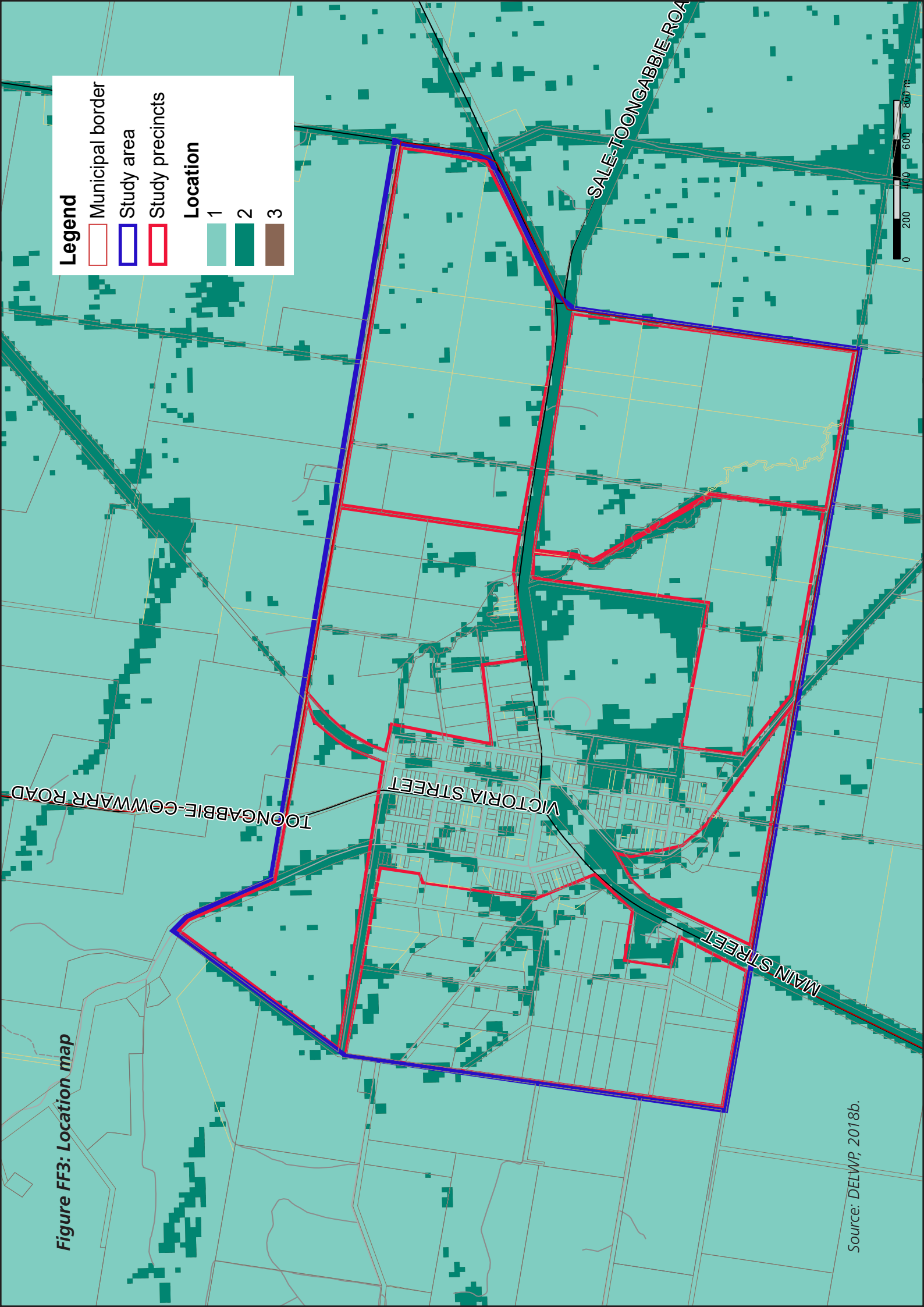
In Clause 21.03 it states that in Latrobe the objective is to identify, maintain and enhance natural ecosystems and biodiversity values within rural and urban areas by protecting all environmental assets as a first priority, enhance as a second priority, and consider replacement as a last resort.

Furthermore, it states that an additional objective is to protect indigenous flora and fauna species and their habitat across the municipality by using the following strategies.

- Encourage the protection of remnant indigenous vegetation on private land;
- Enhance the condition and quantity of indigenous vegetation;
- Encourage the protection of indigenous fauna species and their habitat on private land with an emphasis on protecting threatened species; and
- Maintain the natural asset value of Council road reserves.

Lastly, the aim is to increase the extent and quality of indigenous vegetation and biodiversity across the municipality by encouraging the development of wildlife corridors and links across the municipality.

Figure FF3: Location map



Clause 21.05 Natural Resource Management

Under Water in Clause 21.05 it states that the municipality should aim to protect waterways, aquatic areas, floodplains, wetlands, swamps and catchments by using the following strategies:

- Protect, enhance and reinstate environmental values of the waterway; and
- Encourage connectivity of waterways to open space and other natural environment and landscape features.

It also aims to protect riparian land, vegetation communities, waterway valleys and escarpments by protecting and enhancing waterway corridors through use of good urban design, appropriate built form, water sensitive urban design, appropriate plantings and land management.

2.4.3 OTHER RELEVANT PLANNING CONSIDERATIONS

Clause 15.03 Heritage (includes Aboriginal cultural heritage)

The objective is to ensure the protection and conservation of places of Aboriginal cultural heritage significance by:

- Identify, assess and document places of Aboriginal cultural heritage significance, in consultation with relevant Registered Aboriginal Parties, as a basis for their inclusion in the planning scheme.
- Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.

The Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) have a native title claim to parcels of crown land within the municipality, this includes along the creek beds

in Toongabbie, the Gippsland Plains Rail Trail and the Toongabbie Cemetery. These areas have the highest conservation values from a biodiversity perspective and as such, both could be considered simultaneously. Along Rosedale and Toongabbie Creeks there are areas of cultural sensitivity, and as such, a cultural heritage management plan may be triggered for the larger parcels being considered for rural living. Artifacts have been found in the south-east rural living 1 precinct.

2.5 Catchment Land Protection Act 1994

The *Catchment and Land Protection Act 1994* (CaLP Act) contains provisions relating to catchment planning, land management, noxious weeds and pest animals. Landowners are responsible for the control of any infestation of noxious weeds and pest fauna species to minimise their spread and impact on ecological values.

As the study area is expected to have been disturbed as a result of agricultural disturbances and from adjoining land-uses, there is potential for a number of declared noxious weeds and animals to be present.

The development is likely to require management actions to avoid the introduction or spread of declared noxious weeds and pest animals to ensure compliance with the CaLP Act. Compliance with the CaLP Act is likely to be required in all sections of the study area and can be addressed through the preparation of a Construction Environmental Management Plan (CEMP) or similar document.

The Wildlife Act 1975 (and associated Wildlife



2.6 Wildlife Act 1975

Regulations 2013) is the primary legislation in Victoria providing for protection and management of wildlife. Authorisation for habitat removal may be obtained under the Wildlife Act 1975 through a license granted under the Forests Act 1958, or under any other Act such as the Planning and Environment Act 1987.

Removal of any trees should be supervised by a trained fauna handler with appropriate authorisation under the Act for salvage and translocation. Referral authorities (i.e. DoEE, DELWP or Council) may also request a fauna handler be present for the removal of habitat.

Figure FF4: Priority 4 - Protecting Victoria's Environment - Biodiversity 2037

4. Increase opportunities for all Victorians to have daily connections with nature.

Initiatives by the government to deliver this priority will include:

- Establish reliable baseline information about Victorians' current connection with the natural environment.
- Identify less engaged groups, and understand barriers to engagement in order to increase opportunities to connect with nature.
- Implement and promote programs to increase opportunities for people to connect with nature, including programs to get Traditional Owners out on Country.
- Promote opportunities for additional 'greening' in established urban areas through broadening standards for public open-space planning provisions, in the context of long-term change in population and community needs.

Source: DELWP, 2017e.

2.7 Other Strategies

2.7.1 PROTECTING VICTORIA'S ENVIRONMENT - BIODIVERSITY 2037

The Flora and Fauna Guarantee Act 1988 (FFG Act) is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. Sections 17 and 18 of the Flora and Fauna Guarantee Act 1988 provide for the preparation and revision of a Flora and Fauna Guarantee Strategy. The Strategy must set out how the flora and fauna conservation and management objectives are to be achieved. It must include proposals for guaranteeing the survival, abundance and evolutionary development in the wild of all taxa and communities of flora and fauna, ensuring the proper management of potentially threatening processes and an education program, and improving the ability of all relevant people to meet the flora and fauna conservation and management objectives.

In 2017 the Flora and Fauna Guarantee Strategy was updated and renamed *Protecting Victoria's Environment - Biodiversity 2037* which included an implementation plan. In the implementation plan it has 20 priorities that include priorities that are relevant to planning considerations but are not limited to:

- Increase opportunities for all Victorians to have daily connections with nature;
- Increase opportunities for all Victorians to act to protect biodiversity;
- Embed consideration of natural capital into decision making across the whole of government, and support industries to do the same;
- Help to create more liveable and climate-adapted communities; and
- Increase incentives and explore market

opportunities for private landholders to conserve biodiversity.

Priority 4 applies to town structure planning, with actions such as 'promoting additional greening in established urban areas' in Figure FF4.

2.7.2 LATROBE 2026

In 2026, Latrobe Valley enjoys a beautiful natural environment that is managed and protected with respect to ensure a lasting legacy for future generations.

Latrobe 2026 states that while there are a number of areas of natural bush in close proximity to Latrobe Valley, retention and responsible management of remnant native vegetation together with regeneration is critical to preserve and enhance land and water health and conserve biodiversity.

2.7.3 LATROBE CITY COUNCIL PLAN 2017 – 2021

Latrobe City aims to implement the vision from Latrobe 2026 by implementing a town planning regime which facilitates appropriate urban growth, industry diversification, liveability and connectivity of Latrobe City in order to improve the liveability and connectedness of Latrobe City and to provide a connected, engaged and safe community environment which is improving the wellbeing of all Latrobe City citizens.

2.7.4 NATURAL ENVIRONMENT SUSTAINABILITY STRATEGY 2014-2019

Latrobe City Council seeks its direction from Latrobe 2026: The Community Vision for Latrobe Valley with the objective:

"In 2026, Latrobe Valley enjoys a beautiful

natural environment that is managed and protected with respect to ensure a lasting legacy for future generations."

This objective, together with the core principles of sustainability, liveability, leadership and organisational excellence provide the overarching framework under which the Natural Environment Sustainability Strategy (NESS) has been developed.

The NESS focuses on four themes for the sustainable management of the natural environment across Latrobe City for the next five years:

- Meeting statutory requirements. Continuing to fulfill our regulatory responsibilities under the Planning and Environment Act and meet the environmental requirements of state and federal legislation.
- Building capacity to respond to change. Helping our organisation and our community to make better environmental decisions and respond more effectively to environmental challenges.
- Improving resource use efficiency. Working towards overall reductions in water use, energy use, waste generation and unsustainable purchases.
- Protecting natural assets. Working cooperatively to better manage, and increase protection for the waterways, air, soil and biodiversity valued by Latrobe City.

The NESS is currently being updated.

2.7.5 LATROBE CITY BIODIVERSITY AND NATIVE VEGETATION POLICY 2011

The goals of this Policy are to protect Latrobe City's biological diversity and maintain ecological

2.8 Implications

processes and systems, by protecting, enhancing and, where appropriate, restoring native vegetation (including flora and fauna habitat requirements) to conserve biodiversity, protect river water quality and conserve soil resources, including on private land managed for agriculture, forestry and urban development; and to enhance the protection and management of nature conservation values, both inside and outside areas protected under legislation.

It is the policy of Latrobe City to seek to maintain and enhance biodiversity within the municipality, and in particular to:

- Seek to protect biodiversity and native vegetation assets of state and national significance, including native vegetation classified as Endangered or Vulnerable in the bioregion,
- Seek the retention and enhancement of remnant native vegetation for the conservation of biodiversity, and particularly the larger and better quality patches,
- Encourage the maintenance and enhancement of remaining native vegetation as a priority,
- Support revegetation or regeneration as an important but lower priority, to extend, enhance or connect remnant native vegetation,
- Encourage biodiversity conservation in both rural and urban landscapes and across all land tenures,
- Achieve a reversal within the municipality of the long-term decline in the extent and quality of native vegetation and biodiversity, leading to a net gain,
- Encourage landholders to pursue a target of 30% of native vegetation across the landscape as a critical threshold for biodiversity conservation.

The project has potential to support values that if impacted would require approval/permit under the following legislation:

- Commonwealth Environment Protection and Biodiversity Conservation Act 1999;
- Victorian Environment Effects Act 1978; and,
- Victorian Planning and Environment Act 1987.

3

Biodiversity Assessment



3.1 Analysis

The following methodology was used to assess the conservation value:

- Desktop Assessment;
- Review of Historical Data;
- Field Surveys in the form of Habitat Hectare Assessments; and
- Consultation with WGCMA and the Environment team from DELWP

3.1.1 DESKTOP ASSESSMENT

An analysis of the study area included a review of relevant literature, online resources and databases gave key data about a range of aspects associated with the sites environmental value and location. These resources include:

DELWP NVIM Tool and Nature-Kit

These tools present modelled data for a biodiversity mapping and reporting tool. It was used to generate information of Ecological Vegetation Classes, Disturbance, Victoria's Biodiversity values, Marine bathymetry and habitat.

Victorian Biodiversity Atlas

The Victorian Biodiversity Atlas is an interactive map that creates a Species Summary List of a selected area. When conducting this, a polygon of the site was used to generate a report that included all the species that have been located before previously in the area.

Visualising Victoria's Biodiversity

Visualising Victoria's Biodiversity is an interactive map that generates a summary of flora and fauna species for a selected area. A report was then generated for the polygon area and compared to a buffer radius of 10 kilometres around the Toongabbie general store which was used as a central point for Toongabbie.

Environment Protection and Biodiversity Conservation Search Tool (EPBC search tool)

An environmental protection and biodiversity matters search was conducted that informs the client on all significant environmental matters inside a polygon of the study area with a 1Km buffer. The search identifies protected areas, Ramsar wetlands, property boundaries, local government areas, key ecological features and many more related protected matters (see Appendix 1 for full details).

Intramaps online GIS database

The Latrobe City Councils online Geographical information system was used to identify property boundaries, site size, some EVC mapping, waterways and other aspects of the town that may be of interest to the report such as planning zones, residential areas and road names.

3.1.2 HISTORICAL DATA

Limited historical data exists on the flora and fauna within the Toongabbie area, however, *Latrobe Region Heritage Sites 1987* had some information on the fauna found in the area to compare to current data while the pre-1750s EVCs gives an indication of the flora that was naturally occurring in the area prior to European settlement.

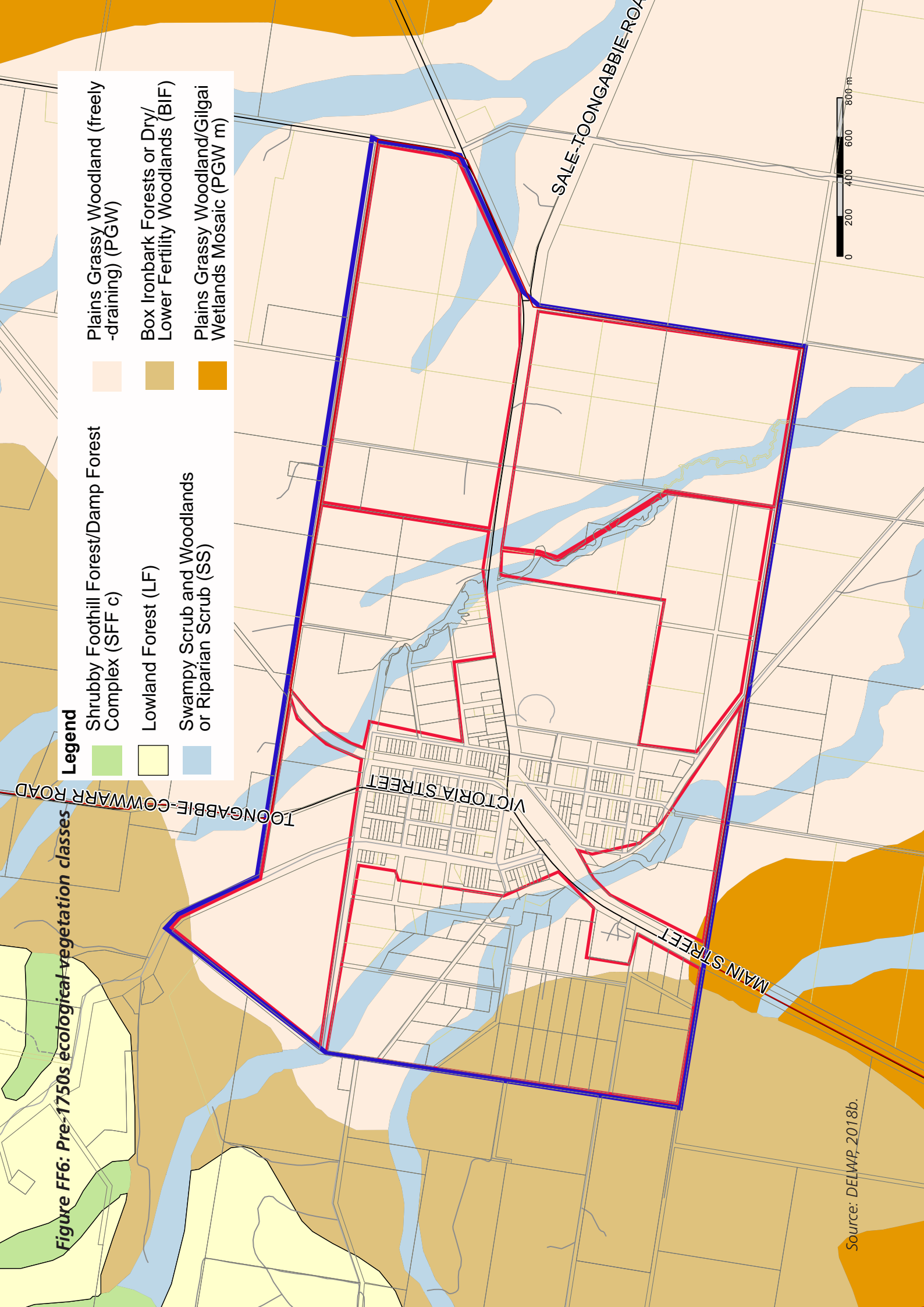
In *Latrobe Region Heritage Sites 1987* (Figure FF5), it states that from Walhalla to Toongabbie, an area that encloses mature vegetation within the Boola Boola State Forest, is home to the Black Rock Skink, Eastern Water Dragon, Giant Burrowing Frog, Peron's Tree Frog, Hooded Robin, White-winged Thriller, Diamond Firetail, Painted, Button-quail, Azure Kingfisher and Barn Owl (noted as Z11 in Figure FF5).

The pre-1750 Environmental Vegetation Classes (EVCs) (Figure 10) shows the study area contained the endangered Plains Grassy Woodland (green) and Swamp Scrub (blue) as well as the vulnerable Box Ironbark Forest (orange).

Photo: Rosedale Creek transversing through farmland.
Source: McKenzie, T., 2019.



Figure FF6: Pre-1750s ecological vegetation classes



3.2 Results

3.2.1 REMNANT VEGETATION

Based on the tree cover in Figure FF7, the study area appears to be primarily residential lots and cleared farmland which includes smaller rural living lots. The areas retaining elements of native vegetation appear to be either associated with roadside verges and road reserves, the immediate environs of Toongabbie and Rosedale Creeks, and parts of the Toongabbie Cemetery, Golf Club and Gippsland Plains Rail Trail and some internal fence lines and water bodies. In most cases, however, the native vegetation remains only as isolated species and is heavily modified that it no longer represents a native vegetation community.

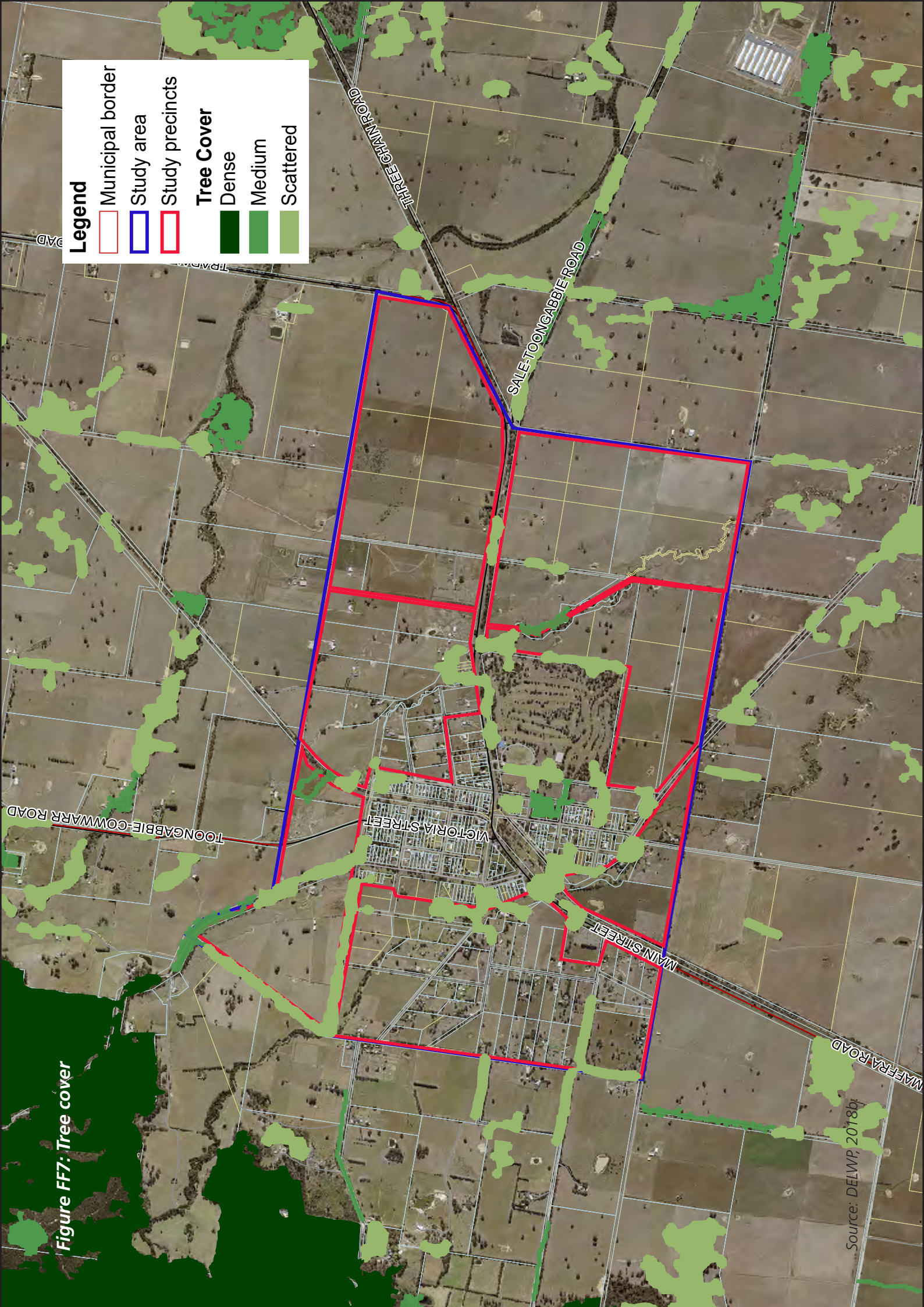
Any additional development that is identified through the structure plan and associated rezonings within the study area are likely to be incremental in nature and avoid areas of significant conservation value. This is because they are on roadside reserves and verges, recreation reserves, along waterways or land zoned for public use. The exception being the rear lot of 53-57 Humphrey Road, Toongabbie. However, the 30 metre buffer around waterways would largely include this area, and as such would be covered by existing planning policy. Further controls such as a Vegetation Protection Overlay could be further explored once the patches have been formally identified.

Scattered trees exist outside these areas, if the land is rezoned outside of the township to a rural living zone, Clause 52.17 and the principles of avoid, then minimise native vegetation removal could be used in the planning permit process when approving new development.



Photo: Toongabbie Cemetery looking towards the Alpine Ranges.

Source: McKenzie, T., 2019.



Legend

Municipal border



Study area



Study precincts

Tree Cover

Dense

Medium

Scattered

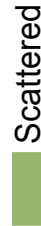


Figure FF7: Tree cover

Source: DELWP, 2018b

3.2.2 STRATEGIC MANAGEMENT PROSPECTS

NaturePrint's Strategic Management Prospects (SMP) tool is designed to help biodiversity managers consider and compare which actions to do and where in order to deliver the *Biodiversity 2037's* goals and targets to try to prevent more species from becoming threatened. The management efforts need to consider how to achieve the most benefits for the most species.

Government and non-government conservation or land managers can use SMP to make informed decisions about how and where they can act to protect and manage biodiversity in Victoria. SMP can be used in a variety of ways, including to:

- Provide guidance on how to maximise biodiversity outcomes (by informing on-ground projects and investment decisions)
- Facilitate objective comparisons (e.g. between regions, species, threats and management actions)
- Provide scope and focus for partnership discussions
- Inform and improve the Biodiversity Plan Targets
- Inform reporting on progress towards Biodiversity Plan Targets.

There are a number of threatening processes that affect that affect the ability for native plants and animals and their ability to thrive and that contribute to the loss of biodiversity values within the study area.

According to NatureKit (DELWP, 2018b), the biggest threats to Toongabbie's biodiversity values are:

- Stock grazing;
- Feral cats, rabbits and foxes;

- Phytophthora Cinnamomi (a soil-borne water mould that produces an infection which causes a condition in plants called "root rot" or "dieback");
- Transformer weeds; and
- Land clearing.

Consideration should be given to how the Structure Plan might address conservation objectives and minimise impacts from future land use changes, these include the loss of mature hollow bearing trees, weed invasion, changes to natural drainage and the protection of remaining remnant vegetation particularly on roadsides and freehold land.

The strategic management prospects have a number of planning measures that could be used in the Structure Plan process in response to biodiversity management.

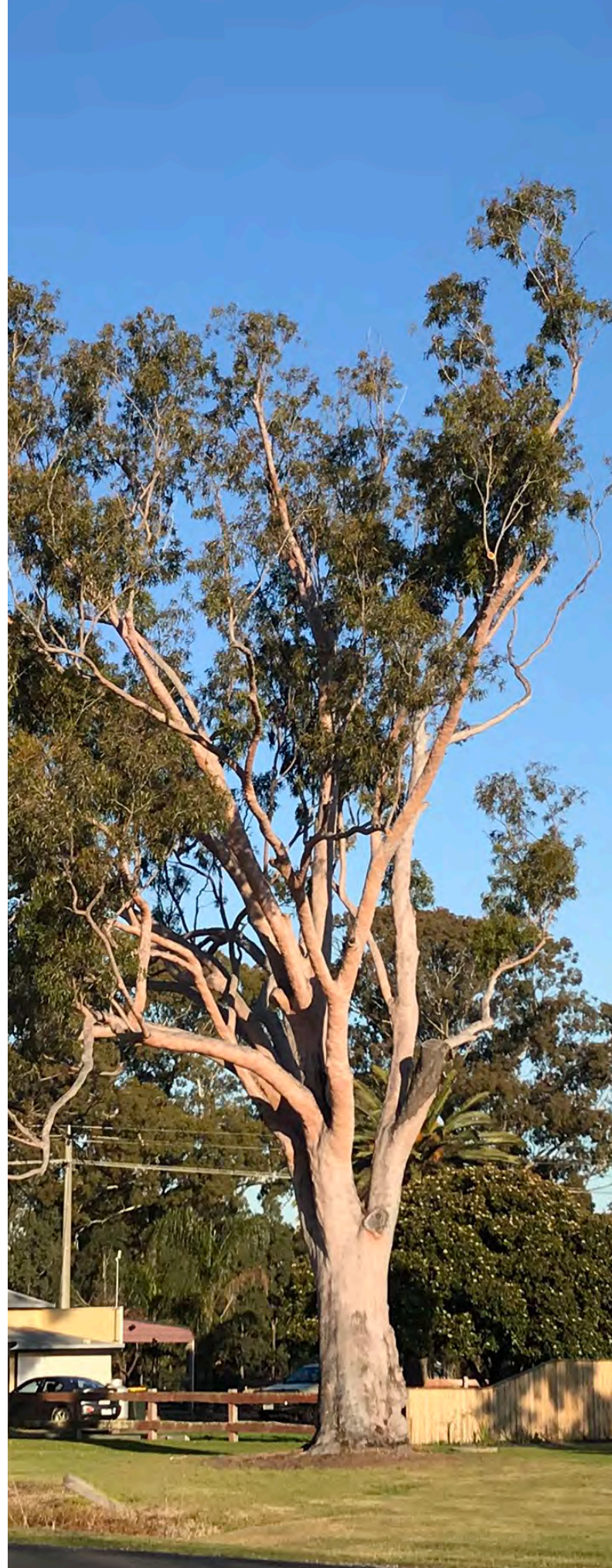
As a part of the structure planning process biodiversity response planning measures can be reviewed and analysed to see whether measures can be incorporated into the Latrobe Planning Scheme.

A biodiversity response planning measure is the likely beneficial response that flora and fauna will receive if that action is carried out. If the biodiversity response planning measures were carried out, the most beneficial actions for the Toongabbie study area from a structure planning perspective are permanent protection and re-vegetation. Other beneficial actions include:

- Control cats;
- Control rabbits;
- Control foxes;
- Control domestic stock;

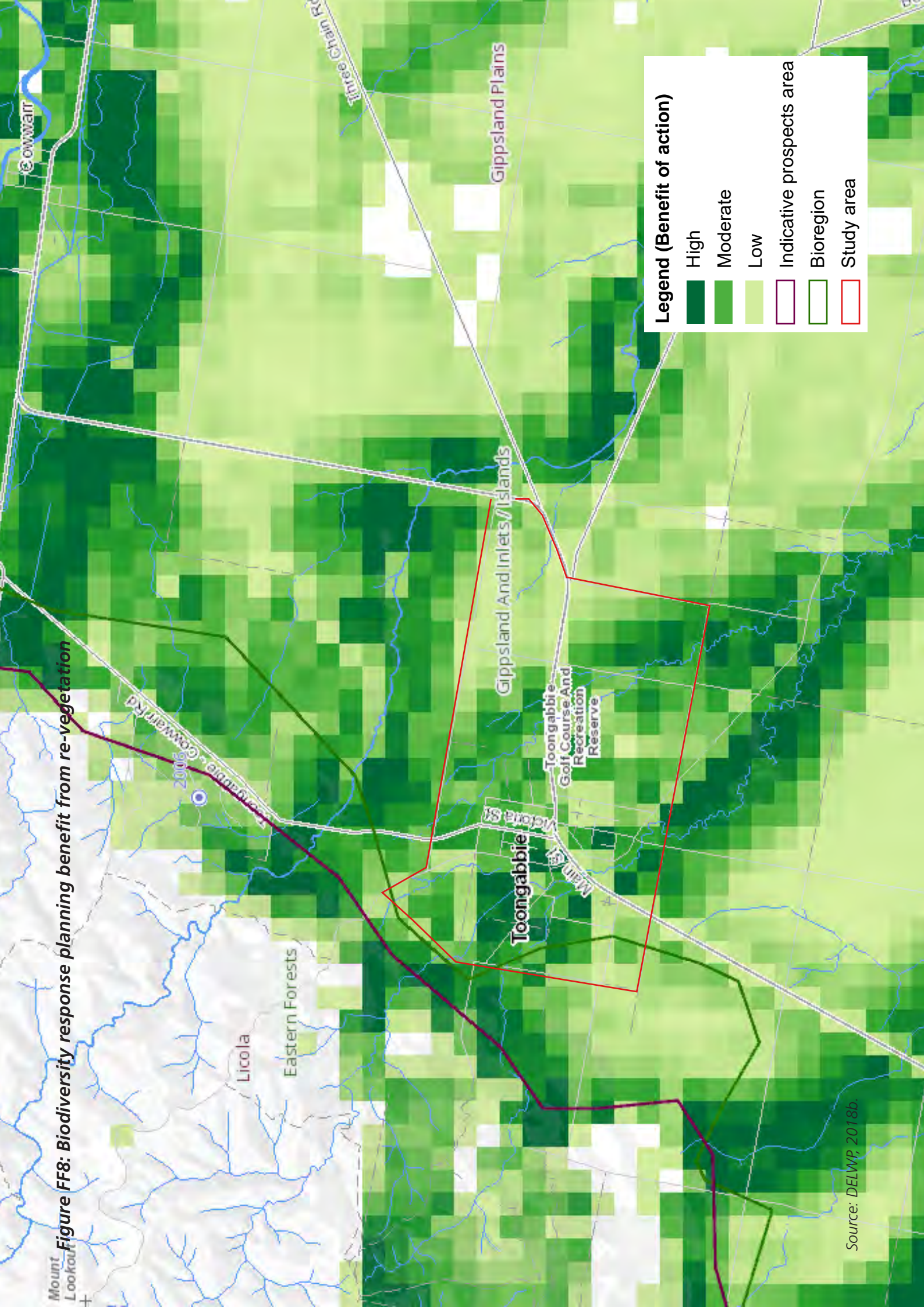
- Control phytophthora; and
- Control weeds.

In Figure FF8, it shows that the waterway corridors will benefit the most from re-vegetation. Figure FF9 indicates the possible benefit from permanent protection for native vegetation within Toongabbie.



*Photo: Tree near Toongabbie General Store.
Source: McKenzie, T., 2020.*







Source: DELWP, 2018b.

3.2.3 COST EFFECTIVE ACTIONS

To achieve the most positive change for biodiversity, activities are chosen based on the greatest benefit to the most species at the least cost. Habitat distribution models, threat models, benefit of action models and the cost of actions are considered when looking at the most cost-effective actions.

The cost effective actions are then ranked (i.e. the top 20% of ranked prospects or top 40% of ranked prospects.)

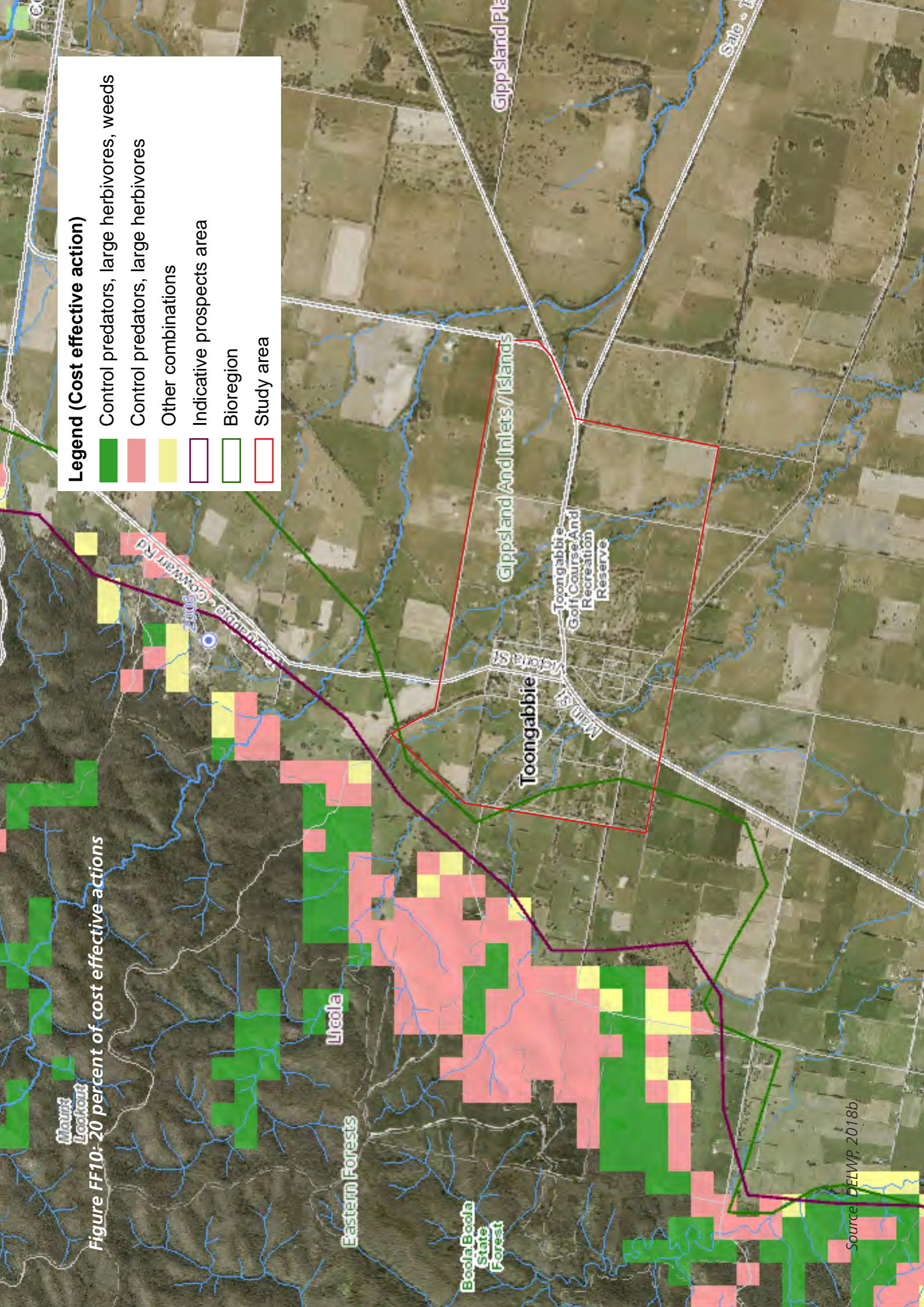
If the top 20 percent of the cost effective actions (Figure FF10) were undertaken, which is a distribution model of a cost-benefit analysis for all species, the study area would not benefit from any further actions.

If 60 percent of the cost effective actions were carried out, small areas along Toongabbie Creek would benefit from controlling predators, rabbits and weeds.

The study area would need to see 80 percent of all cost effective actions (Figure FF11) being carried out to see significant improvement in biodiversity values across the study area. While this indicates that re-vegetation, control of predators and weeds, and protection of remnant vegetation will achieve the best overall results, further studies need to be undertaken for specific flora and fauna that are likely to be found within the study area including for the Gippsland Red Gum Grassy Woodland and Associated Native Grasslands community, the Greater Glider, Giant Honey Myrtle, and the white-throated Needle Tail. Management plans and response planning measures can then be tailored to the flora and fauna that is specific to the area.



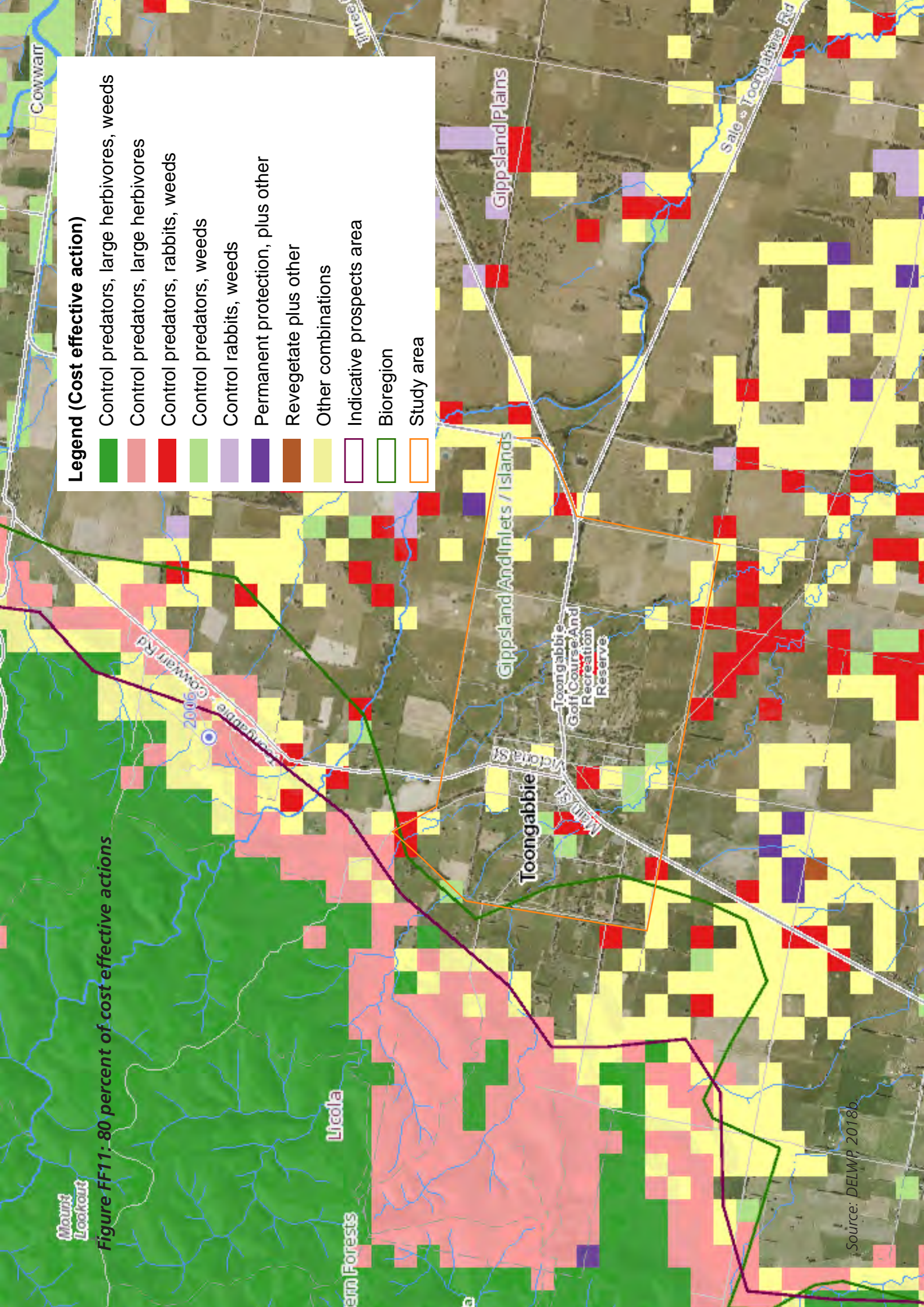
*Photo: Galahs on the Toongabbie Golf Course.
Source: McKenzie, T., 2020.*



Legend (Cost effective action)

- Control predators, large herbivores, weeds
- Control predators, large herbivores
- Other combinations
- Indicative prospects area
- Bioregion
- Study area

Figure FF10: 20 percent of cost effective actions



3.2.3 CONSERVATION SIGNIFICANCE

DELWP has also mapped the relative conservation significance of areas over the whole state – called the strategic biodiversity values, based on a number of different ecological characteristics. Figure FF12 shows the strategic biodiversity mapping of Toongabbie, from the DELWP website NatureKit.

The golf course contains some of the highest strategic biodiversity values (SBV) of 81 due to the area being in close proximity to the Rosedale creek and having large patches of Plains Grassy Woodland EVCs.

The Toongabbie cemetery contains high SBVs also with the patch that contains Gippsland Red Gum Grassy Woodland vegetation having a SBV of 83; this patch of native grasses is rare in Australia and has significance due to the small fauna that use these grasses as their home.

The vegetation located on 53-57 Humphreys' road property may have some conservation significance due to it being an endangered EVC class under the EPBC Act.

The project may have a significant impact upon listed species and ecological communities under the EPBC Act. Targeted surveys are recommended to determine the presence of species and ecological communities considered to have a moderate potential to occur in the study area (see above). Any impact on habitat for these species may be considered a significant impact under the EPBC Act, and should be referred to the Federal Environment Minister.

The Toongabbie golf course also provides some areas of significance where migratory birds and native animals may use the patches of vegetation

as cover between larger patches. As Toongabbie is situated in close proximity to the remnant and planted forests of the Highlands-Southern Fall Bioregion (as shown in Figure FF1) there is some significant areas that should be conserved such as the Box Ironbark Forest which has a vulnerable EVC status.

3.2.4 NATIVE VEGETATION CONDITION

The native vegetation condition varies across the study area. The areas with the highest condition score of between 0.61 and 0.8 are along the edge of Toongabbie's golf course fronting Traralgon – Maffra Road, the Toongabbie wetlands, roadside vegetation along Old Walhalla Road and in patches near the Toongabbie Cemetery.

Most roadside vegetation or vegetation in road reserves has a moderate score of 0.41-0.60 while scattered vegetation throughout town has a low score of between 0.00 and 0.04 as shown in Figure FF13.

Figure FF12: Strategic biodiversity values

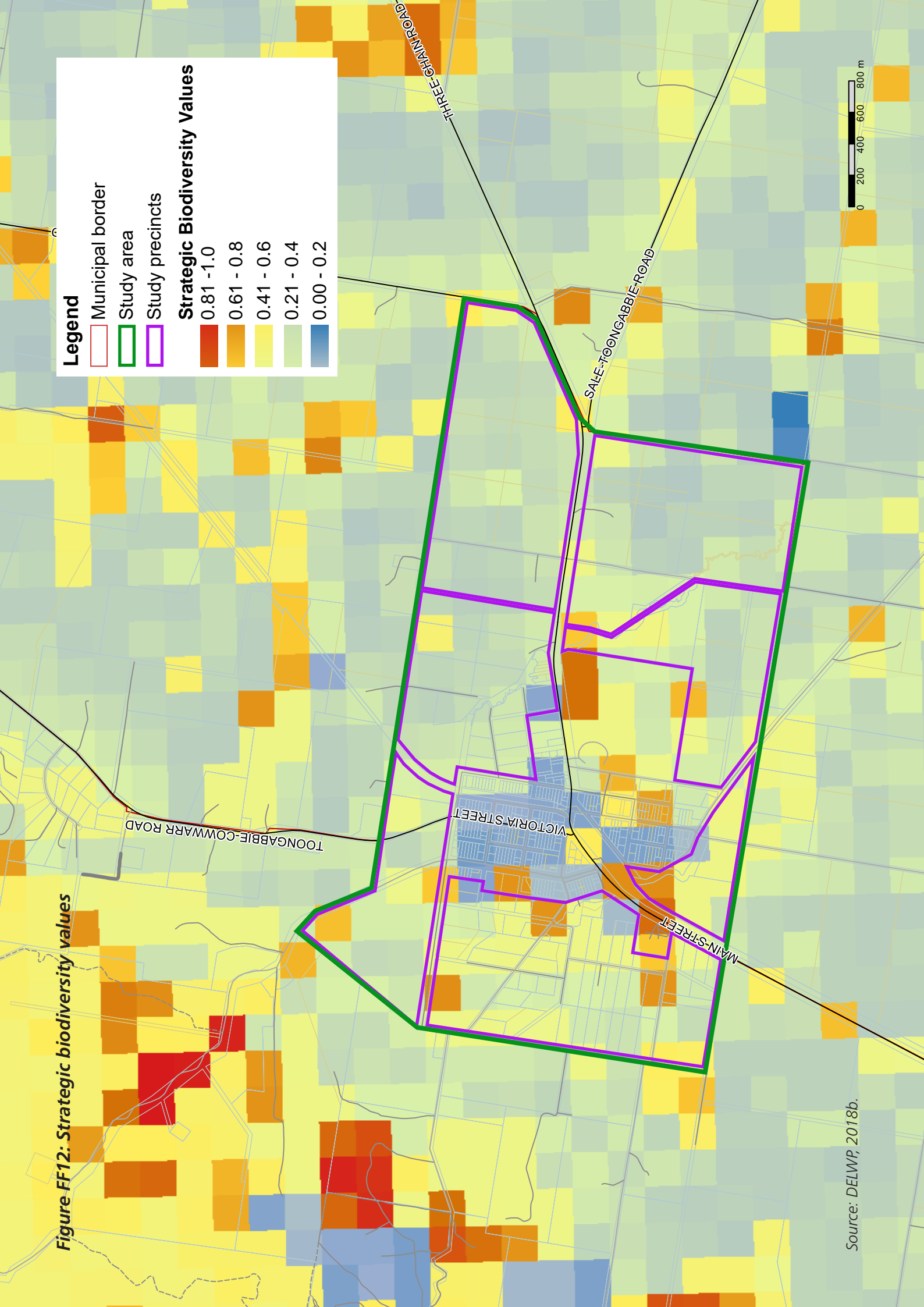


Figure FF13: Native vegetation condition

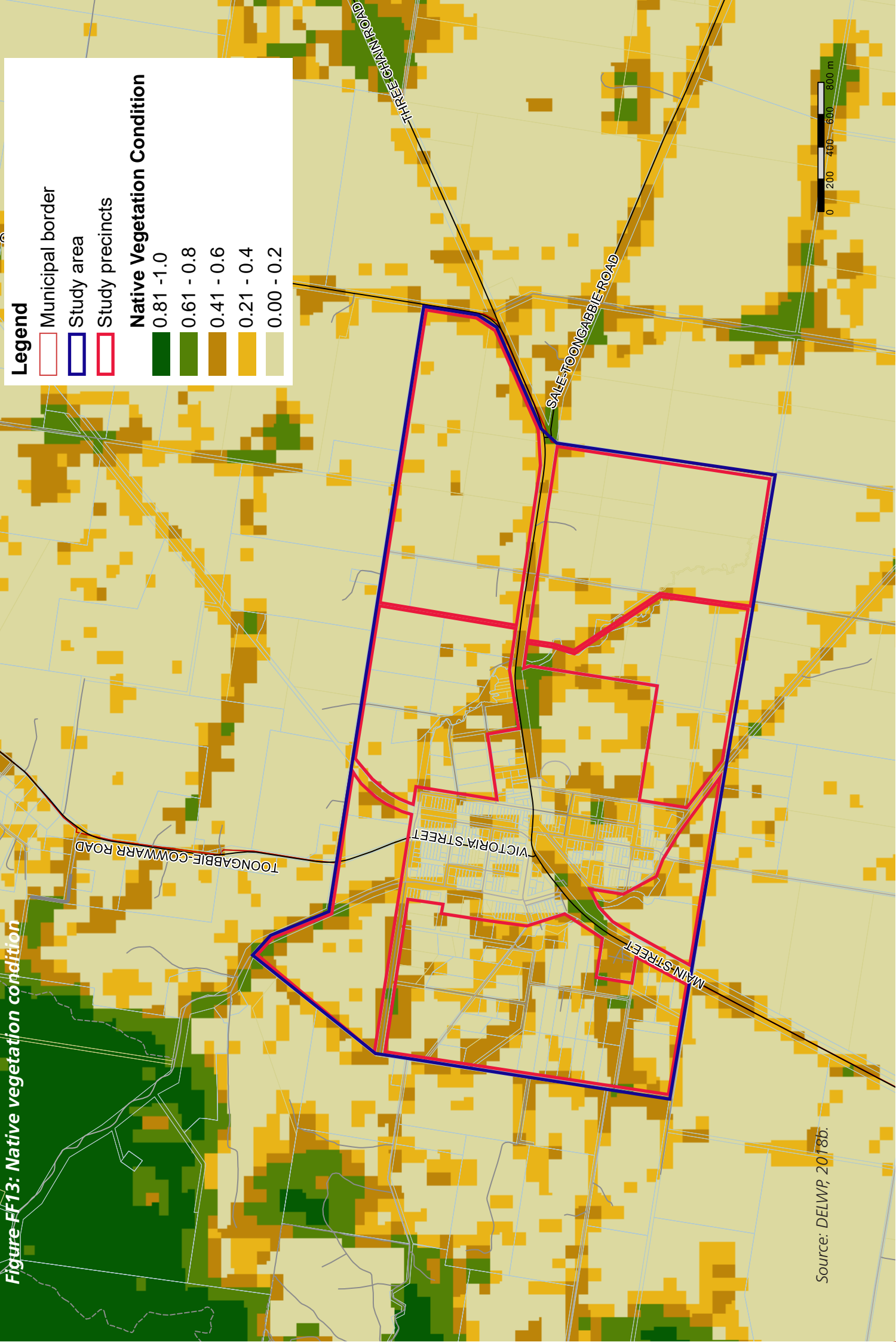
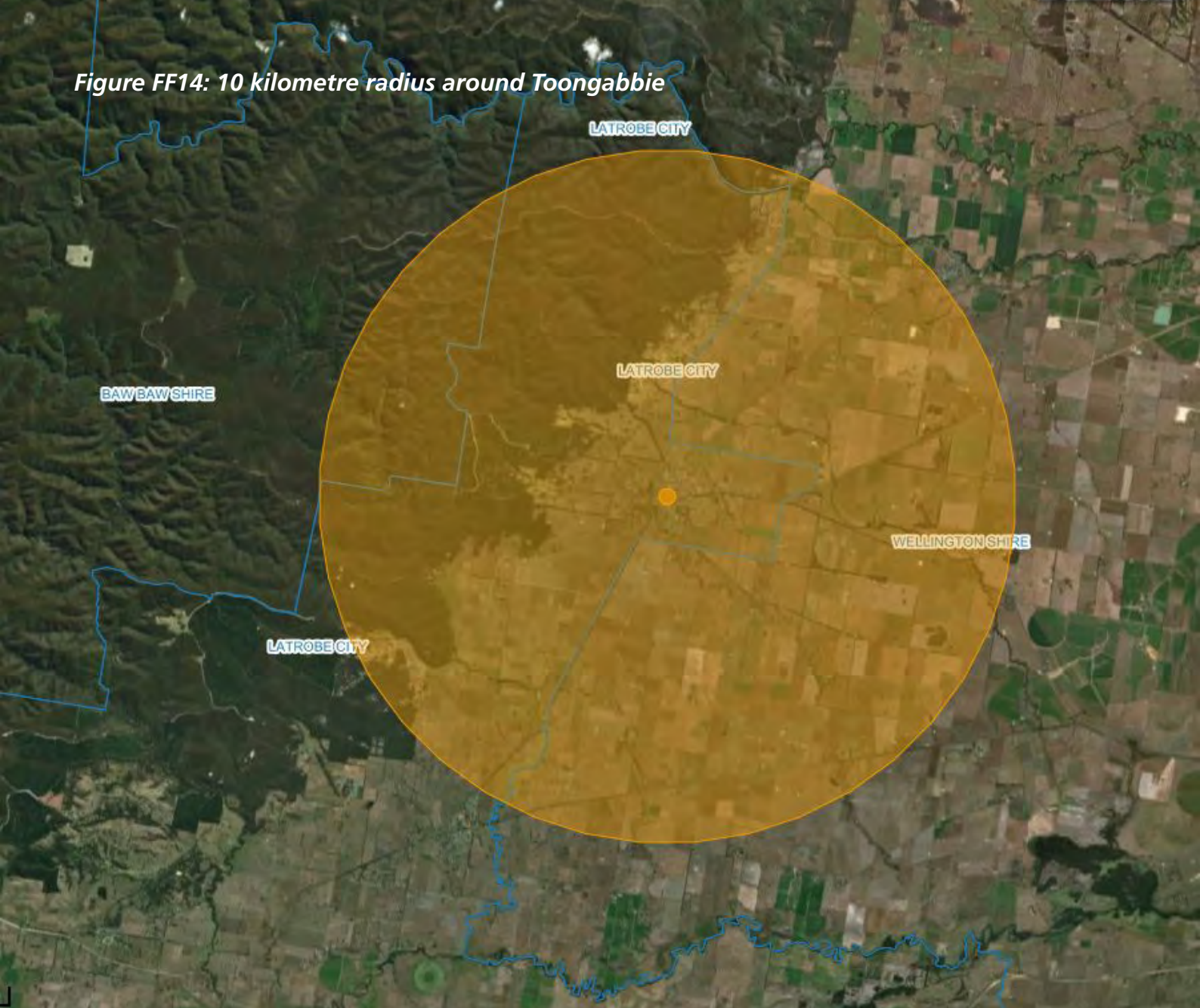


Figure FF14: 10 kilometre radius around Toongabbie



Source: DoEE, 2017.

The following is based on a modelled distribution of threatened species. It is important to note that most of the species listed in the Listed Threatened Species section either likely to occur in the study area but will be vagrant or rare visitors at best.

3.2.5 FLORA RECORDINGS

A total of 58 plant species was recorded in the study area through *Visualising Victoria's Biodiversity* (VBA) and an additional 10 species are identified by the EPBC Act Online Database as possessing likely habitat in the local area.

The study area is currently mapped by DELWP

as containing extant of Plains Grassy Woodland EVC and Swamp Scrub EVC vegetation persisting as small remnants in some protected sites along some creek and fence lines.

The VBA contains an additional 468 significant flora species previously recorded within 10 kilometres of the study area. The EPBC search tool nominated an additional 13 nationally significant species which have not been previously recorded but have the potential to occur in the locality.

3.2.6 FAUNA RECORDINGS

A total of 40 Fauna species have been recorded in the area, with an additional 18 species classified as threatened under the EPBC act listed as species or habitat 'likely to occur' or 'may occur' in the area. The habitat value of the study area is generally low, being dominated by grazing paddocks with mainly exotic pasture species.

The remnant vegetation along the river beds, small patches of remnant vegetation within the study area and the large dams on agricultural properties however provide habitat suitable for many birds, frogs and other smaller animals. A further 197 species have been observed within 10 kilometres of the study area.

The Atlas of Living Australia has 7647 flora and fauna occurrences within 10 kilometres of the study area; this is reduced to 311 occurrences with the study area. The large reduction in flora and fauna diversity is largely due to Toongabbie's proximity to the Great Dividing Ranges and the Thomson River.

A full list detailing all the flora and fauna that are likely to be found on the site can be found in the appendices at Appendix 4.

3.2.7 WETLANDS OF INTERNATIONAL IMPORTANCE (RAMSAR)

The Gippsland Lakes Ramsar site is located outside the study area, approximately 30-40km downstream of the study area. Given the distance between the study area and the Ramsar site, any potential impacts due to development could be addressed through standard environmental management procedures during construction.

NB: all flora photos are sourced from Department of Environment, Water, Heritage and the Arts, 2010 unless specified.



Figure FF15: Spear Grass (*Heteropogon contortus*)

Source: Department of Education and Training, 2019



Figure FF16: Gippsland Red Gum (*Eucalyptus tereticornis ssp. mediana*)



Figure FF17: Common Wallaby Grasses (*Rytidosperma caespitosum*)

Source: R. Best in Department of Education and Training, 2019.



3.2.8 LISTED THREATENED ECOLOGICAL COMMUNITIES

The EPBC Act Protected Matters Search Tool also showed that a Federally-listed Threatened Ecological Community Grassy Woodland and Associated Woodland, which is classified as Critically Endangered, is also highly likely to be found within the study area as it has been listed as occurring at the Toongabbie Cemetery. Species found in the Gippsland Red Gum Grassy Woodland and Associated Grassland EVC include but are not limited are:

- Gippsland Red Gum (*Eucalyptus tereticornis* subsp. *mediana*);
- Wallaby Grasses (*Rytidosperma caespitosum*);
- Spear Grasses (*Heteropogon contortus*);
- Wattle Mat Rush (*Lomandra filiformis*);
- Weeping Grass (*Microlaena stipoides*);
- Kangaroo Grass (*Themeda triandra*);
- Chocolate Lily (*Arthropodium strictum*);
- Purple Donkey Orchid (*Diuris punctata*); and
- Early Nancy (*Wurmbea dioica*).

Pictures of flora (Figures FF15 to FF20) are all likely to be found in the Gippsland Red Gum Grassy Woodland and Associated Woodland EVC (Commonwealth of Australia, 2010) (Appendix 5).

3.2.9 LISTED THREATENED SPECIES

10 nationally significant flora species that are vulnerable, endangered or critically endangered and are considered to have be likely or may occur in the study area (Figure BG4 on page 11), which includes:

- River Swamp Wallaby Grass (*Amphibromus nervosus*);
- Thick-lipped Spider Orchid (*Caladenia tessellata*);



Figure FF18: Chocolate Lily (*Arthropodium strictum*)

Source: Nicholas, L.



Figure FF19: Matted Flax Lily (*Dianella amoena*)



Figure FF20: Early Nancy (*Wurmbea dioica*)

Source: Nicholas, L.

- Matted Flax Lily (*Dianella amoena*);
- Round-leaf Pomaderris (*Pomaderris vacciniifolia*);
- Maroon Leek Orchid (*Prasophyllum frenchii*); and
- Metallic Sun Orchid (*Thelymitra epipactoides*).

There are seven vulnerable, endangered or critically endangered bird species that are likely or may occur in the area, these include:

- Regent Honeyeater (*Anthochaera phrygia*);
- Australasian Bittern (*Botaurus poiciloptilus*);
- Curlew Sandpiper (*Calidris ferruginea*);
- Painted Honeyeater (*Grantella picta*);
- Swift Parrot (*Lathamus discolor psittacidae*);
- Eastern Curlew (*Nemenius madagascariensis*); and
- Australian Painted-snipe (*Rostratula australis*).

There are two species of vulnerable fish species that are likely or may occur within the study area, these are:

- Eastern Dwarf Galaxias (*Galaxiella pusilla*); and
- Australian Grayling (*Prototroctes maraena*).

Furthermore, there are two species of frog that are considered vulnerable that may occur in the study area, as well as one species of critically endangered moth. These are:

- Green and Golden Bell Frog (*Litoria aurea*);
- Growling Grass Frog (*Litoria raniformis*); and
- Golden Sun Moth (*Synemon plana*).

Lastly, there are six species of mammals that are either endangered or vulnerable that are either likely or may occur in the area, these species are:

- Tiger Quoll (*Dasyurus maculatus*);



Figure FF21: Tiger Quoll (*Dasyurus maculatus*)
Source: Bush Heritage Australia, 2019



Figure FF22: Greater Glider (*Petauroides volans*)
Source: Greening Australia, 2018



Figure FF23: Swift Parrot (*Lathamus discolor psittacidae*)
Source: Bird Life Australia



- Greater Glider (*Petauroides volans*);
- Grey-headed Flying Fox (*Pteropus poliocephalus*);
- Broad-toothed Rat (*Mastacomys fuscus*);
- Long-nosed Potoroo (*Potorous tridactylus*);
- and
- Smoky Mouse (*Pseudomys fumeus*).

Consultation held on 8 October 2019 highlighted that property owners had spotted families of the Greater Glider in the foothills of the Great Dividing Ranges near Old Walhalla Road.

3.2.10 LISTED MIGRATORY BIRDS

There are 13 species of nationally significant migratory species, this includes one migratory marine birds, five migratory terrestrial species and seven migratory wetland species that are either likely or may occur within the study area. Two of the migratory wetland species are critically endangered. These are:

- Eastern Curlew (*Nemenius madagascariensis*);
- and
- Curlew Sandpiper (*Calidris ferruginea*).

3.2.11 FLORA AND FAUNA LIKELIHOOD OF OCCURRING IN THE AREA

According to the Victorian Biodiversity Atlas recordings (Figures FF28 and FF29), the Toongabbie Cemetery has the highest likelihood of significant flora in the study area, this is consistent with the area being listed as an endangered EVC under the EPBC Act. The other area that has a likelihood of significant flora growing is along the Gippsland Plains Rail Trail as the Giant Honey Myrtle was recorded there in 2002.

There have been very few sightings of significant



Figure FF24: Grey-headed Flying Fox (*Pteropus poliocephalus*)

Source: Animal Spot, 2019



Figure FF25: Golden Sun Moth (*Synemon plana*)

Source: SWIIFT, 2019



Figure FF26: Long-nosed Potoroo (*Potorous tridactylus*)

Source: Science Photo Library, 2019

fauna in the study area, however, a number of sightings have occurred within five kilometres of the study area largely due to its proximity to the Alpine Ranges and the Cowwarr Weir. However, there is a small likelihood that fauna may pass through Toongabbie. Significant bird species such as the White Throated Needle Tail have been recorded at the wetlands located at 53-57 Humphrey Road and the adjoining road reserve in recent years.

For the purpose of this report, it is important that emphasis is directed at values that are present or can be realistically preserved and restored; in the case of Toongabbie this will be the critically endangered grassy woodland and grasslands and its associated flora and fauna.

By placing vegetation protection overlays on these critically endangered areas, it ensures that they are protected from further development, and that the environmental conservation values are mapped and known.

Further work can also enhance the waterways through the study area that will allow for movement corridors for visiting fauna as they are only likely to be transient if found in the study area.

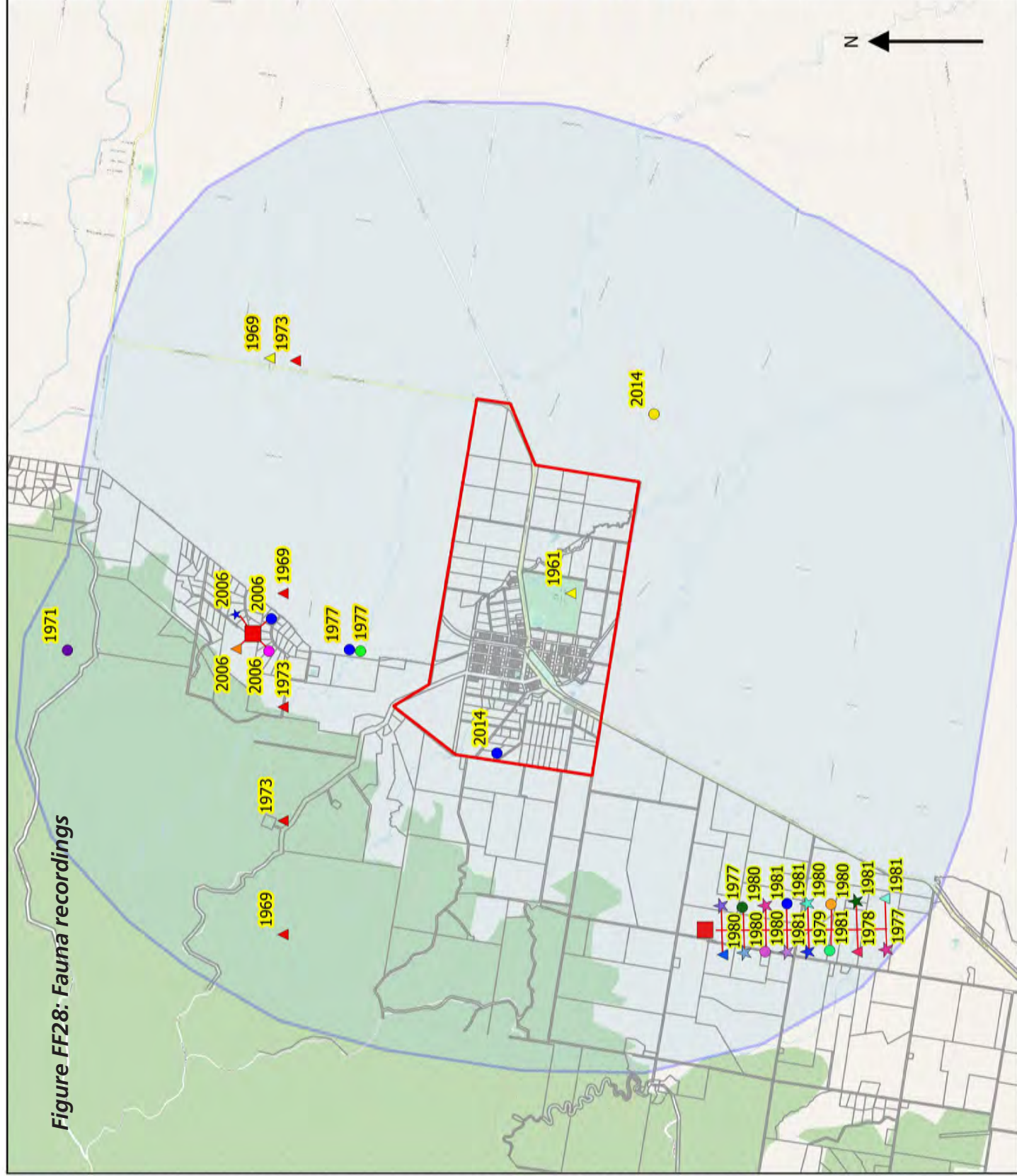


**Figure FF27: White-throated Needle Tail
(*Hirundapus caudacutus*)**

Source: Tranter, G., 2016



Figure FF28: Fauna recordings



Legend

- ▬ Study Area
- ▬ Buffer Layer
- ▲ Dendy's Toadlet
- ★ Australasian Shoveler
- Barking Owl
- ▲ Eastern Snake-necked Turtle
- Diamond Firetail
- ★ Eastern Great Egret
- Greater Glider
- Growling Grass Frog
- ★ Grey Goshawk
- ▲ Southern Toadlet
- Hardhead
- ★ Latham's Snipe
- Nankeen Night Heron
- ★ Pied Cormorant
- ★ Powerful Owl
- ▲ Regent Honeyeater
- ★ Royal Spoonbill
- White-bellied Sea-eagle
- ▲ Spotted Harrier
- White Throated Needletail
- ▲ Spotted Quail-thrush
- Central point for fauna sitings

**Previously documented
significant fauna within 5km
of the study area**

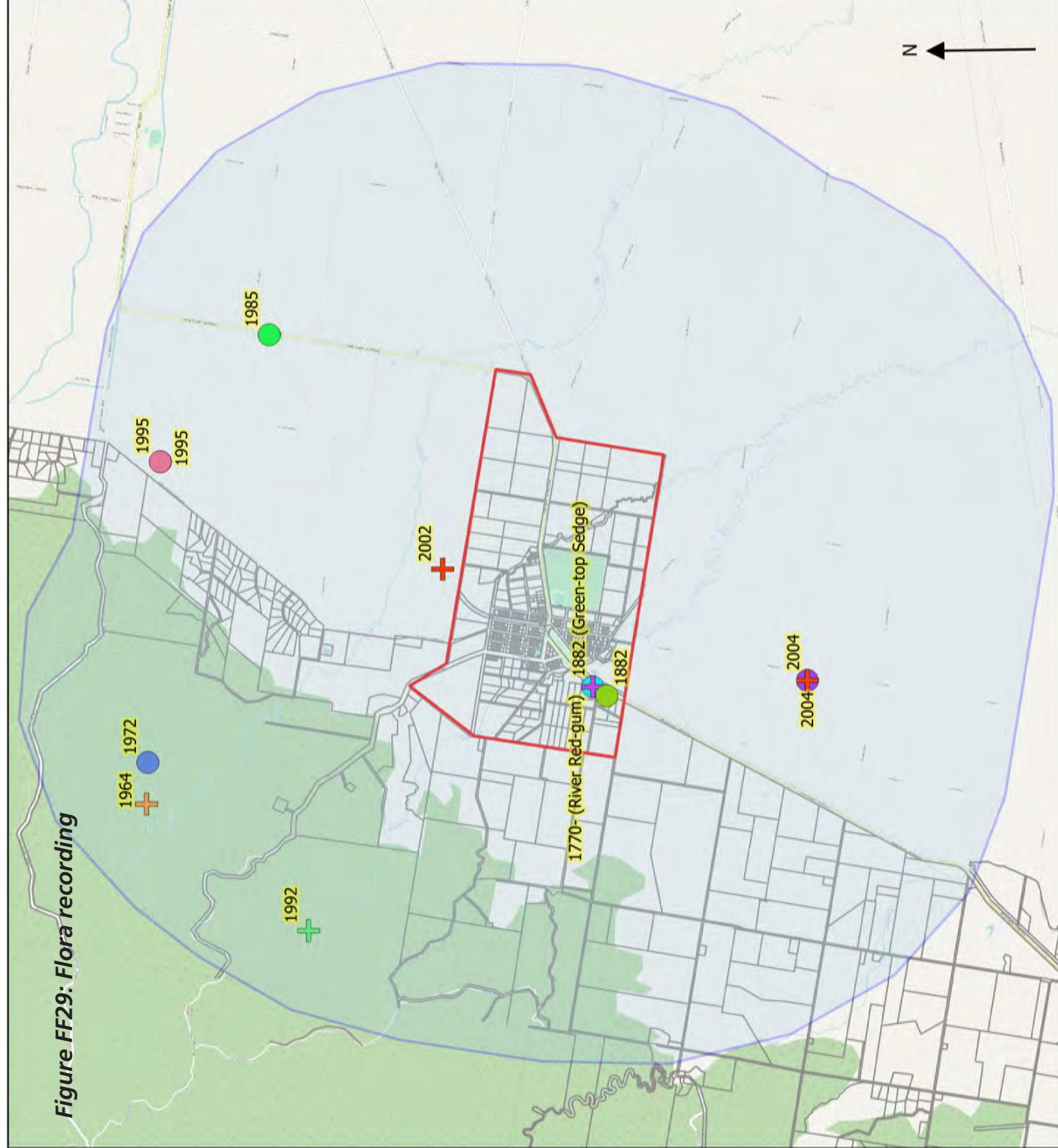


Map Version: 1.0
Desktop Fauna Assessment for Toongabbie

VBA 2019. Victorian Biodiversity Atlas. Sources from:
"VBA_FAUNA25" and "VBA_FAUNA100", May 2019

0 1 2 3 km

Figure FF29: Flora recording



Legend

- + Giant Honey-myrtle
- Matted Flax-lily
- Round-leaf Pomaderris
- Small-leaf Bush-pea
- Green-top Sedge
- + Grey Scentbark
- + Hairpin Banksia
- Leafy Peppergrass
- + River Red-gum
- Velvet Apple-berry
- 5km Buffer
- Study Site

Previously documented
significant fauna within 5km of
the study area



Map Version: 1.0
Desktop Flora Assessment for Toongabbie

VBA 2019, Victorian Biodiversity Atlas. Sourced
from: 'VBA_FLORA25' and 'VBA_FLORA100',
May 2019

0 1 2 3 km

3.3 Field Survey

Site based assessment occurred on 3 January 2019 to evaluate the topography, biodiversity attributes and areas of environmental significance. Nippe Lane, Old Walhalla Road, Heywood Street, Stringer Road, Humphrey Road, Nicholsons Road, Traralgon-Maffra Road and Afflecks Road were all streets within the Toongabbie study area that were investigated along with a number of significant patches of native vegetation identified.

A habitat hectares assessment along with field based notes/sketches will give an idea on the vegetation quality and structure of the area. While this component is essential it is crucial that desktop based assessments have been completed prior to the field work to ensure the understanding of the scope and size of the completion is made.

Photos, sketches and general notes:

A camera and field book were taken out during the field survey and key environmental issues were captured using the camera and their location sketched in regards to the key biodiversity significant sites within the study area. The key environmental issues that were recorded included pest plants, rubbish, human intervention, potential threats, nearby activities and other environmental issues that were thought to be considered of interest to Latrobe City Council. These formed the Site 1 and Site 2 Habitat Hectare Assessments.

3.3.1 LIMITATIONS

It is acknowledged that the field survey was undertaken in summer, and due to drought conditions, the creek beds were very dry. This report does not address what flora and fauna may be found during wetter conditions or during different seasons. It is recommended that further flora and fauna surveys be conducted during wetter conditions and during flowering seasons.

*Photo: Native vegetation on roadside.
Source: McKenzie, T., 2019.*



Figure FF30: Location of habitat hectare assessments



3.4 Site and Habitat Hectare Assessments

The Habitat Hectares (HH) assessment was conducted using the Department of Environment, Land, Water and Planning (DELWP) vegetation quality field assessment sheet. The sheet provides data based on the site condition and landscape context to combine together for a final habitat score. Before the habitat hectares assessment can commence, a small component of the desktop survey must be utilised in Nature-kit as it is important that the Ecological Vegetation Class (EVC) of the area is defined before the assessment can be accurately completed. The site must be firstly measured with the boundary clearly marked using flagging tape. Once the site has been located and boundary set in place a general overview must be completed. The general overview compared the sites characteristics with the EVC's benchmarks and descriptions. The most accurate EVC for the site was chosen and the HH assessments began. Attached to the report is the full copy of both the Habitat Hectare assessments (Appendix 3 and 4).

Five locations were looked at during the site assessment, including:

1. Toongabbie Creek adjoining Humphrey Road;
2. Toongabbie Golf Course on Main Street;
3. Rosedale Creek at 1880 Traralgon-Maffra Road;
4. 53-57 Humphrey Road and the adjoining road reserve; and
5. Gippsland Plains Rail Trail at Afflecks Road.

Of these, two had habitat hectare assessments completed – Toongabbie Creek and the Toongabbie Golf Course.

The site at 53-57 Humphrey Road was found to have significant stands of Gippsland Red Gum and native grasses located on the property and in the adjoining road reserve, enough for the

site to be considered the Gippsland Red Gum Grassy Woodland Community, which is nationally significant and protected under the EPBC Act. A Habitat Hectare assessment was not conducted as this time as the EVC area was smaller than a hectare. However, there is significant potential to further restore and protect the vegetation on this site.

Rosedale Creek has previously been shown as an endangered Swampy Scrub EVC however while this area is labelled as Swamp Scrub there was insufficient flora values to link to this EVC at this time. It had more Plains Grassy Woodland EVC characteristics. It should be noted that the site has been significantly impacted by the grazing of cattle and horses. Furthermore, there is evidence of the harvesting of trees for firewood and possible tree removal that has occurred on the site. Weeds have taken over the understorey in many places due to the livestock grazing which has allowed weeds to out compete other native vegetation. It was determined to be too degraded to carry out a HH assessment, Rosedale Creek also showed no signs of recruitment (the seeding of saplings by the adult trees). This was vastly different to Toongabbie Creek which showed signs of degradation due to grazing and lack of weed management but was experiencing strong recruitment of large tree species such as Black Wattle.

While the Swamp Scrub EVC was said to be present in Toongabbie it was only found in a small section along the Gippsland Plains Rail Trail. It was not large enough to carry out a Habitat Hectare assessment however, notes about the EVC habitat are included on page 446.

3.4.1 SITE 1 - TOONGABBIE CREEK

The Toongabbie creek site, Location 1, as shown in Figure FF30, was located at the beginning of Humphrey's Road along the Toongabbie creek. The Plains Grassy Woodland EVC was found to be present on the site. The area received an overall HH score of 34/100 (see more details in Appendix 3). This score was largely due to the extreme amount of weeds on the site, the small patch size and the lack of understorey life-form biodiversity due to the native species inability to compete with the thick weeds and grazing of domestic animals such as cattle and horses.

Weed species present were Blackberry (genus: *rubus*), Scotch Thistle (*Onopordum acanthium*) and Kikuyu Grass (*Pennisetum clandestinum*). The site also contained an abundance of pest animal species such as rabbits (*Oryctolagus cuniculus*). Although the understorey was depleted the woody species of trees was coping well with recruitment and there are 5-6 large trees per hectare.

*Photo: Toongabbie Creek.
Source: McKenzie, T., 2019.*



3.4.2 SITE 2 - TOONGABBIE GOLF COURSE

The Toongabbie Golf Course site, Location 2 as shown in Figure FF30, was located between Heywood Street and Nippe Lane along Traralgon-Maffra Road and the Toongabbie golf course. The patch is approximately 4.2 hectares in size. Vegetation on site was assessed as being Plains Grassy Woodland EVC. The site received a HH score of 50/100 (see more details in Appendix 4) which was based on the abundance of large trees and recruitment, the lack of understorey biodiversity and the presence of 25-50% weed cover.

The Toongabbie golf course site contained a high level of recruitment as seen in the photo to the right. Rubbish was also noted on the site due to it being in close proximity to the local shops. Kangaroo grass (*Themeda triandra*) and Gum trees (genus: *eucalyptus*) represented the Plains Grassy Woodland EVC, as well as several other native understorey species. It was noted that areas of the site were being maintained due to young children often using the site and the shorter grass easing the threat of snake attack. The site also contained a range of weeds such as *Agapanthus* (*Agapanthus africanus*), Blackberry (genus: *rubus*) and Mirror Bush (*Coprosma repens*).

The landscape context score for both sites 1 and 2 also caused the overall score to be low due to the high level of disturbance. This is based off the sites being within the town area with limited native vegetation nearby and increased human activity.



*Photo: Road reserve in front of Toongabbie Golf Course.
Source: McKenzie, T., 2019.*

3.4.3 GIPPSLAND PLAINS RAIL TRAIL

Although the EVC map in Figure FF2 on page 403 shows Swamp Scrub along the waterways - Rosedale Creek and Toongabbie Creek, they were both found to be largely devoid of Swampy Scrub EVC. However, that EVC was found in patches along the Gippsland Plains Rail Trail, particularly at the intersection with Afflecks Road to the north of the town.

This Swamp Scrub EVC is dominated by Swamp Paperbark (*Melaleuca ericifolia* (or sometimes Woolly Tea-tree (*Leptospermum lanigerum*))) which often forms a dense thicket that out-competes other species. Some emergent Eucalypts were also present. In areas where the light penetrated to the ground level, herbaceous ground cover was present.

The site was found to have a high level of bird and insect biodiversity; however, the dry weather had depleted water levels in the swamp allowing some weed species to take over the usual understorey and may require human intervention in the future to maintain the high quality of the vegetation.

*Photo: Gippsland Plains Rail Trail.
Source: McKenzie, T., 2019.*



3.5 Implications

The results of this assessment indicate that the study area has high potential to support threatened species and ecological communities listed under the EPBC Act. It has a moderate potential to support fauna listed under the EPBC Act. Site assessments of the study area by Latrobe City officers identified discrete areas of Swamp Scrub and Plains Grassy Woodland within the study area and along the boundaries, which could support threatened species and qualify as threatened ecological communities.

A small patch of Gippsland Plains Grassy Woodland EVC was also identified and needs further work by the Federal Environment Department and Department of Environment, Land, Water and Planning to be formally identified. As well as the area at the Toongabbie Cemetery which has already been identified as Gippsland Plains Grassy Woodland EVC.

Further surveys were recommended to determine the presence of threatened species and ecological communities, and assess the extent and quality of native vegetation.



*Photo: Possible Gippsland Red Gum Grassy Plains and Associated Grassland EVC area
Source: McKenzie, T., 2019.*

4



Conclusion

The results of this assessment indicate that the study area has moderate potential to support threatened species and ecological communities listed under the EPBC Act. The site assessments undertaken by Latrobe City Council in January 2019 identified discrete areas of Swamp Scrub and Plains Grassy Woodland EVCs, as well as the federally-listed Gippsland Red Gum Grassy Woodland and associated grassland within the study area and along the boundaries, which could support threatened species and qualify as threatened ecological communities. These areas of environmental significance have shown to be significantly degraded due to land fragmentation, farming practices and invasive weeds.

The opportunity to improve on the native vegetation extent within the town exists, with some research and identification into the core areas for corridors to be created. It is possible that large benefits to biodiversity can be provided from a small amount of initiative.

In order to improve on the key patches of vegetation, the initial steps will include some pest management, rehabilitation and removal of livestock from key areas such as waterways.

Completing these actions will allow for the ecosystems to rebuild naturally over time and be in accordance with Clause 12.01 Biodiversity of the Planning Policy Framework.

From a planning perspective, vegetation protection overlays could be applied to the Gippsland Red Gum Grassy Woodland and Associated Native Grasslands EVC areas. However, these areas will need to be formally identified before the overlays can be applied. The most appropriate vegetation protection overlay is discussed in the Land Use and Economic Assessment. With the initial assessment, one lot

may be ruled out of any further development opportunities. The development of road reserves may be significantly impacted which may hinder development opportunities, particularly, near Heywood and Ries Streets within the Toongabbie township, and the road reserve adjacent to 53-57 Humphrey Street, Toongabbie.

4.1 Opportunities

Green corridors could be created along Rosedale and Toongabbie Creeks including the stream that runs towards 53-57 Humphreys Road, Toongabbie. This would not only create connected biodiversity corridors but could become town walking trails for the community. This could be shown on the Toongabbie Structure Plan and would align with *Protecting Victoria's Environment - Biodiversity 2037*.

4.2 Recommendations

As a result of this Flora and Fauna Assessment the following actions are recommended:

1. Complete further site assessments in different seasons to further assess the type and quality of vegetation that is in Toongabbie.
2. Work with representatives from the Federal Department of Environment and Energy and state representatives from the Department of Environment, Land, Water and Planning to assess the possible Gippsland Red Gum Grassy Woodland and Associated Native Grasslands EVC areas.
3. Investigate using appropriate planning tools for the protection of the Gippsland Red Gum Grassy Woodland and Associated Native Grasslands EVC areas and other significant areas.

4. Work with West Gippsland Catchment Management Authority to create a management plan for the Toongabbie and Rosedale Creeks to create green corridors and integrated pathways.
5. Identify significant roadside vegetation and include on Council's significant tree register.
6. Apply vegetation protection overlays to Gippsland Red Gum Grassy Woodland and Associated Native Grasslands EVC communities and other significant identified areas.
7. Work with landowners to establish agreements to rehabilitate the waterways on their properties.



*Photo: Water Reserve on Stringer Road.
Source: McKenzie, T., 2019.*



5

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6

Appendices



Appendix 1

EPBC Act Protected Matters Report



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 16/08/18 14:31:31

[Summary](#)

[Details](#)

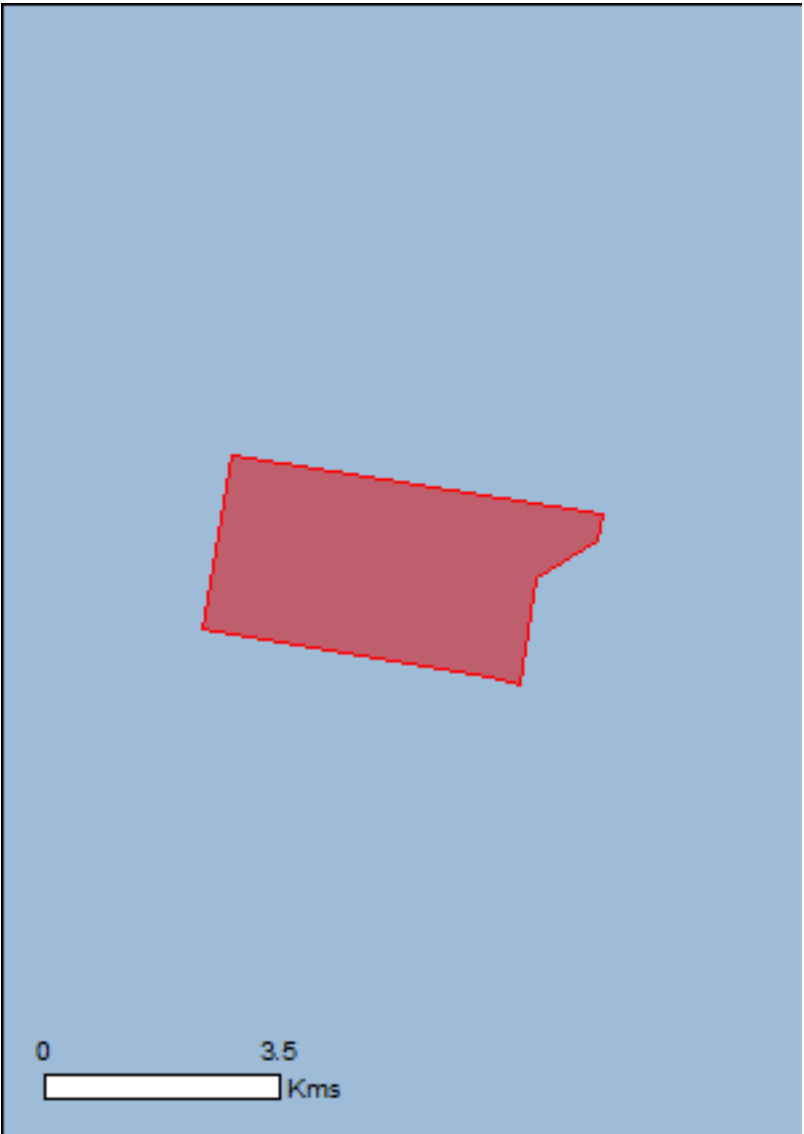
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

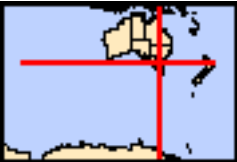
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	28
Listed Migratory Species:	13

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	1
Invasive Species:	34
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name	Proximity	
Gippsland lakes	30 - 40km upstream	

Listed Threatened Ecological Communities		[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.		

Name	Status	Type of Presence
Gippsland Red Gum (Eucalyptus tereticornis subsp. mediana) Grassy Woodland and Associated Native Grassland	Critically Endangered	Community likely to occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Fish		
Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area
Frogs		

Name	Status	Type of Presence
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat may occur within area
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Insects		
Synemon plana Golden Sun Moth [25234]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Mastacomys fuscus mordicus Broad-toothed Rat (mainland), Tooarrana [87617]	Vulnerable	Species or species habitat may occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pseudomys fumeus Smoky Mouse, Konoom [88]	Endangered	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat likely to occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat likely to occur within area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Pomaderris vacciniifolia Round-leaf Pomaderris [4256]	Critically Endangered	Species or species habitat may occur within area
Prasophyllum frenchii Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat likely to occur within area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat likely to occur within area
Thelymitra epipactoides Metallic Sun-orchid [11896]	Endangered	Species or species habitat may occur within area
Thelymitra matthewsii Spiral Sun-orchid [4168]	Vulnerable	Species or species

Name	Status	Type of Presence
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	habitat may occur within area
		Species or species habitat likely to occur within area
Listed Migratory Species		
[Resource Information]		
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence
Pandion haliaetus Osprey [952]	Endangered*	area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]		Species or species habitat likely to occur within area
		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Toongabbie B.R.	VIC
Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included.	
Name	State
Gippsland RFA	Victoria

Invasive Species	[Resource Information]
Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.	

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Turdus philomelos Song Thrush [597]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Carrichtera annua Ward's Weed [9511]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within

Name	Status	Type of Presence
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		area Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-38.072567 146.65051,-38.071824 146.646734,-38.066891 146.608196,-38.048644 146.612058,-38.054794 146.661668,-38.057565 146.660896,-38.061485 146.652742,-38.072567 146.65051

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

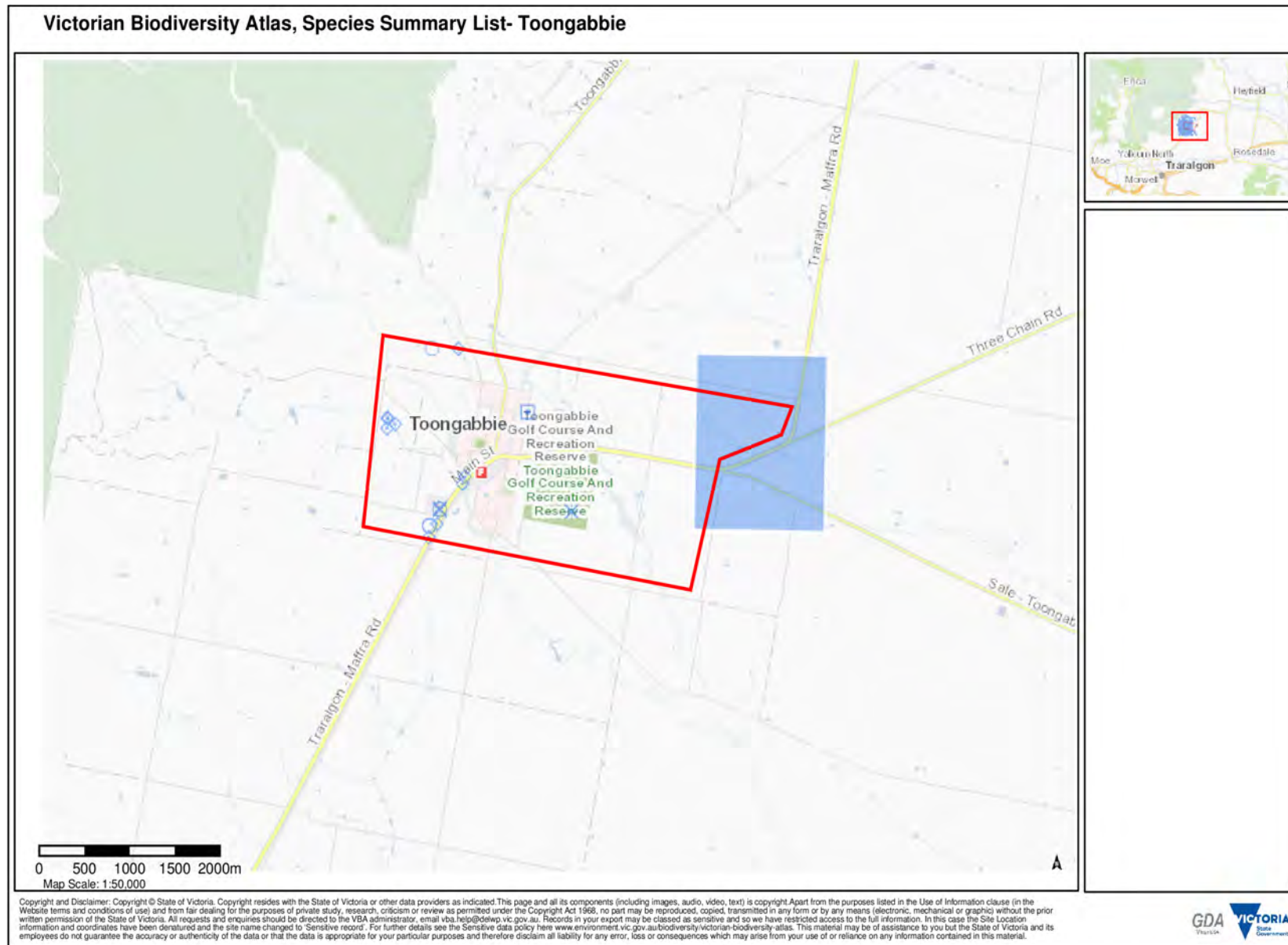
The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

Appendix 2

Victorian Biodiversity Atlas, Species Summary List -
Toongabbie

Victorian Biodiversity Atlas, Species Summary List- Toongabbie



Selected Area

Type: User Polygon Value: POLYGON (((146.649806 -38.072289,146.653229 -38.059964,146.66094 -38.057534,146.662238 -38.054893,146.610477 -38.048862,146.608375 -38.066889,146.649806 -38.072289)))

Common Filter

Taxon Level: Species

Advanced Filter

No advanced filter criteria.

Total Records

101

Last Review Date:01 Aug 2018

Search Result

Taxon ID	Scientific Name	Common Name	Victorian Advisory List	Conservation Status	Discipline	Taxon Origin	Short Name	Count of Sightings	Last Record
5140	Misc Dry	Dry waterbody			Aquatic fauna, Aquatic invertebrates, Terrestrial fauna, Flora			1	12/04/2016
501300	Eucalyptus muelleriana	Yellow Stringybark			Flora		Euca muel	1	31/08/1888
10009	Coturnix pectoralis	Stubble Quail			Terrestrial fauna			1	28/02/1999
10043	Ocyphaps lophotes	Crested Pigeon			Terrestrial fauna			1	01/11/2014
10058	Porphyrio porphyrio	Purple Swamphen			Terrestrial fauna			1	29/10/2014
10097	Phalacrocorax sulcirostris	Little Black Cormorant			Terrestrial fauna			1	29/10/2014

10180	Threskiornis spenicollis	Straw-necked Ibis			Terrestrial fauna	3	01/11/2014
10189	Ardea pacifica	White-necked Heron			Terrestrial fauna	1	29/10/2014
10202	Chenonetta jubata	Australian Wood Duck			Terrestrial fauna	3	01/11/2014
10208	Anas superciliosa	Pacific Black Duck			Terrestrial fauna	1	01/11/2014
10210	Anas castanea	Chestnut Teal			Terrestrial fauna	1	01/11/2014
10211	Anas gracilis	Grey Teal			Terrestrial fauna	1	01/11/2014
10232	Elanus axillaris	Black- shouldered Kite			Terrestrial fauna	1	28/02/1999
10242	Ninox novaeseelan diae	Southern Boobook			Terrestrial fauna	2	29/10/2014
10258	Glossopsitta concinna	Musk Lorikeet			Terrestrial fauna	2	01/11/2014
10269	Cacatua galerita	Sulphur- crested Cockatoo			Terrestrial fauna	4	01/11/2014
10271	Cacatua sanguinea	Little Corella			Terrestrial fauna	1	29/10/2014
10273	Eolophus roseicapillus	Galah			Terrestrial fauna	2	01/11/2014
10288	Platycercus eximius	Eastern Rosella			Terrestrial fauna	3	01/11/2014
10322	Dacelo novaeguinea e	Laughing Kookaburra			Terrestrial fauna	2	01/11/2014
10334	Hirundapus caudacutus	White- throated Needletail	Vulnerable	vu	Terrestrial fauna	1	01/11/2014

10357	Hirundo neoxena	Welcome Swallow		Terrestrial fauna		2	29/10/2014
10359	Petrochelidon nigricans	Tree Martin		Terrestrial fauna		1	01/08/2004
10364	Rhipidura leucophrys	Willie Wagtail		Terrestrial fauna		1	01/08/2004
10415	Grallina cyanoleuca	Magpie-lark		Terrestrial fauna		3	29/10/2014
10424	Coracina novaehollandi ae	Black-faced Cuckoo- shrike		Terrestrial fauna		1	01/11/2014
10425	Coracina papuensis	White-bellied Cuckoo- shrike		Terrestrial fauna		1	01/08/2004
10486	Acanthiza chrysorrhoa	Yellow- rumped Thornbill		Terrestrial fauna		1	01/08/2004
10529	Malurus cyaneus	Superb Fairy- wren		Terrestrial fauna		1	01/08/2004
10634	Manorina melanocephala	Noisy Miner		Terrestrial fauna		3	01/11/2014
10638	Anthochaera carunculata	Red Wattlebird		Terrestrial fauna		2	29/10/2014
10702	Cracticus torquatus	Grey Butcherbird		Terrestrial fauna		2	01/11/2014
10705	Cracticus tibicen	Australian Magpie		Terrestrial fauna		4	29/10/2014
10954	Corvus mellori	Little Raven		Terrestrial fauna		1	29/10/2014
10957	Columba livia	Rock Dove	*	Terrestrial fauna	Introduced	1	28/02/1999
10976	Pardalotus striatus	Striated Pardalote		Terrestrial fauna		1	01/08/2004
10998	Acridotheres tristis	Common Myna	*	Terrestrial fauna	Introduced	1	01/08/2004

10999	<i>Sturnus vulgaris</i>	Common Starling		*	Terrestrial fauna	Introduced	3	01/11/2014
13033	<i>Geocrinia victoriana</i>	Victorian Smooth Froglet			Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		1	24/04/1961
13063	<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog (race unknown)			Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		1	12/11/1997
13125	<i>Pseudophryne semimarmorata</i>	Southern Toadlet	Vulnerable	vu	Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		7	24/04/1961
13134	<i>Crinia signifera</i>	Common Froglet			Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		1	12/11/1997
13182	<i>Litoria ewingii</i>	Southern Brown Tree Frog			Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		1	12/11/1997
63906	<i>Litoria verreauxii verreauxii</i>	Verreaux's Tree Frog			Terrestrial fauna, Aquatic fauna, Aquatic invertebrates		1	12/11/1997
500007	<i>Acacia acinacea</i> s.l.	Gold-dust Wattle			Flora	Aca aci.sl	2	08/04/1978

500038	Acacia genistifolia	Spreading Wattle		Flora		Acac geni	1	01/01/1770
500057	Acacia melanoxylon	Blackwood		Flora		Acac mela	1	01/01/1770
500236	Anthoxanthu m odoratum	Sweet Vernal-grass	*	Flora	Introduced	Anth odor	1	12/11/1991
500440	Bossiaea prostrata	Creeping Bossiaea		Flora		Boss pros	1	12/11/1991
500495	Briza maxima	Large Quaking- grass	*	Flora	Introduced	Briz maxi	1	12/11/1991
500496	Briza minor	Lesser Quaking- grass	*	Flora	Introduced	Briz mino	1	12/11/1991
500512	Burchardia umbellata	Milkmaids		Flora		Burc umbe	2	12/11/1991
500519	Caesia calliantha	Blue Grass- lily		Flora		Caes call	1	12/11/1991
500557	Caleana major	Large Duck- orchid		Flora		Cale majo	1	01/01/1882
500627	Carex breviculmis	Common Grass-sedge		Flora		Care brev	1	12/11/1991
500632	Carex chlorantha	Green-top Sedge	Poorly known k	Flora		Care chlo	1	01/01/1882
500702	Centaurium erythraea	Common Centaury	*	Flora	Introduced	Cent eryt	1	12/11/1991
500848	Cotula coronopifolia	Water Buttons	*	Flora	Introduced	Cotu coro	1	01/01/1882
500961	Rytidosperma caespitosum	Common Wallaby- grass		Flora		Rytid caes	1	15/12/1995
501038	Arthropodium strictum s.l.	Chocolate Lily		Flora		Art'p s.sl	1	12/11/1991
501050	Dillwynia cinerascens s.l.	Grey Parrot- pea		Flora		Dil cin.sl	1	12/11/1991

501107	Drosera peltata subsp. peltata spp. agg.	Pale Sundew		Flora		Dros pe.p	1	12/11/1991
501185	Eragrostis brownii	Common Love-grass		Flora		Erag brow	1	01/01/1887
501255	Eucalyptus bridgesiana s.l.	But But		Flora		Euc br.sl	1	21/05/1967
501258	Eucalyptus camaldulensi s	River Red- gum	X	Flora		Euca cama	1	01/01/1770
501281	Eucalyptus globoidea	White Stringybark		Flora		Euc globo	3	07/05/1879
501489	Gonocarpus tetragynus	Common Raspwort		Flora		Gono tetr	1	12/11/1991
501628	Chrysocephal um semipapposu m	Clustered Everlasting		Flora		Chry semi	1	12/11/1991
501654	Hemarthria uncinata var. uncinata	Mat Grass		Flora		Hema unci	1	01/03/1887
501692	Holcus lanatus	Yorkshire Fog	*	Flora	Introduced	Holc lana	1	12/11/1991
501739	Hypericum androsaemu m	Tutsan	*	Flora	Introduced	Hype andr	1	01/01/1770
501741	Hypericum gramineum	Small St John's Wort		Flora		Hype gram	1	12/11/1991
501748	Hypochaeris radicata	Flatweed	*	Flora	Introduced	Hypoc rad	1	12/11/1991
501813	Juncus capitatus	Capitate Rush	*	Flora	Introduced	Junc capit	1	12/11/1991
501856	Kunzea ericoides s.l.	Burgan		Flora		Kunz erico	1	12/11/1991

501863	Lagenophora stipitata	Common Bottle-daisy		Flora		Lage stip	1	01/01/1882
502042	Lomandra filiformis	Wattle Mat-rush		Flora		Loma fili	1	12/11/1991
502203	Mirabilis jalapa	Four O'clock	*	Flora	Introduced	Mira jala	1	16/05/2007
502456	Pentapogon quadrifidus var. quadrifidus	Five-awned Spear-grass		Flora		Pent quad	1	12/11/1991
502523	Pimelea humilis	Common Rice-flower		Flora		Pime humi	1	12/11/1991
502558	Plantago gaudichaudii	Narrow Plantain		Flora		Plan gaud	1	12/11/1991
502561	Plantago lanceolata	Ribwort	*	Flora	Introduced	Plan lanc	1	12/11/1991
502584	Poa clelandii	Noah's Ark		Flora		Poa clelan	1	12/11/1991
502844	Pultenaea daphnoides	Large-leaf Bush-pea		Flora		Pult daph	1	01/01/1883
502864	Pultenaea pedunculata	Matted Bush-pea		Flora		Pult pedu	1	12/11/1991
502952	Rubus fruticosus spp. agg.	Blackberry	*	Flora	Introduced	Rubu frut	1	31/07/1998
503039	Schoenus apogon	Common Bog-sedge		Flora		Scho apog	1	12/11/1991
503303	Stylidium graminifolium s.l.	Grass Triggerplant		Flora		Styl gr.sl	1	12/11/1991
503387	Themeda triandra	Kangaroo Grass		Flora		Them tria	1	12/11/1991
503421	Tricoryne elatior	Yellow Rush-lily		Flora		Tric elat	2	12/11/1991
503733	Eucalyptus cephalocarpa s.s.	Mealy Stringybark		Flora		Euc cep.ss	2	21/05/1967

503741	Glycine microphylla	Small-leaf Glycine		Flora		Glyc micr	1	01/01/1882
503792	Dichelachne rara	Common Plume-grass		Flora		Dich rara	1	12/11/1991
504290	Billardiera scandens s.s.	Velvet Apple- berry	Rare	Flora		Bill sc.ss	1	01/01/1882
504942	Austrostipa rudis subsp. rudis	Veined Spear-grass		Flora		A'stip r.r	1	12/11/1991
505167	Amaranthus cruentus	Redshank	*	Flora	Introduced	Amar crue	1	24/01/1916
505188	Lotus corniculatus var. corniculatus	Bird's-foot Trefoil	*	Flora	Introduced	Lotu co.co	1	01/01/1882
508024	Aira spp.	Hair Grass	*	Flora	Introduced	Aira spp.	1	12/11/1991
509077	Sonchus spp.	Sow Thistle		Flora		Sonch spp.	1	12/11/1991
509134	Thelymitra spp.	Sun Orchid		Flora		Thelym spp	1	12/11/1991
528552	Vulpes vulpes	Red Fox	*	Terrestrial fauna	Introduced		1	29/10/2014

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Appendix 3

Vegetation Quality Field Sheet - Toongabbie Creek

Vegetation Quality Field Assessment Sheet

Version 1.3 - October 2004

**Department of
Sustainability and
Environment**

Site Name/No. Toongabbie Creek Site 1

Location 6 Humphrey road, Toongabbie

Date 02/01/19

Assessor(s): Mitchell Gorman, Ruth Harper and Tegan McKenzie

Map Name/No.

AMG / MGA

Tenure

EVC: Plains Grassy Woodland

Bioregion: Gippsland Plain

'Site Condition Score'

Large Trees

Score

5

Category & Description	% Canopy Health*		
	> 70%	30-70%	< 30%
None present	0	0	0
> 0 to 20% of the benchmark number of large trees/ha	3	2	1
> 20% to 40% of the benchmark number of large trees/ha	4	3	2
> 40% to 70% of the benchmark number of large trees/ha	6	5	4
> 70% to 100% of the benchmark number of large trees/ha	8	7	6
≥ the benchmark number of large trees/ha	10	9	8

Large trees are defined by diameter at breast height (dbh)
- see EVC benchmark.

* Estimate proportion of an expected healthy canopy cover that is present (i.e. not missing due to tree death or decline, or mistletoe infestation).

Understorey Life forms

LF Code from EVC benchmark	# spp observed / Benchmark spp.	% cover observed / Benchmark % cover	Present (✓)	Modified (✓)
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
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	/	/		

Tree Canopy Cover

Score

2

Category & Description	% Canopy Health *		
	> 70%	30-70%	< 30%
< 10% of benchmark cover	0	0	0
< 50% or > 150% of benchmark cover	3	2	1
≥ 50% or ≤ 150% of benchmark cover	5	4	3

Tree canopy is defined as those canopy tree species reaching ≥ 80% of mature height - see EVC benchmark description.

* Estimate proportion of an expected healthy canopy cover that is present (i.e. not missing due to tree death or decline, or mistletoe infestation).

Lack of Weeds

Score

0

Category & Description	'high threat' weeds*		
	None	≤ 50%	> 50%
> 50% cover of weeds	4	2	0
25 - 50% cover of weeds	7	6	4
5 - 25% cover of weeds	11	9	7
< 5% cover of weeds**	15	13	11

* proportion of weed cover due to 'high threat' weeds - see EVC benchmark for guide.

'High threat' weed species are defined as those introduced species (including non-indigenous 'natives') with the ability to out-compete and substantially reduce one or more indigenous life forms in the longer term assuming on-going current site characteristics and disturbance regime.

The EVC benchmark lists typical weed species for the EVC in the bioregion and provides an estimate of their 'invasiveness' and 'impact'. In general, those weed species considered to have a *high impact* are considered *high threat* regardless of their invasiveness.

** if total weed cover is negligible (<1%) and high threat weed species are present then score '13'.

Present
For life forms with benchmark cover of < 10%, considered 'present' if
• any specimens are observed.

For life forms with benchmark cover of ≥ 10%, considered 'present' if
• the life form occupies at least 10% of benchmark cover.

Modified
(apply only where life form is 'present')
For life forms with benchmark cover of < 10%, then considered substantially 'modified' if the life form has either:
• < 50% of the benchmark species diversity; or
• no reproductively-mature specimens are observed.

For life forms with benchmark cover of ≥ 10%, then considered substantially 'modified' if the life form has either:
• < 50% of benchmark cover; or
• < 50% of benchmark species diversity; or
• ≥ 50% of benchmark cover due largely to immature canopy specimens but the cover of reproductively-mature specimens is < 10% of the benchmark cover.

Understorey

Score

5

Category & Description	
All strata and Life forms effectively absent	0
Up to 50% of life forms present	5
≥ 50% to 90% of Life forms present • of those present, ≥ 50% substantially modified	10
• of those present, < 50% substantially modified	15
≥ 90% of Life forms present • of those present, ≥ 50% substantially modified	15
• of those present, < 50% substantially modified	20
• of those present, none substantially modified	25

Version 1.3 October 2004

Species Recruitment

Score

Woody species recorded in habitat zone	Adequate Recruitment (✓)
<u>Eucalypt canopy (combined species)</u>	
Blackwood	
Wattle	
Burgan	
number of woody spp. in FVC benchmark (SS and taller)	

* high diversity defined as $\geq 50\%$ of benchmark woody species diversity.

Score

Logs

Score

absent if large log length is < 25% of EVC benchmark log length.

Patch Size

Score

Distance to Core Area

Score

Final Habitat Score

Neighbourhood

Score

Multiply % native vegetation x Weighting for each radius from the zone (eg. 40% x 0.03 = 1.2); then add values to obtain final Neighbourhood Value.

Final Habitat Score												
	'Site Condition Score'							'Landscape Context Score'				
Component	Large Trees	Tree Canopy Cover	Lack of Weeds	Understorey	Recruitment	Organic Litter	Logs	Patch Size	Neighbourhood	Distance to Core Area	Total	
	5	2	0	5	10	3	4	2	1	2	100	
Score	5	2	0	5	10	3	4	2	1	2	34	

Appendix 4

Vegetation Quality Field Sheet - Toongabbie Golf Course

Version 1.3 October 2004

10

Score

Category & Description			High diversity* [◇]	Low diversity* [◇]
No evidence of a recruitment 'cohort' ⁺	within EVC not driven by episodic events		0	0
	within EVC driven by episodic events [^]	clear evidence of appropriate episodic event	0	0
		no clear evidence of appropriate episodic event	5	5
Evidence of at least one recruitment 'cohort' in at least one life-form	proportion of native woody species present that have adequate recruitment [◇]	< 30%	3	1
		30 - 70%	6	3
		≥ 70%	10	5

* high diversity defined as $\geq 50\%$ of benchmark woody species diversity.

Score

Category & Description	Dominated by native organic litter	Dominated by non-native organic litter
< 10% of benchmark cover	0	0
< 50% or > 150% of benchmark cover	3	2
≥ 50% or ≤ 150% of benchmark cover	5	4

Adequate Recruitment (✓)

[illegible]

Score

Category & Description	Large logs present*	Large logs absent [#]
< 10% of benchmark length	0	0
< 50% of benchmark length	3	2
≥ 50% of benchmark length	5	4

absent if large log length is < 25% of EVC benchmark log length.

'Landscape Context Score'

Score

Category & Description	
< 2 ha	1
Between 2 and 5 ha	2
Between 5 and 10 ha	4
Between 10 and 20 ha	6
≥ 20 ha, but 'significantly disturbed'*	8
≥ 20 ha, but not 'significantly disturbed'*	10

* 'significantly disturbed' defined as per RFA 'Old Growth' analyses eg. roading, coupes, grazing etc. – effectively most patches within fragmented landscapes.

Score

Distance	Core Area not significantly disturbed*	Core Area significantly disturbed*
> 5 km	0	0
1 to 5 km	2	1
< 1 km	4	3
contiguous	5	4

* defined as per RFA 'Old Growth' analyses.

Score

Radius from site	% Native vegetation *	Weighting	
100 m		0.03	
1 km		0.04	
5 km		0.03	
subtract 2 if the neighbourhood is 'significantly disturbed'			
Add Values and 'round-off'			

Multiply % native vegetation x Weighting for each radius from the zone (eg. 40% x 0.03 = 1.2); then add values to obtain final Neighbourhood Value.

Final Habitat Score

	'Site Condition Score'							'Landscape Context Score'			
Component	Large Trees	Tree Canopy Cover	Lack of Weeds	Understorey	Recruitment	Organic Litter	Logs	Patch Size	Neighbourhood	Distance to Core Area	Total
	9	4	6	10	10	5	2	2	0	2	100
Score	50										

Appendix 5

Gippsland Red Gum Grassy Woodland and Associated
Native Grassland

Latrobe*City*

Bushfire Risk Assessment

Toongabbie Structure Plan
Background Report



Latrobe*City*
a new energy

Name	No.	PM Approved	PD Approved	Date
Draft Bushfire Assessment	1	TM	LD	22.04.2020
Draft Bushfire Assessment	2	TM	LD	15.06.2020

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ACKNOWLEDGEMENTS

The Study Team recognises that the State of Victoria has an ancient and proud Aboriginal history and complex ownership and land stewardship systems stretching back many thousands of years. We would like to acknowledge the Traditional Owners of this land, and offer our respect to the past and present Elders, and through them to all Aboriginal and Torres Strait Islander People.

Executive Summary

Latrobe City Council has prepared a bushfire risk assessment for the Toongabbie township and surrounding areas, as identified in the study area on page 13.

This report aims to inform the Toongabbie Structure Plan by identifying any bushfire risk constraints that would inhibit any potential growth, as well as to identify any bushfire risk mitigation measures that could improve the safety of the residents.

The assessment aims to:

- Review relevant literature (in an effort to avoid duplication, relevant sections have been included in this report);
- Review the planning policy and undertake an assessment against the proposed structure plan study precincts to determine appropriate areas for growth;
- Undertake a landscape risk assessment; and
- Identify any constraints that will impact on future population growth.
- Identify appropriate bushfire risk mitigation measures that enables the future population growth while prioritising human life.

This assessment will inform the potential zoning requirements, as well as identifying further advocacy or internal capital works that need to be undertaken. It will provide recommendations to address any potential gaps identified, as well as policy directions for the Toongabbie Structure Plan.

The Bushfire Risk Assessment was developed in consultation with the CFA as a result of the consultation and site visits to Toongabbie, key recommendations include:

- Apply a Design and Development Overlay to

proposed Precinct H.

- Apply a Development Plan Overlay to a portion of the proposed Precinct C.
- Apply a Development Plan Overlay to the proposed precincts D, E and F.
- Defer rezoning of proposed precincts E and F until there is a demonstrated demand for more rural living.
- Do not rezone precinct A due to its proximity to the bushfire risk.
- Apply the Development Plan Overlay to a portion of the proposed Precinct B.

These bushfire mitigation measures do not take into account the staging of land releases and will not be implemented until such time that the land is rezoned.

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1

Introduction



1.1 Background

This Report has been prepared by Latrobe City Council to assess the bushfire risk in Toongabbie as a part of the Toongabbie Town Structure Plan 2019. This report is consistent with the Latrobe Planning Scheme, particularly Clause 13.02 as well as guidance provided in:

- Planning Advisory Note 68: Bushfire State Planning Policy Amendment VC140
- Planning Practice Note 64: Local Planning for Bushfire Protection

Clause 13.02-1S was introduced into the Planning Policy Framework in December 2017 through Amendment VC140, as such, Latrobe City Council sought to consider bushfire risk by preparing a bushfire considerations report for the proposed rural living precincts in Amendment C105 Live Work Latrobe after consultation with CFA. Due to this process, the rezoning of new rural living precincts was deferred until bushfire risk had been determined on a municipal level and informed the decision-making process on the best locations for new rural living precincts. Toongabbie was identified as a new rural living precinct, however, as that report looked at the precinct in the wider municipality, there is a need for a bushfire risk assessment to be undertaken that considers where the best possible areas for growth around Toongabbie are.

The author of this report has been involved in consultation with CFA to address their concerns and appropriately address bushfire matters in the Toongabbie Structure Plan and has included notes from consultation undertaken for the *draft Municipal Bushfire Risk Assessment 2020* which has occurred concurrently with this assessment.

1.2 Purpose

The purpose of this report is to:

- Assess the potential growth areas against Clause 13.02-1S to identify the most appropriate directions for growth.
- Identify planning tools that could mitigate the risk and improve the safety of the town.

1.3 Methodology

The assessment comprises relevant sections from *Bushfire Risk Rating Assessment Toongabbie Proposed Rural Living Precincts for Toongabbie* (Hazel, 2018), sections of *Assessment of Matters relating to Bushfire Risk, Management, and Planning* (Latrobe City Council, 2018), as well as the results of modelling of bushfire risk that was undertaken by DELWP representatives for each of the possible precincts within the study area.

This assessment was prepared by reviewing the following documents relating to bushfire risk:

- Safer Together (Victorian Government, 2015)
- Strategic Bushfire Management Plan - East Central (Victorian Government, 2014)
- Regional Bushfire Planning Assessment (DELWP, 2014)
- Profile of Risk within Latrobe City (Victorian Government, 2015)
- Profile of Bushfire Risk within Latrobe District- 2016 update, (Victorian Government, 2016)
- Latrobe City Fire Management Plan 2017 - 2020 (Latrobe City Council, 2017)
- Draft Municipal Bushfire Assessments (Fire Risk Consultant, 2019)

A review of the relevant documents relating to planning for mitigation of bushfire risk, including *Planning Permit Applications Bushfire Management Overlay Technical Guide* and other previously stated documents.

Initial consultation has been undertaken with:

- Department of Environment, Land, Water and Planning (DELWP) - Forest Fire Management Department;
- Parks Victoria; and
- Country Fire Authority (CFA).

Some of this consultation was held in conjunction with the draft *Bushfire Assessment and Rural Rezoning* project. Assessments for each proposed precinct have also been undertaken assessing against Clause 13.02-1S and *Planning Practice Note 37: Rural Residential Development*.



Photo: Firefighting crews battling fires near Heyfield.
Source: Scullin, 2013.

2

Strategy Review



2.1 Strategy Document Review

2.1.1 STRATEGIC PLANNING FOR BUSHFIRE

The CFA guidelines state that the most effective way to strengthen community resilience to bushfire is to direct growth to settlements and locations with a lower risk. It states that lower risk locations generally include areas that:

- Are not within a Bushfire Management Overlay;
- Have good road access; and
- Are located more than 700 metres from large areas of vegetation (such as national parks, state parks)

It states that development in these areas prioritises the protection of human life and the bushfire related strategic considerations.

It states to avoid locations where the bushfire hazard presents an extreme risk to safety such as isolated settlements where effective evacuation is severely restricted.

While areas in between should carefully consider development and whether a proposal reduces the risk to an acceptable level. In these cases, a risk assessment is required.

2.1.2 SAFER TOGETHER

Safer Together is the state government's current approach to reducing the risks from bushfire, focusing on the effectiveness of actions in reducing bushfire risk. The new approach is about:

- Better assessing where and when to use fuel management and other risk reduction activities;
- Avoiding unacceptable impacts on the environment and communities;

- Better integration across public and private land and fire managers working together and with communities to plan and deliver integrated bushfire management;
- Involving local communities in decision making, drawing on local values and insights to promote resilience; and
- Using world-leading science to manage fire and ecosystems.

(Source: <https://www.safertogether.vic.gov.au/background>)

The 2009 Victorian Bushfires Royal Commission concluded that integrated fire management planning could improve planning for fire prevention. Integrated fire management planning requires the involvement of the community, public and private land owners, utility providers, the State, Councils, and industry. The Safer Together initiative is understood to be in response to the recommendations of the Victorian Bushfire Royal Commission. As part of this initiative a "Landscape Bushfire Risk Analysis" is being completed which will consider both public and private land.

2.1.3 STRATEGIC BUSHFIRE MANAGEMENT PLAN – EAST CENTRAL

The Strategic Bushfire Management Plan – East Central was released in October 2014 and outlines the fuel management strategy that DELWP and Parks Victoria will implement on public land. The strategy guides action to minimise the risk of major bushfires to people, property, infrastructure and economic activity, while maintaining and improving the resilience of natural ecosystems. Importantly, this report is based on movement of fire in the landscape –

not municipal boundaries.

The plan was developed with the community, industries and other emergency service agencies including:

- Parks Victoria;
- Country Fire Authority;
- Local governments;
- Water corporations and utility services;
- Private land managers, regional and municipal integrated fire management planning committees;
- Victorian National Parks Association;
- Latrobe University;
- University of Melbourne;
- Department of Human Services; and
- Community representatives.

The methodology for developing this plan is based on the International Standard for Risk Management, ISO 31000. The risk assessment process aims to determine the likelihood and consequence of a major bushfire impacting on people and properties, on the landscape's key infrastructure, economic assets and high-value ecosystem areas.

Victorian Governments method for determining degree of bushfire risk is measured by 'residual risk'. Residual risk considers the Victorian Fire Risk Register and PHOENIX Rapidfire bushfire simulation software along with past bushfire experience and local knowledge.

2.1.4 REGIONAL BUSHFIRE PLANNING ASSESSMENT - GIPPSLAND REGION

The *Regional Bushfire Planning Assessment (RBPA) for the Gippsland Region 2012* provides information where a range of land use planning matters intersect with a bushfire hazard to

influence the level of risk to life and property from bushfire. This information is required to be used as part of strategic land use and settlement planning at the regional, municipal and local levels.

"The RBPA is not a statutory planning provision and does not directly translate into planning schemes. However, it complements planning scheme provisions such as the Bushfire Management Overlay (BMO) by providing spatial and qualitative information from a variety of sources which together can inform considerations about where bushfire should be assessed early in the strategic planning process." (DPCDa, 2012).

The strategic directions for Toongabbie from the RBPA are discussed in section 4.5.1.

2.1.5 PROFILE OF BUSHFIRE RISK WITHIN LATROBE DISTRICT

The *Profile of Bushfire Risk within Latrobe City 2015* report provides an analysis of bushfire risk in Latrobe City and then describes the assets to be protected. The report notes that Latrobe City has a wide variety of assets at risk of fire throughout the municipality, as well as extensive areas of ecological assets, coal and small areas of timber assets.

Landscape scale risk analysis is provided to indicate where the worst fires could start, build intensity and where they are likely to impact the most (using Phoenix). These are the townships most at risk from major bushfire as well as landscape significant infrastructure. It also shows current fuel hazard levels and a case study of the highest risk locations within the municipality, drawing upon VFRR information.



The 2015 report states:

The risk information included here is provided for Council's information to guide bushfire risk mitigation actions as appropriate. This may be through the Municipal Fire Management Planning Committee or other relevant group.

The 2016 update is not a full re-creation of the original document rather provides updated fire history information and provides updates where the original Phoenix modelling data has been update using data as at June 2016.

2.1.6 LATROBE MUNICIPAL FIRE MANAGEMENT PLAN

The purpose of the *Latrobe City Municipal Fire Management Plan 2017 – 2020* (MFMP) is to chart the planned and coordinated implementation of measures designed to minimise the occurrence and mitigate the effect of fire in Latrobe. This plan considers all forms of fire including bushfire, structure fire, coal fire and fire involving chemicals, and consolidates actions in response to the significant range of plans that exist within Latrobe that relate to fire.

An important aspect of implementing the MFMP is to engage communities in the fire management planning process. This ensures that the MFMP responds to community needs, values and risks.

The MFMP has been produced pursuant to the *Emergency Management Act 1986*; and is considered to fulfill the requirements of the *CFA Act 1958*. The MFMP identifies the following priorities or values for Latrobe City as they relate to fire:

- Protection and preservation of life is

paramount;

- Protection of critical infrastructure and community assets that support community resilience;
- Protection of residential property as a place of primary residence;
- Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability; and
- Protection of environmental and conservation values that consider the cultural, biodiversity, and social values of the environment.

The MFMP includes a register of assets at risk of bushfire, and outlines a range of bushfire mitigation strategies and treatments which are applied including:

- Provisions in the Victorian Planning Scheme;
- Bushfire Management Overlays/Bushfire Prone Areas;
- Provisions in the Building Code of Australia (BCA);
- Compliance and enforcement of legislation;
- Declared Fire Danger Period/ prohibited period²² and restrictions;
- Total Fire Ban day declarations;
- Community information and warnings;
- Gippsland Arson Prevention Program (GAPP), HVP, Council, Police, CFA, DELWP;
- Powerline hazard tree identification, management and reporting;
- Fire hazard inspection program and issue of notices;
- Public awareness programs – multimedia communications;
- Roadside vegetation management by VicRoads, municipal councils and DELWP;
- Council patrols and inspections;
- Emergency management signage;

- Event Management Plans; and
- Routine asset maintenance.

The MFMP identifies that 'strategic firebreaks' are established where sites are identified because of their ability to be used as a firebreak and provide a major traffic corridor. All strategic firebreaks are the highest priority for both fire prevention works and road surface maintenance.

In responding to the changed policy requirements for the consideration of bushfire risk within the Planning Schemes, it is acknowledged that further alignment of the MFMP and Planning Scheme will be necessary. This will be particularly relevant whereby the planning approval of new uses and development will be consistent with the ongoing management of land identified by the MFMP (either on individual sites or broader precincts). This matter was noted by the Royal Commission in their report which stated:

"... land-use planning and building controls to minimise or reduce bushfire risk presents challenges, that it can only control development from the day the control is applied and cannot retrospectively enact policy."

The Royal Commission further noted that a bushfire policy that broadly outlines how to incorporate risk management in land-use planning should include the policy's links with the council's municipal fire prevention plan and municipal emergency management plan.

2.1.7 BUSHFIRE RISK RATING ASSESSMENT TOONGABBIE PROPOSED RURAL LIVING PRECINCTS

The report considers the proposed rural living precincts from Amendment C105 and whether they meet the objectives of Clause 13.02.

The assessment looks at:

- Assessing the bushfire hazard at a landscape and site scale;
- Considering shelter options, strategic access and biodiversity; and
- Assessing the proposed planning scheme amendment against the bushfire risk, possible alternate locations on a municipal level, and against relevant policy directions.

It recommends further strategic work, which is being undertaken through this project before proceeding with any rezonings.



2.2 Planning Practice and Advisory Notes

2.2.1 PPN37: RURAL RESIDENTIAL DEVELOPMENT

The purpose of this practice note is to provide guidance when planning for, or assessing proposals for rural residential use and development.

The zones usually applied to rural residential land are:

The Low Density Residential Zone (LDRZ) is a 'residential' zone. It specifies a lot size of at least 0.4 hectares in areas where reticulated sewerage is not connected or 0.2 hectares for each lot connected to reticulated sewerage. A different lot size can be specified in a schedule to the zone.

The Rural Living Zone (RLZ) is a 'rural' zone. It specifies a lot size of at least 2 hectares and provides opportunities for some rural uses to occur. A different lot size can be specified in a schedule to the zone.

These considerations mean that the following broad questions should be answered in sequence:

- **Strategy:** Does rural residential development align with the overall strategic planning of the municipality?
- **Housing need:** How much rural residential development is required to provide appropriate housing diversity and choice to meet housing needs?
- **Location:** Where should new rural residential development take place?
- **Subdivision and design:** Is the new rural residential development subdivided and designed in an attractive setting offering high amenity and efficient infrastructure?

Toongabbie Structure Plan has looked at both the LDRZ and RLZ to see if either zone is an appropriate response to the desired outcome and the land use constraints.

More detail around the rural residential precincts is discussed in Chapter 6.

2.2.2 PPN64: LOCAL PLANNING FOR BUSHFIRE PROTECTION

The purpose of this practice note is to:

- Provide guidance about local planning for bushfire protection;
- Assist councils to tailor the Local Planning Policy;
- Framework in response to bushfire matters where necessary; and
- Provide guidance on how to prepare schedules to the Bushfire Management Overlay.

In Appendix 1 of the planning practice note it outlines a four step approach to considering the bushfire risk which has been used to develop this report.

2.2.3 AN68: BUSHFIRE STATE PLANNING POLICY AMENDMENT VC140

This advisory note expands on the strategies in Clause 13.02-1S and what should be considered as a part of each of those strategies.

2.2.4 PLANNING PERMIT APPLICATIONS BUSHFIRE MANAGEMENT OVERLAY TECHNICAL GUIDE

This guide uses a five-step process and shows how to work through the different parts of the planning scheme to prepare an application that fully considers bushfire matters. It also identifies how a council will assess an application and make a decision on whether planning permission is appropriate.

Four separate application pathways apply dependent on what the application is for and the zone that applies to the site. The guide is structured to reflect the five steps:

- **Step 1:** Find out if the Bushfire Management Overlay applies.
- **Step 2:** Identify which application pathway applies. Separate application pathways apply depending on what the application is for and the planning controls that apply to the site.
- **Step 3:** Assess the bushfire hazard on and around your land.
- **Step 4:** Prepare an application that includes bushfire protection measures.
- **Step 5:** Understand how the council will assess your application

This has been used in assessing the bushfire hazard on and around Toongabbie and identifying appropriate mitigation measures.

*Photo: 2007 Bushfire burning near Toongabbie.
Source: King, M., 2007 .*



3

Site Description



3.1 Victorian Bushfire Context

The following is an excerpt from Fire Risk Consultants (2020):

Victoria is one of the most fire-prone areas in the world, with a history of catastrophic bushfires such as Black Friday (1939), Ash Wednesday (1983) Alpine Fire (2003), Great Divide Fire (2006) and most recently, Black Saturday (2009) [and Black Summer Fires (2020)].

Victoria's high bushfire risk is the result of factors that increase the likelihood and consequences of fire. These factors include large areas of the state comprising of highly flammable dry eucalypt forest, protracted droughts and an increasing population density in bushfire-prone areas.

While bushfire is a significant risk facing Victoria, it is also a natural part of the environment and many plant species rely on fire to regenerate. A variety of causes can ignite a bushfire: some bushfires result from events that are natural, such as lightning, while others result from human activity. Following ignition, the direction and speed of the fire's travel, and the height and intensity of the flames are determined by climatic and weather conditions, topography and fuel in the area.

The climate in Victoria is characterised by mild, moist winters followed by hot dry summers. The Victorian fire season typically occurs between the end of October and the start of May.

Days of higher fire risk are often typified by the passage of a cold front, which causes fires to spread rapidly and then change direction due to the wind change. Most of Victoria's catastrophic fires have been subject to this type of effect, with many fatalities resulting from people being trapped after the fire changed direction.

Topography affects fire behaviour: fires travel upslope much faster than they travel on flat land and corresponding reductions in speed apply downslope. North facing slopes are drier than

south facing slopes, and fuels on north facing slopes will ignite and burn more easily than those on south facing slopes. Areas upslope of an approaching fire are considered highly dangerous.

Victoria has two main vegetation types affecting the spread of bushfires: grass and forest. Grass fires are predominantly wind driven and spread rapidly under the influence of strong winds. Grass fires burn at a lower intensity and flame height than forest fires and burn out quickly. Grass fires can often be quickly extinguished with water.

In contrast, forests have more fuel (leaf and bark litter on the ground, shrubs, grasses, trees etc.) available for a fire to burn. Wind speeds are lower in the forest and forest fires take some time to reach their full potential: however, once fully developed, forest fires usually have a greater flame height and intensity than grass fires, especially where the flames are burning in the tree canopy. Large logs continue burning after the initial fire front has passed. The high flames and intensity of forest fires make them difficult to control, and fire fighters are generally unable to control fires where the flames are over 10 metres in height.

While the weather and topography in an area cannot be modified to reduce the fire hazard, a reduction in the flammable fuels in an area can reduce the flame height and intensity of a forest fire. Reduced flame height and intensity makes it safer and easier for firefighters to suppress a forest fire. Infrastructure such as roads can also increase the speed of a fire response, allowing firefighters to safely and effectively suppress a fire before it reaches maximum intensity and flame height. Reduced fuel and improved access infrastructure can subsequently reduce

the impact of the fire on communities and the environment.

The State of Victoria currently has three fire services:

- *MFB is responsible for the suppression of fire in the metropolitan fire district. MFB specialises in urban fire and only operates within metropolitan Melbourne.*
- *CFA is responsible for the suppression of fire in the country area of Victoria (private property outside the metropolitan fire district). CFA specialises in grass fires and township fires.*
- *DELWP is responsible for the prevention and suppression of fire on public land in Victoria outside the metropolitan fire district. DELWP specialises in forest fire. On behalf of the Secretary of DELWP, Forest Fire Management Victoria (FFMVic) undertakes fire prevention and suppression activities. FFMVic comprises staff from DELWP, Parks Victoria, VicForests and Melbourne Water.*

The objective of all bushfire management activities in Victoria is to reduce the impact and consequences of bushfire on people, property and the environment, with the protection of human life the highest priority.

In Victoria, bushfire safety is considered a shared responsibility between the fire services, the Victorian Government and local government, communities and individuals. All parties are responsible for preparing prior to the fire season in order to protect themselves and their interests from the impact and effect of bushfires.



*Photo: Fire engines at bushfire near Toongabbie.
Source: King, M., 2007*

3.2 Municipal Bushfire Context

In Latrobe City Council (2018) it states that: Bushfire risk is *'the likelihood of a fire starting, spreading and impacting on people, property and the environment – the things we care about most'* (DELWP, 2018). Factors which affect bushfire risk include the type and condition of fuels, weather, topography, the location of people and assets, as well as our ability to prevent fires from igniting and suppress them once they have started. Latrobe City, like much of Victoria and many parts of Australia plans for the risk of bushfire drawing upon historical and modelled information. Historical analysis of bushfire in Latrobe City shows that major bushfires have occurred at least every 3-4 years over the past 11 years.

Comparatively, urban settlement covers a relatively small proportion of the municipality, where approximately 40% of Latrobe City is used for forestry, 30% for agriculture, 10% for coal mining and native vegetation covers 20% of the land area (i.e..... National Parks, State Forests, Conservation Reserve).

Latrobe City has approximately 730ha of high value timber assets, as identified by VicForests as Ash-type forests (available and suitable for harvest within the next 20 years) on public land. The diverse natural and physical characteristics of Latrobe City offer a variety of rural and urban living opportunities for the City's estimated population of 75,000. Approximately 75% of the population live in the main urban centres of Traralgon, Morwell, Moe and Churchill with the remaining population residing in small towns and rural areas. Outside of urban settlement areas, primary land uses include forestry and mining industries, along with large industry precincts and the Latrobe Regional Airport (Source: Latrobe City MFMP). Latrobe has mild to warm summers with average maximum daytime temperatures around 23°C to 25°C. In

winter, average maximum daytime temperatures are mostly around 12°C to 14°C. The Latrobe Valley's warmest month is February with an average temperature range of 12.5°C to 26.4°C and the coldest month is July with an average temperature range of 3.6°C to 13.5°C. Annual rainfall average across the region is 800 millimetres with the occasional frost and snow on neighbouring hills. The most rain occurs in late winter and spring.

Toongabbie averages a range of 12.2°C to 25.6°C in February and 3°C to 13.2°C in July which is marginally colder than the average across Latrobe. It receives relatively little rainfall with an average rainfall of 564mm since 2010. The rainfall is less than the average across Latrobe and as such Toongabbie is typically drier than the rest of the Latrobe.

While forest fires represent only 3.8% of all bushfires; when they do occur they can have devastating consequences as occurred in the Black Saturday fires of 2009. However care needs to be taken as to how this is interpreted as a number of the recent bushfires may have been classified as scrub or grass fires.

History shows that fires that start in non-forested areas can also impact the community. The vast majority of bushfires in Latrobe City, around 96%, occur in scrub or bush and grass type vegetation with some 51% of all bushfires are contained to less than one hectare in size. The ignition factor of many fires is unknown, around 22%, however of the known causes of ignition, the top ignition factors for bushfires are:

- Deliberately lit or suspicious fires 32.7%,
- Unattended or inadequately controlled fires in the open 9.4%, and
- Private fuel reduction burns 6.7%.



3.3 Bushfire History

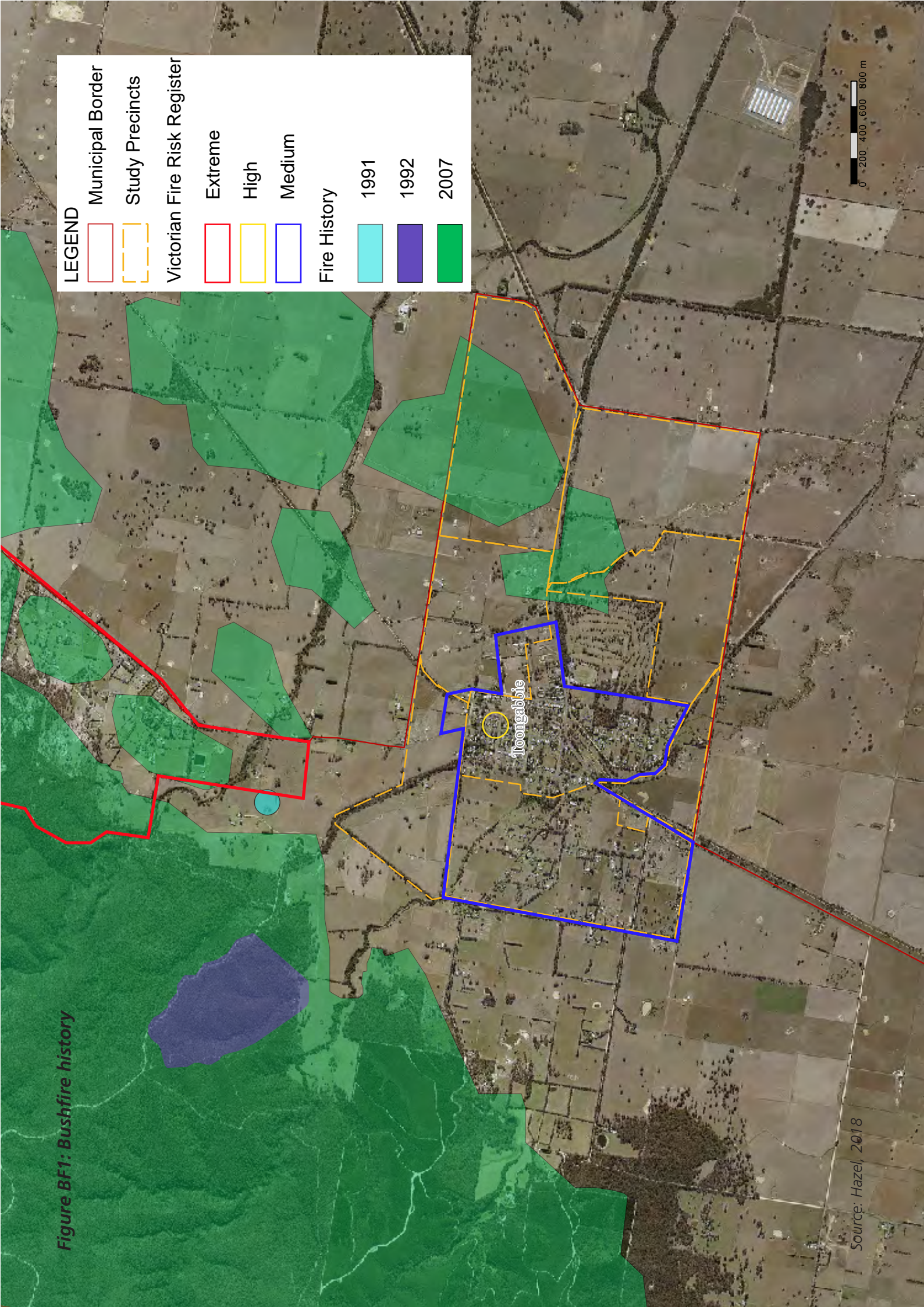
Hazel (2018) states the following in relation to bushfire history around Toongabbie:
Bushfire history data shows that the landscape was extensively affected by bushfire in 2006. Evidence of ember attack creating grassfires can be observed in the spatial extent of the bushfire. The following description of this fire as documented by the local community.

On Thursday 14th December, 2006, a deliberately lit fire that started at Coopers Creek moved very quickly towards Toongabbie. It spotted into the hills behind Fraser's Lane. When an extremely strong wind change arrived it took the fire along the hills, closer to the township. It spotted into the town, out into the grasslands and continued quickly along towards Cowwarr across the flats and then a wind change moved it to the Weir Road and up to Seaton. Very few people had seen a fire travel so quickly and with such intensity before.
(Source: <http://toongabbie.vic.gov.au/service/cfa>)

While there were no fires within five kilometres in the past few years, Toongabbie was threatened in early 2019 due to Bushfires starting near Walhalla, with many residents choosing to evacuate. This fire started due to dry lightning strikes.



Figure BF1: Bushfire history



3.4 Victorian Fire Risk Register - Latrobe

The Emergency Management Victoria and CFA (2019) state that:

The Victorian Fire Risk Register - Bushfire (VFRR-B) is a process in which representatives from local government, fire services, public land managers, utilities and community groups map assets at risk from bushfire and assess the level of risk to the asset. Assets may include residential areas, children's services, hospitals, aged-care facilities, infrastructure, commercial industry, tourism events, flora, fauna and those that are culturally significant. Agency representatives also record the current treatments which are carried out to mitigate the risk to the asset. Treatments may include fire prevention, community education and hazard reduction.

The VFRR-B supports and informs Municipal Fire Management Plans. A number of agencies are also using the VFRR-B as evidence based data to support their bushfire planning and decision making.

There are a number categories that the Victorian Fire Risk Register considers, these include:

- Human Settlement
- Economic Assets
- Environment Assets
- Cultural Assets

Toongabbie represents a medium risk on the human settlement map which includes the township and the rural residential precinct to the west of the town as shown in Figure BF2.

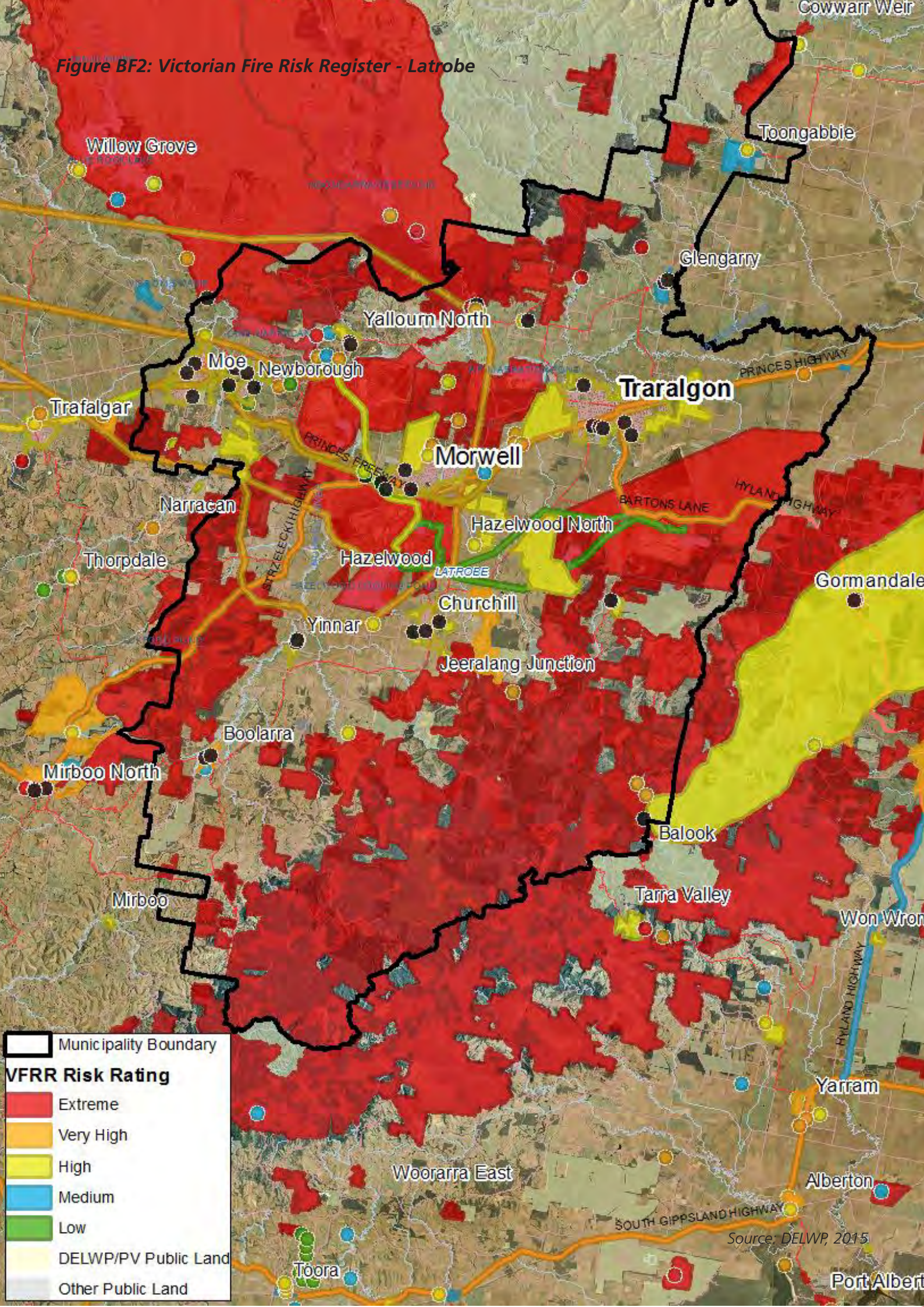
The plantation to the west of town is shown as an extreme risk on the economic map (MFMP, 2018).

There are no registered environmental assets

within 5 kilometres of the study area. There is a proposed solar farm that is proposed to be located two kilometres south of Toongabbie on the corner of Traralgon-Maffra Road and Frasers Lane.

The Toongabbie Mechanics' Institute is identified as a cultural asset that has a medium risk category.

Figure BF2: Victorian Fire Risk Register - Latrobe



3.5 Existing Lot Size by Title

For the purpose of this Bushfire Risk Assessment, the lot size has been shown by title arrangements as a separate title could be sold to a different landowner at any point in time.

The different precincts within the study area show a largely fragmented title pattern. This is particularly the case in precinct H with the majority of lots ranging from 0.6 Hectares in size to 3.5 Hectares. There are only three titles within this precinct that could be further subdivided.

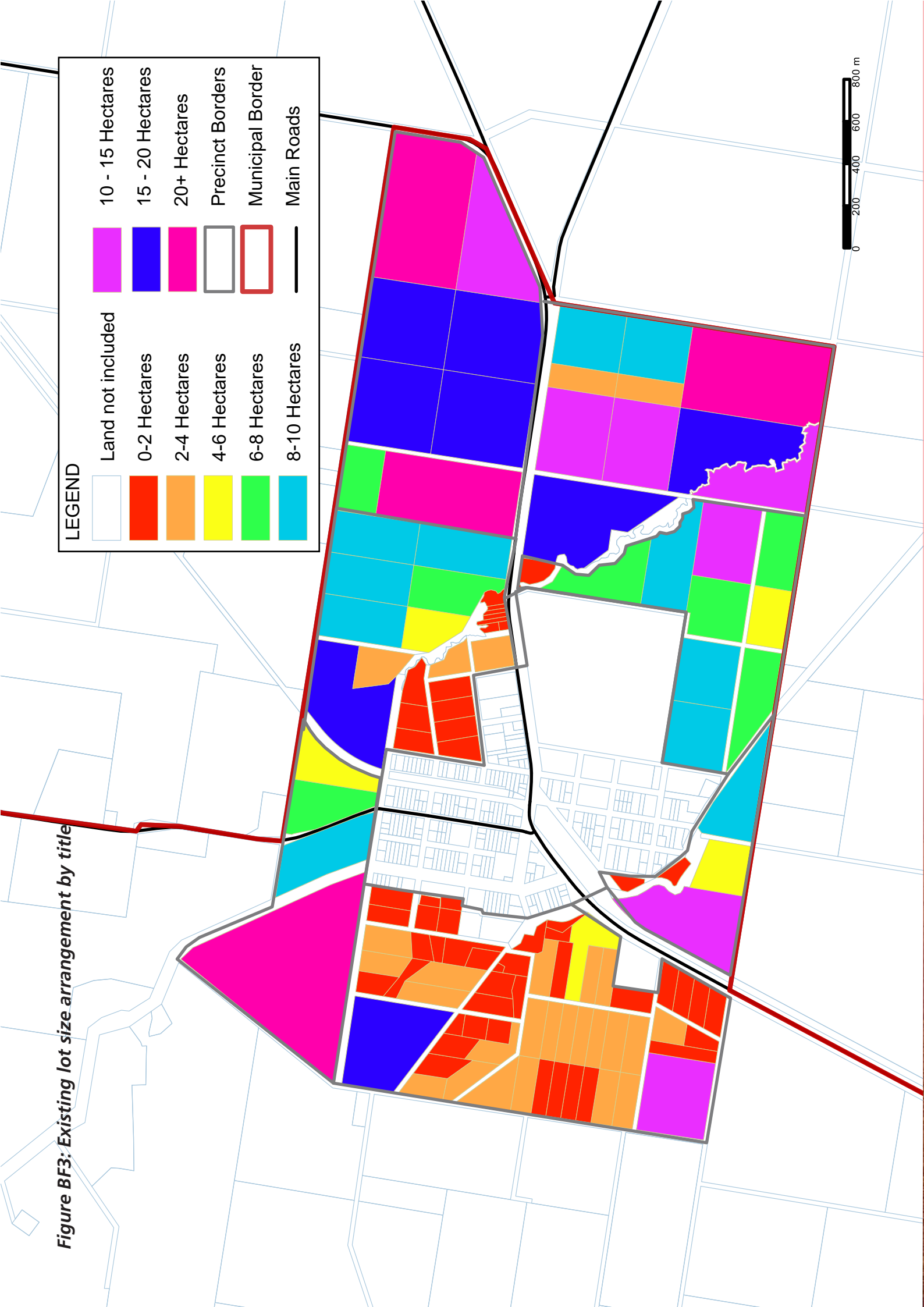
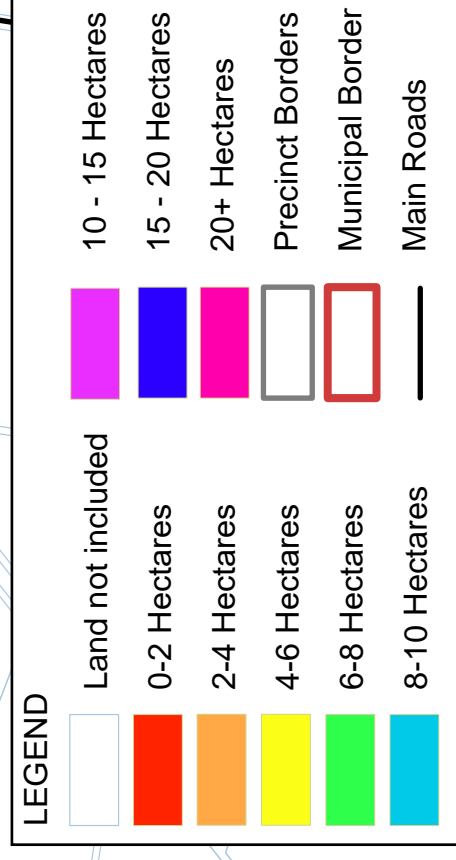
Precinct C is also heavily fragmented on the town side of Rosedale Creek. The majority of these lots are around the 2 Hectare size. The lots to the east of Rosedale Creek in the precinct C vary between 4 to 10 Hectares.

The existing land use pattern is an important consideration when considering future growth and bushfire risk. There would need to be balance between representing the current land use with an appropriate zone and ensuring that bushfire mitigation measures are put in place which would not be the case if the RLZ1 was in place without any addition policy measures and/or overlays to control development siting and design.



*Photo: 2007 Bushfire burning near Toongabbie.
Source: King, M., 2007.*

Figure BF3: Existing lot size arrangement by title



4

Planning Policy



4.1 Planning Policy Overview

Clause 71.02-3 (Integrated decision making) of the Latrobe Planning Scheme states that: *Planning authorities and responsible authorities should endeavour to integrate the range of policies relevant to the issues to be determined and balance conflicting objectives in favour of net community benefit and sustainable development for the benefit of present and future generations. However in bushfire affected areas, planning authorities and responsible authorities must prioritise the protection of human life over all other policy considerations.*

4.1.1 OBJECTIVE

As such, Clause 13.02-1S (Bushfire Planning) of the Latrobe Planning Scheme has the following objective and applies to all land-use decision making in regional areas:

To strengthen the resilience of settlements and communities to bushfire through risk- based planning that prioritises the protection of human life.

4.1.2 STRATEGIES

Clause 13.02-1S includes a number of strategies to achieve this objective, these include:

- Prioritising the protection of human life;
- Requiring an assessment of the bushfire hazard and risk assessment; and
- Directing population growth and new settlements to low risk locations.

The last dot point is only achievable at a neighbourhood scale for a town structure plan. In relation to settlement planning which includes the development of a town structure plan, clause 13.02-1S includes the following requirements:

- *Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metres under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).*
- *Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.*
- *Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.*
- *Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reduce bushfire risk overall.*
- *Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.*
- *Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.*
- *Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009.*

When these strategies are combined it is clear that these any planning scheme amendment or strategic planning document requires a

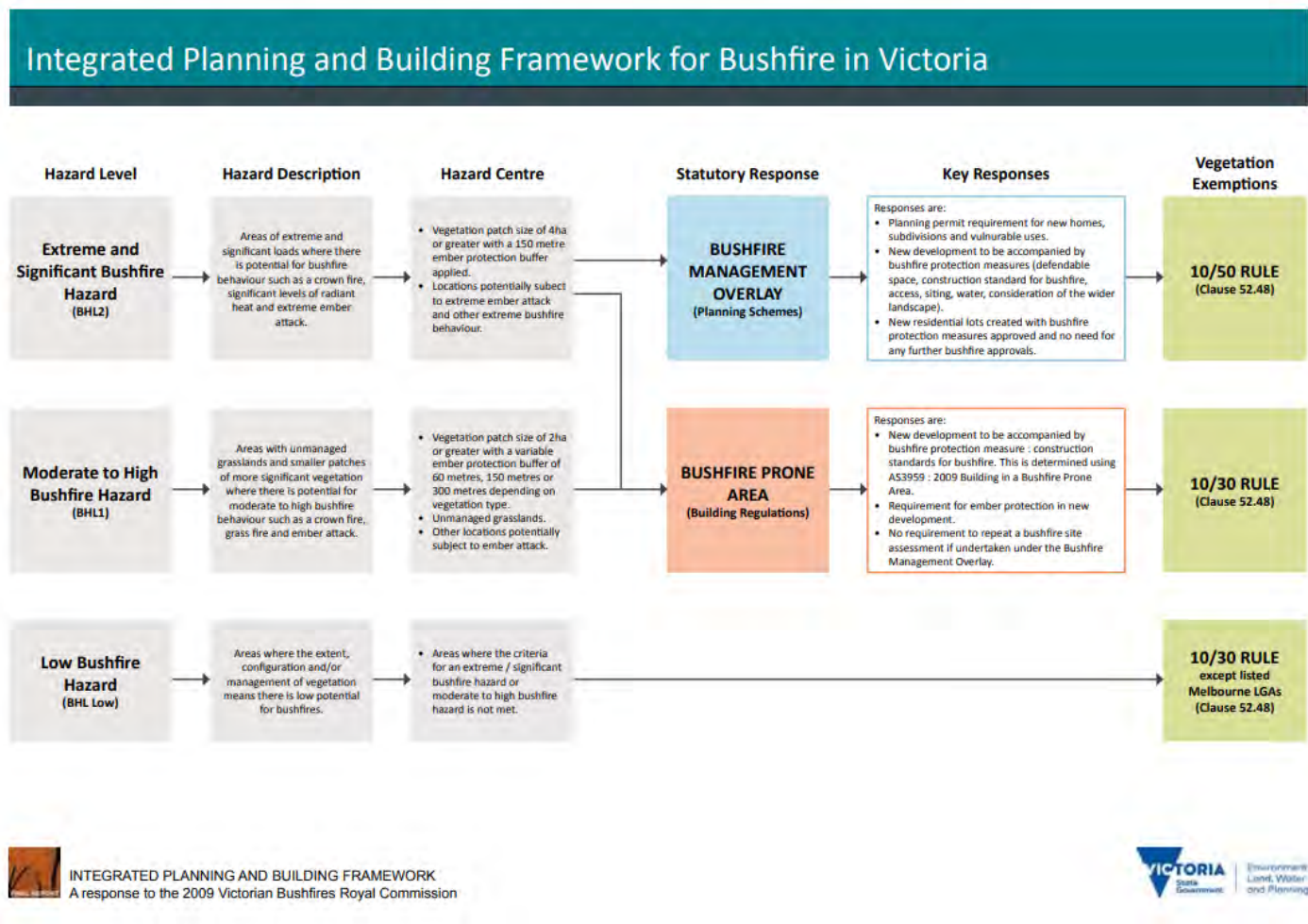
considered approach to bushfire risk to ensure that the risk is adequately mitigated.

The purpose of this report is to ensure the plan comprehensively responds to the consideration of bushfire risk.

In the context of strategic planning decisions, these strategies need to be balanced and consider the ‘net increase in risk to existing and future residents’. While it is necessary to ensure that the protection of human life is prioritised when decisions are made, the strategies are not

‘mandatory requirements’ in Clause 13.02-15 in the Planning Scheme and as each situation varies, each strategy needs to be considered as appropriate to ensure that decisions are consistent with the State policy objectives and that planning decisions are integrated.

Figure BF4: Bushfire considerations in the planning scheme



Source: DELWP, 2019b.

4.2 State Planning Policy Assessment

4.2.1 APPLICATION

This policy must be applied to all planning and decision making under the Planning and Environment Act 1987 relating to land that is:

Within a designated bushfire prone area;
Subject to a Bushfire Management Overlay; or
Proposed to be used or developed in a way that may create a bushfire hazard.

Bushfire Hazard Data

As described in *Planning Advisory Note 46 (2013)*:

DEPI [now DELWP] has created hazard data for use in the planning and building systems based on fire behaviour generated from several factors including topography, fire fuel type and load and weather. A key output is modelled head fire intensity levels. Head fire intensity is a measure of the rate of energy release per unit length of fire front expressed as kW/m.

To enable the hazard data to be used in the planning and building systems, three different bushfire hazard levels have been created.

Bushfire Hazard Level Two (BHL2) – the most significant bushfire hazard where head fire intensity is modelled to be 30,000kW/m or more. This level of hazard informs where the BMO should apply. It also informs areas declared as bushfire prone in the building system.

Bushfire Hazard Level One (BHL1) – moderate bushfire hazard can be expected in these areas with head fire intensity modelled to be between 4,000kW/m and 30,000kW/m. This level of hazard informs areas declared as bushfire prone in the building system. Areas at the upper end of the bushfire intensity range (that is 28,000kW/m

and above and referred to as BHL1b) will be considered, where appropriate, for applying the BMO based on the advice of the relevant fire authority. This is generally where the Bushfire Prone Area applies without a BMO.

Bushfire Hazard Level Low (BHL Low) – Areas where the extent, configuration and/or management of vegetation results in low potential for bushfire spread. BHL Low does not inform the BMO.

Bushfire Prone Area

The study area for Toongabbie sits entirely within a Bushfire Prone Area (BPA). The greater area surrounding Toongabbie is also largely within a BPA with the exception of the north-west corner and south-east corner which is within a BMO, reflecting the moderate bushfire hazard as the residential areas interface with grasslands.

Amendment VC140, amended Clause 13.02-15 of the Latrobe Planning Scheme to specifically refer to Bushfire Prone Areas and to strengthen the consideration of bushfire risk in all planning decisions. As the site is fully contained within the Bushfire Prone Area, the minimum level of construction for all dwellings is BAL 12.5, and this bushfire risk must be considered.

Bushfire Management Overlay

The Bushfire Management Overlay (BMO) applies to land that interfaces with the northern and western boundaries of the study area, as well as the south east corner.

In *Planning Advisory Note 46 (2013)* the BMO is described as, "a planning scheme provision used to guide the development of land in areas of high bushfire hazard. The location, design



and construction of development and the implementation of bushfire protection measures must be considered under a BMO. The BMO applies to areas where there is potential for extreme bushfire behaviour, such as a crown fire and extreme ember attack and radiant heat."

Revised mapping, using the hazard criteria, was implemented into the Latrobe Planning Scheme on 3 October 2017 after it was recommended to do so in the Victorian Bushfires Royal Commission in 2009.



*Photo: Fire burning near Walhalla, 2019.
Source: Bombala Times, 2019.*

Figure BF5: Bushfire prone area

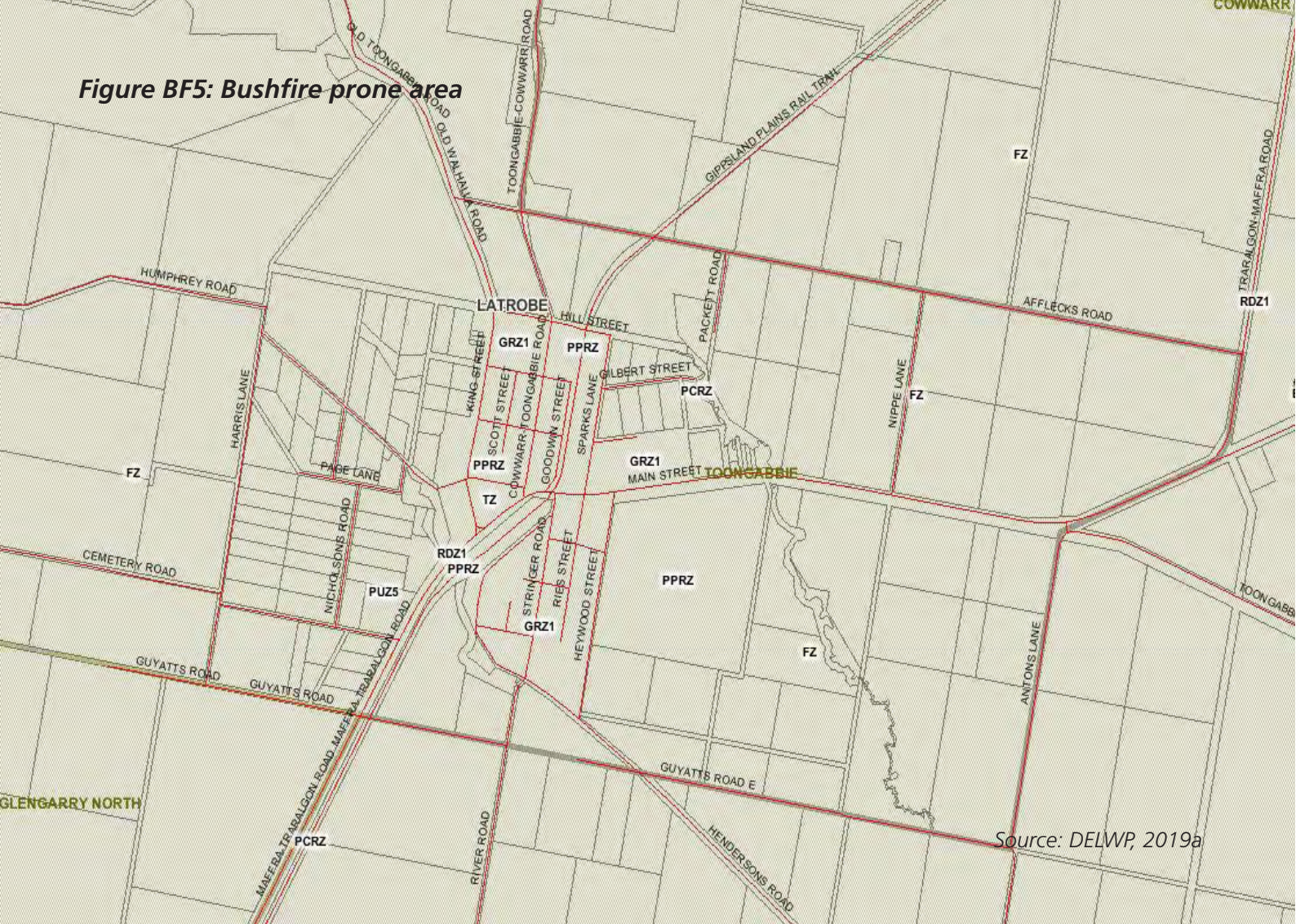


Figure BF6: Bushfire management overlay (BMO)



4.3 Clause 13.02 Assessment

4.3.1 PROTECTION OF HUMAN LIFE

<i>Give priority to the protections of human life over all other policy considerations by:</i>	<i>Response</i>
Prioritising the protection of human life over all other considerations	<p>The project is an opportunity to provide planned development in Toongabbie and enhance the bushfire safety at a settlement level through the Structure Plan and associated planning tools, and at a site-based level through design guidance. The Structure Plan will need to consider the risk to human life so that the safety of existing development is improved, and provide sufficient protection to new residents.</p> <p>Given the proximity to the Great Dividing Ranges, the potential extreme ember attack and the exposure to radiant heat; shelter options, strategic fuel breaks, evacuation routes the design of housing will be important considerations in mitigating the risk and prioritising human life.</p>
Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.	<p>Directions for growth can then be directed to areas that have a lower risk rating to ensure that their is no net increase in risk exposure. The south and south east precincts provide the safest areas as they are in the opposite direction to the landscape bushfire threat and are separated by a primary firebreak. The eastern precincts provide the next best areas as they are separated from the bushfire threat by a secondary firebreak and is further away from the fire hazard. While the Precinct H and the Precinct C have limited scope for subdivision design due to the high level of fragmentation, the design of the other precincts must respond to the retained farmland, and vegetation. The street network should provide safe egress, and perimeter roads along the interface where specified. This may entail building roads along the established road reserves in the Precinct H. Toongabbie has an established road reserve network which could provide a further street network to ensure this. Where precincts already have a perimeter road, it should be retained for bushfire protection measures.</p>

Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision-making at all stages of the planning process.	The Structure Plan provides an opportunity to improve the safety of the existing town by clarifying the treatment interface between the settlement and the bushfire hazard. Bushfire risk should be considered in the integrated water management plan, street design, landscaping, and ongoing land management. Any development application or application to subdivide land should demonstrate how the design responds to the identified bushfire risk.
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4.3.2 BUSHFIRE HAZARD IDENTIFICATION AND ASSESSMENT

<i>Identify bushfire hazard and undertake appropriate risk assessment by:</i>	<i>Response</i>
Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.	The Latrobe Planning Scheme relies on the Structure Plan responding to bushfire based on current assessment methods. Clauses 13.02 and 53.02 are to be considered for all of the land, and Clause 44.06 is of relevance to the land contained in the Bushfire Management Overlay. The importance of bushfire planning being strengthened by Clause 71.02-3 Integrated Decision Making emphasizes the need to reconcile potential conflicts in design and vision at this early stage. <i>Planning Practice Note 64</i> has been used as a template for the assessment outlined in this report.

<p>Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act.</p>	<p>Consistent with the revised Clause 13.02, the Structure Plan must respond to the Bushfire Prone Area. Further work is required to determine the required setbacks for properties adjacent to the bushfire risk. Sufficient direction in the Structure Plan and the applied planning scheme tool (Design and Development Overlay or Development Plan Overlay) will facilitate this to occur at a later date, however for areas not currently proposed to be rezoned this need to occur prior to endorsement of the plan. The maps for the Bushfire Management Overlay and the Bushfire Prone Areas as specified in the Figure 14 and 15 describe the current extent of the bushfire hazards. Data including the Victorian Fire Risk Register, The Regional Bushfire Planning Assessments, and mapping data from Forest Fire Management has been used to inform the decisions when assessing the bushfire hazard.</p>
<p>Applying the Bushfire Management Overlay in planning schemes to areas where the extent of vegetation can create an extreme bushfire hazard.</p>	<p>The BMO is applied to areas of extreme hazard, located outside the study area.</p>
<p>Considering and assessing the bushfire hazard on the basis of:</p> <ul style="list-style-type: none"> • Landscape conditions - meaning the conditions in the landscape within 20 kilometres and potentially up to 75 kilometres from a site; • Local conditions - meaning conditions in the area within approximately 1 kilometre from a site; • Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and, • The site for the development 	<p>The Latrobe Planning Scheme relies on the Structure Plan responding to bushfire based on current assessment methods including Clauses 13.02-15, and 53.02 to consider land uses across all of the study area. Clause 44.06 does not apply to the study area. Clause 71.02-3 strengthens the bushfire considerations in the Planning Scheme and emphasises the need to consider potential conflicts in design and vision at the earliest possible stage.</p> <p>An assessment is provided in Chapter 5. As it is a Structure Plan, three scales have been considered - Landscape conditions at 20km, Local conditions at 5 km, and Neighbourhood conditions at 1km. The site conditions are considered through the Bushfire Hazard Site Assessment and would be provided at subdivision stage, policy considerations may be included to ensure that this can happen.</p>

Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.	CFA will be a referral authority for consideration of the Planning Scheme Amendment. CFA is expected to be will be consulted during the referral of the amendment. An initial consultation with CFA occurred on 30 March and 22 April 2020.
Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures	The content of this report ensures that bushfire risk includes appropriate measures at the settlement planning stage through the Structure Plan. Future applications to subdivide land may need to fully assess the site-based bushfire risk and include appropriate bushfire protection measures (e.g. managed land, BALs, landscaping of public spaces) consistent with the direction of the Planning Scheme and the Structure Plan which is dependent on the policy directions that will be included in the Structure Plan on the basis of recommendations from this report and consultation undertaken with the CFA.
Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.	This provision of the Clause 13.02-1S is critical and means this allows the Responsible Authority to include requirements for developments to also provide a response to bushfire risk through the amendment process and that the Responsible Authority may not approve a permit application until it is satisfied with the bushfire protection measures being implemented.

4.3.3 SETTLEMENT PLANNING

<i>Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:</i>	<i>Response</i>
Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metres under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).	Development of land surrounding Toongabbie should contribute to an improved interface with the grasslands as bushfire risk mitigation measures will be implemented into the Planning Scheme. No lot should be approved where the lot cannot achieve the Column A separation distances in Clause 53.02. If necessary, building envelopes should be provided on lots to provide certainty with regard to development.

<i>Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:</i>	<i>Response</i>
Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.	BAL:Low is a typology of location used in AS3959-2009 Construction of Building in Bushfire Prone Areas (Standards Australia). It defines a location that is not exposed to flame contact or levels of radiant heat from a fire front that is harmful to people. Hazel (2018) says that <i>"an area of BAL:Low is available in the settlement of Toongabbie, being land generally along Cowen Street between the General Store and the Village Green. Despite the availability of BAL:Low, Toongabbie will be subject to high levels of ember attack (see landscape assessment.) Sheltering in an open environment can be dangerous as ember attack is difficult to mitigate."</i>
Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.	Any permit to subdivide or develop land that is issued should provide a permit condition that ensures the ongoing management of the balance land contained between development and the unmanaged vegetation which is similar to the conditions that have been used in other Low Density Residential or Rural Living Development Plan areas within Latrobe such as the Acreage in Tyers. Furthermore, the <i>Latrobe City Municipal Fire Management Plan</i> (MFMP) already acknowledges the key areas for treatment in regards to community infrastructure. Ongoing land management notices are issued under the MFMP as well.
Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reduce bushfire risk overall.	The Structure Plan provides a design response that considers the integration of bushfire mitigation measures into the settlement to provide an improved interface with the settlement. Emphasis on edge roads along open space and undeveloped land interface is required the safety of the new residents. With appropriate mitigation measures, development will decrease the risk of bushfire to the existing township and will not lead to a net increase in risk. Further bushfire protection measures can be included by strengthening the perimeter roads in the areas, ensuring that the design and siting of any dwelling has strengthened bushfire protection measures and that the appropriate separation distances can be achieved.

Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:	Response
Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.	An assessment is provided in Chapter 4. As it is a Structure Plan, three scales have been considered - Landscape conditions at 20km, Local conditions at 5 km, and Neighbourhood conditions at 1km. As Toongabbie is exposed to landscape fires given its proximity to the Great Dividing Ranges, the fire runs of up to 75Km has been considered in the Landscape Assessment. The site conditions are considered through the Bushfire Hazard Site Assessment and would be provided at subdivision stage, policy considerations may be included to ensure that this happens.
Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.	Toongabbie has been identified as a small town in the <i>Live Work Latrobe: Housing Strategy</i> which supports growth that is consistent with the structure plan and the Toongabbie Housing Framework Plan. Moderate growth is expected to occur in Toongabbie (refer to draft <i>Toongabbie Structure Plan Background Reports - Context Report 2020</i> for more details). A town structure plan looks at the most appropriate locations for settlement growth at a local and neighbourhood level. This ensure that growth is being directed towards the areas with the lowest bushfire risk. Eight different precincts have been considered. Precincts outside of Toongabbie have been considered in the draft <i>Bushfire Assessments and Rural Rezoning</i> s Project which in turn have been considered in this project. As already demonstrated in Figure BG2 on page 10, Latrobe City Council is heavily constrained, areas that have the lowest bushfire risk are often reserved for other purposes. Toongabbie along with Churchill form the lowest risk locations in areas that are not constrained.

<i>Plan to strengthen the resilience of settlements and communities and prioritise protection of human life by:</i>	<i>Response</i>
Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009.	This provision of the Clause 13.02-1S is critical and means this allows the Responsible Authority to include requirements for developments to also provide a response to bushfire risk through the amendment process. This is demonstrated at a strategic level by this report however, further refinement for some locations may be required to determine lot yield. That is able to be done at a Development Plan, or development planning stage or through the subdivision process.

4.3.4 AREAS OF HIGH BIODIVERSITY CONSERVATION VALUE

<i>Planning must consider as relevant:</i>	<i>Response</i>
Ensure settlement growth and development approvals can implement bushfire protection measures without unacceptable biodiversity impacts by discouraging settlement growth and development in bushfire affected areas that are of high biodiversity conservation value.	<p>The highest areas of biodiversity conservation value as specified within the Flora and Fauna Assessment occur near the Toongabbie Golf Course, the wetlands, Toongabbie Cemetery, and within the road reserve at 53-57 Humphreys Road, Toongabbie. As such, any development within the study area is unlikely to affect the conservation value within Toongabbie. The areas of higher conservation value sit outside the study area to the west and these are managed through the Joint Fuel Management Program shown in Figure BF14.</p> <p>The results of the draft <i>Toongabbie Structure Plan Background Report - Flora and Fauna Assessment 2020</i> indicate that the study area has moderate potential to support threatened species and ecological communities listed under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>. Discrete areas of Swamp Scrub and Plains Grassy Woodland EVCs, as well as what is believed to be the federally-listed critically endangered Gippsland Red Gum Grassy Woodland and Associated Grassland EVC within the study areas. These areas of environmental significance should be protected from further development opportunities.</p> <p>Waterways tend to transverse through private properties and provide some of the more vegetated areas. Adequate separation distances from the creek vegetation should be provided when designing and siting new development. Any re-vegetation of creeks should be in line with the CFA's Landscaping guidelines to ensure minimal fuel loads.</p>

4.3.5 USE AND DEVELOPMENT OF CONTROL IN THE BUSHFIRE PRONE AREA

<i>When assessing a planning permit application use and development within a bushfire prone area:</i>	<i>Response</i>
In a bushfire prone area designated in accordance with regulations made under the Building Act 1993, bushfire risk should be considered when assessing planning applications for the subdivisions of more than 10 lots.	Precincts D, E and F to the east and south-east of the township have the potential to have an application with 10 lots or more, any rezoning would be associated with a development plan overlay which would consider the bushfire risk during the development of the plan.

Planning Permit Considerations

<i>When assessing a planning permit application for the above uses and development:</i>	<i>Response</i>
Consider the risk of bushfire to people, property and community infrastructure.	Future planning permit applications will need to provide an appropriate response, Clause 53.02 of the Scheme assists as a guide. The Precinct H and Precinct C will not trigger for subdivisions larger than 10 lots. Precinct B may have development that is 10 lots or larger, however, this area is not proposed to be rezoned at this point in time due to land supply.
Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.	Future planning permit applications will need to provide an appropriate response, Clause 53.02 of the Scheme assists as a guide.
Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts.	Future planning permit applications will need to provide an appropriate response, that works with the landscaping design response.

4.3.6 POLICY GUIDELINES

<i>Planning must be considered as relevant:</i>	<i>Response</i>
Any relevant approved State, regional and municipal fire prevention plan.	Future planning permit application assessments should be informed by the <i>Municipal Fire Management Plan</i> , structure plan and any other relevant development controls.
AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).	This is considered when referring to BAL12.5 and separation distances specified in Clause 53.02 of the Latrobe Planning Scheme.
Building in bushfire-prone areas - CSIRO & Standards Australia (SAA HB36-1993, May 1993).	This is the handbook to AS3959-2009 and does not need to be considered directly.
Any Bushfire Prone Area map prepared under the Building Act 1993 or regulations made under that Act.	The most up to date Bushfire Prone Area map has been considered in this report and is shown in Figure BF4.

5

Bushfire Risk



5.1 Landscape Hazard Assessment

The study area is situated in the foothills of the Great Dividing Ranges, is relatively flat, sloping gently towards the south-east. It mainly consists of cleared farmland and residential dwellings with isolated native trees and patches of vegetation along roadside verges or on public land. Key features within the 20 kilometre radius include:

- Forest vegetation to the north-west, west and south-west
- Extensive grasslands directly north, east and south.
- A plantation less than 1Km to the west
- The Loy Lang open cut coal mine
- The small townships of Glengarry, Tyers (in Latrobe City Council), Cowwarr, Maffra, and Heyfield (in Wellington Shire Council). As well as the larger town Traralgon.
- Traralgon-Maffra Road which runs north-south.

From the north-west, west and south-west there are extensive forest runs. The forested areas provide a high risk landscape where a bushfire could start and develop into a large bushfire. These long runs, combined with steep topography are capable of generating extreme fire behaviour.

This type of hazard is influenced by fuel loads and drought conditions. Where a bushfire starts is often associated with high temperatures, wind, cyclonic winds and lightning. Extreme ember attack could occur with these type of weather conditions and could results in similar conditions to Black Saturday. These conditions may be intense and could seriously threaten the community. (DELWP, 2017)

On the east and south-east grassland fire runs are present but these are not likely to bring

a bushfire towards the study given Victoria's prevailing bushfire weather patterns. A BAL-Low area can be found around the Village Green between Cowen Street, King Street and Victoria Street.

Within 5 kilometres key features include:

- The foothills of the Alpine Ranges
- Rural residential pockets north of Toongabbie nestled among native vegetation
- Farmland to the south and east
- Plantation a 1km from the study area boundary to the west
- Traralgon-Maffra Road
- Gippsland Plains Rail Trail

Fire runs closer to the study area are through grasslands. Grasslands to the north, west, and south provide a buffer between the forested areas and the settlement. These range in size from 600m to 6Km. Grassland runs from the south and east are possible but are the least likely threat due to the prevailing bushfire weather conditions in Victoria.

5.1.1 LANDSCAPE BUSHFIRE IMPACTS

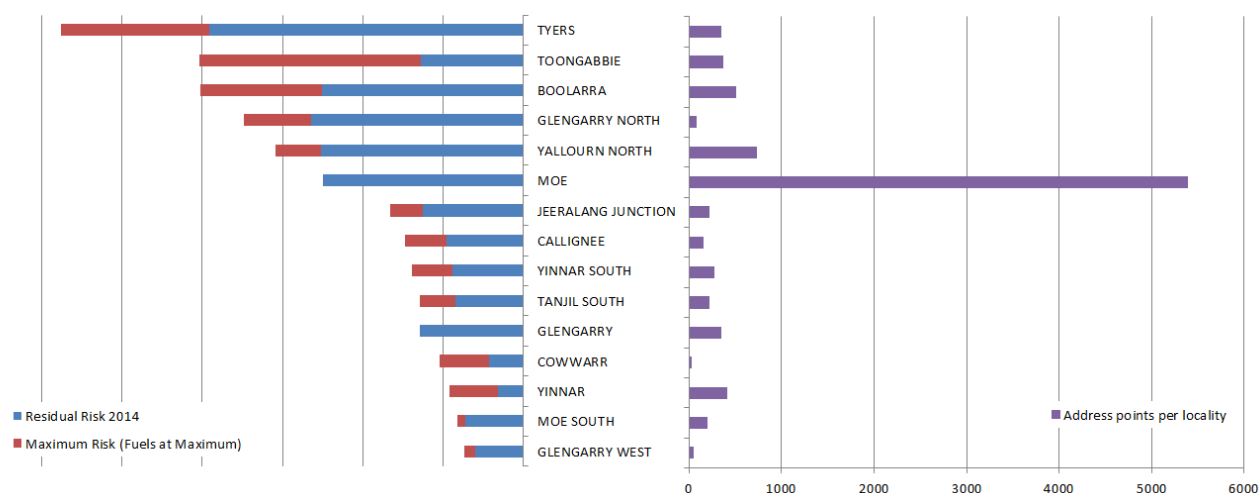
Hazel (2018) on behalf Latrobe City Council states the following:

The large forested areas do not directly interface with the study area. As such there is significantly less chance of being exposed to radiant heat from a bushfire or direct flame contact. However, given the proximity of Toongabbie to the Alpine Ranges the risk arises from ember attack and the further possibility of extreme ember attack.

The forested areas are subject to planned burns and various interventions according to bushfire management zones, landscape management



Figure BF7: Residual risk at FFDI 130 for the 15 highest risk localities from Phoenix modelling and the number of address points per locality



Source: DELWP, 2015

zones, and asset protection zones as per Figure [BF14]. These measures can significantly reduce the residual risk as illustrated in the Figure [BF7], however, as these measures can vary depending on weather conditions and may not be carried out in the specified year, the maximum fuel load is assumed in bushfire scenarios and as such, they are unlikely to materially change the level of risk when assessing it against Clause 13.02-1S. It is, therefore, reasonable to assume that any large fire may behave in a similar fashion to the 2007 bushfire.

Grassfires will interact with the edges of the study area. At these edges higher levels of radiant heat and flame contact is expected. Extreme ember attack will increase the likelihood of grassfires. These grassfires may be ahead of the main fire front from the forested area as embers can travel for many kilometres ahead of the fire front.

When combined with Victoria's likely bushfire weather, the severity of grassfires, a likely wind change and the presence of embers ahead of a fire front creates complexities that increase the landscape risk to the study area. Under these

conditions the landscape risk is considered to be high.

5.1.2 LANDSCAPE TYPE

Hazel (2018) further states that the *Bushfire Management Overlay Technical Guide* (DELWP, 2017) identifies landscape typologies to assist in understanding relative risk in Victoria.

The landscape risk for Toongabbie corresponds with parts of Landscape Type Two and Landscape Type Three.

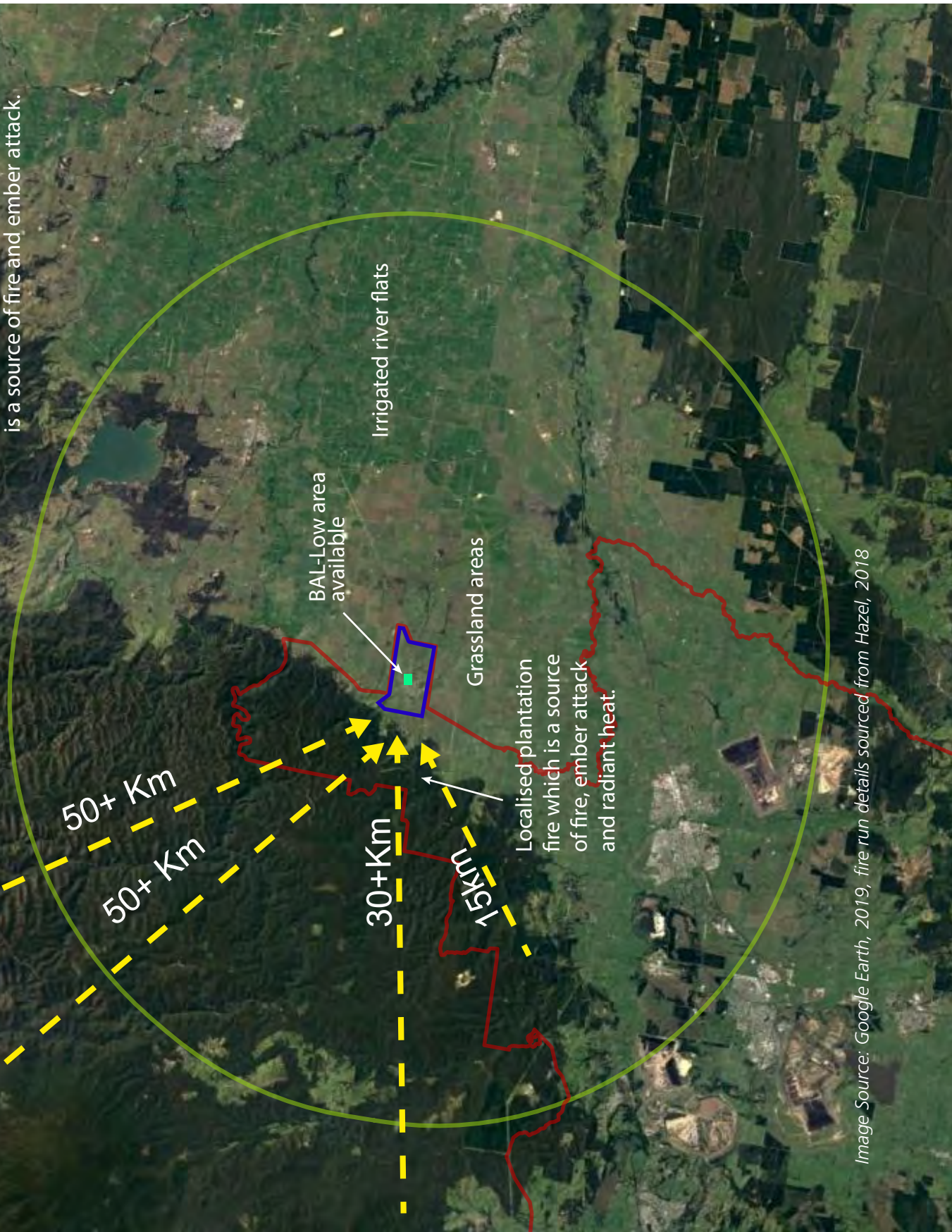
The common characteristic between both landscapes is that the type and extent of the bushfire hazard may result in neighbourhood scale destruction.

Landscape Type Two applies where a location is managed in a minimum fuel conditions in a township, this applies to the study area due to the Village Green being a BAL-Low area. However, due to the risk of extreme ember attack, an open air shelter is not considered to be ideal, as such Landscape Type Three should apply.



Figure BF8: Landscape hazard assessment - 20km radius

Alpine Ranges are a high risk landscape with long fire runs, steep topography and vegetation in a mostly natural state is a source of fire and ember attack.



LEGEND

- Municipal Boundary
- Study Area
- 20km radius
- Grass fire runs
- BAL-Low areas

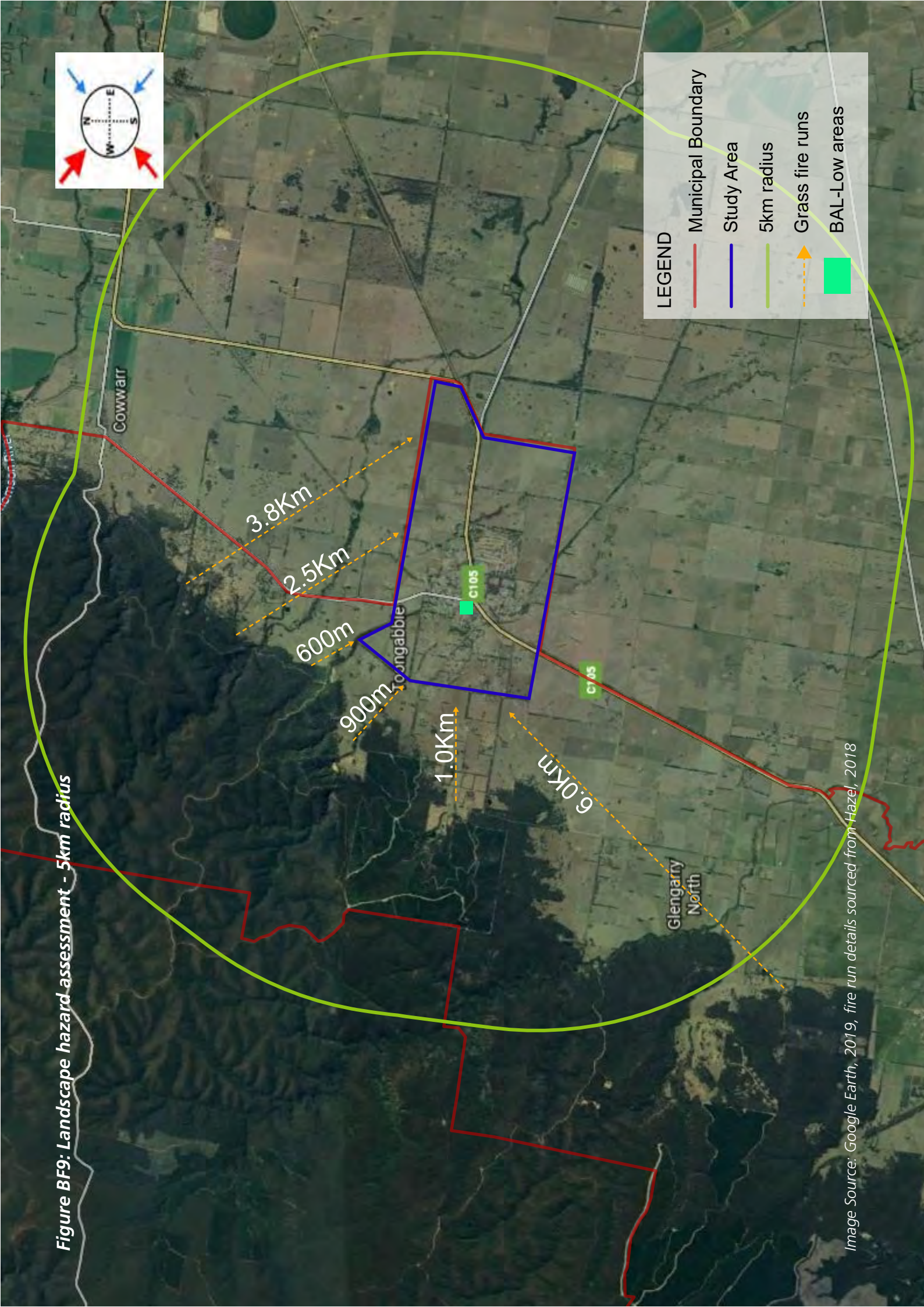
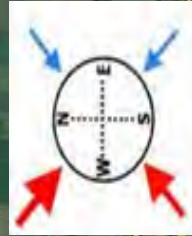


Figure BF9: Landscape hazard assessment - 5km radius

Image Source: Google Earth, 2019, fire run details sourced from Hazel, 2018

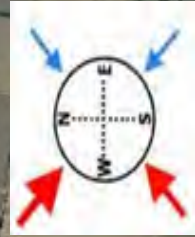


Figure BF10: Landscape hazard assessment - 1km radius

3.8Km

2.5Km

600m

900m

1.0Km

6.0Km

LEGEND

Municipal Boundary

Study Area

1km radius

Grass fire runs

BAL-Low areas

Image Source: Google Earth, 2019, fire run details sourced from Hazel, 2018

5.2 Bushfire Scenarios

Scenario 1 - Bushfire from the north west

The worst scenario for Toongabbie is a landscape fire approaching from the north-west along one of the 50+ kilometre runs. The Great Dividing Ranges have steep topography and it is likely to spread rapidly towards the town. There is a grassland buffer between the Great Dividing Ranges and the study area that provides protection from the radiant heat and flame contact, however there is a risk of ember attack. This fire is a landscape fire and is likely to replicate conditions seen in the 2007 bushfire.

Scenario 2 - Bushfire from the south west.

The next scenario is a landscape fire that approaches from the south west along a 30+ kilometre or 15 kilometre run after the wind switches directions. The grassland would again provide some protection from radiant heat and direct flame contact however there is still a risk from ember attack.

Scenario 3 - Bushfire from the west

There is potential for a bushfire to start in the plantation to the west and spread towards the town along the 1km grassland run. The terrain is not steep and has some undulation which means the fire is likely to spread at a slower rate. This fire scenario is likely to provide some radiant heat and ember attack particularly to the west of the study area. This is a settlement fire threat that can be mitigated through appropriate setbacks and property management.

Scenario 4 - Grassfire

Grassfire can impact from all directions where there is an urban-rural interface. This fire can be mitigated through land management and typical urban infrastructure – roads, carparks, and buildings. This fire scenario is likely to provide radiant heat to the study area and is more likely to affect the north, west and south

west of the study area. This fire is a localised fire threat that can be mitigated by appropriate setbacks primarily achieved by adequate roadside management, defensible space requirements and the presence of urban infrastructure.

FORMS OF BUSHFIRE ATTACK



EMBER ATTACK	RADIANT HEAT
	
<ul style="list-style-type: none">• May occur from the hazard in very close proximity to a building (nearby trees, neighbouring houses).• May occur from fire behaviour in the surrounding landscape.• Most common way houses catch fire during a bushfire.• Occurs when small burning twigs, leaves and bark are carried by wind, landing in and around a building.• Can happen before, during and after a bushfire.	<ul style="list-style-type: none">• Occurs from the hazard in close proximity to a building (up to 150 metres).• The heat you can feel from a fire.• Can ignite surfaces without flame contact or ember attack.• Dries out vegetation ahead of a bushfire so that it burns more readily.
BUSHFIRE HAZARD SITE ASSESSMENT BUSHFIRE HAZARD LANDSCAPE ASSESSMENT	BUSHFIRE HAZARD SITE ASSESSMENT

Photo: Forms of Bushfire Attack.
Source: DELWP, 2017.



Figure BF11: Slope

Toongabbie

5.3 Quantifying risk

The following sections are looking at ways to quantify the bushfire risk as per the steps outlined in *Planning Practice Note 64* (PPN64). PPN64 states that in considering the risks arising from the proposal planning should consider quantifying “*the risks which will arise if the proposal proceeds (for instance, how many more people will be exposed to bushfire and/or what is the nature of the proposed occupancy).*”

Two different methods have been used to quantify the bushfire risk including:

- Municipal wide bushfire risk assessment that looks at the current bushfire risk.
- Phoenix modelling that considers the potential growth scenarios for each precinct in the Toongabbie study area.

Furthermore, by quantifying the risk, it uses the best available science and the most up to date informations as specified in Clause 13.02-15.

Limitations

Limited weight should be given to the data when informing decision-making as it is one factor in understanding the risk to the community, property, environment and assets.

It is also a new way of using the information and therefore is untested.

5.3.1 MUNICIPAL BUSHFIRE RISK ASSESSMENT

Latrobe City Council engaged Fire Risk Consultants to prepare a draft *Municipal Bushfire Risk Assessment 2020* that covered thirteen different locations including rural living precincts, small and district towns.

As there are numerous sources that discuss bushfire risk, Fire Risk Consultants developed

a framework that enabled the collation of the relevant risk indicators. The framework provides a total score against either a location or precinct. The framework is designed to allow the comparison between precincts and where possible municipal wide locations to consider alternative locations.

It is a comparison tool only and relies on a consistent analysis of the risk indicators. This will reduce the subjectivity of the outputs.

The tool provides a hierarchical outcome that supports ongoing discussions for determining future development options, if any exist.

The indicators that have been utilised as part of this assessment are:

- Overall fuel hazard
- Proximity to dwellings
- Ignition history
- Phoenix Rapidfire impact risk
- Political/social
- Access/egress
- Demographics/vulnerability
- Bushfire attack potential
- Topographical influence
- Landscape risk assessment
- Victorian Fire Risk Register

Fire Risk Consultants (2020) state:

A key output of the bushfire risk analysis is the production of a Municipal Landscape Bushfire Risk map that considers CFA Guideline FSG LUP 008 – Strategic Land Use Planning – Bushfire24. This map is intended to provide the following:

- *Identify areas of Latrobe City where development should be avoided, where development can proceed following in depth*

analysis of bushfire risk and areas where development can proceed with no or little restrictions.

- Support future development planning through the identification of areas where the risk from landscape scale bushfires is reduced.
- Assist decision makers in their consideration of Clause 13.02 - Bushfire Planning by encouraging use of the Municipal Landscape Bushfire Risk map.
- To promote consistent application of Clause 13.02-15 - Bushfire Planning.

Throughout this project additional criteria have been developed to further understand and map the variations between the risk areas, which includes:

- Where bushfires have the ability to undertake long runs through forest vegetation greater than the 700m distance, this distance has been increased to increase the community's resilience to the bushfire hazard.
- The boundaries between the colours will, where possible, align with fuel breaks that may consist of roads or other features.
- In the event that more than one piece of vegetation is in close proximity to each other and complex fire behaviour may enable the hazard to jump these fuel breaks.

Latrobe City has been divided into Red, Yellow and Green. These areas have been classified in accordance with the criteria set out in Table 4.

The map is primarily based on the risk indicators analysis and the results from the framework. Where a precinct scores in excess of 30, the area is colour coded red to indicate that this is a location where development should be avoided. Yellow areas are between 25 – 29 and areas that could support future development as there

is limited landscape risk present are between 13 – 24. Note that a score of 13 is the minimum available score. Lower (green) risk locations are described as:

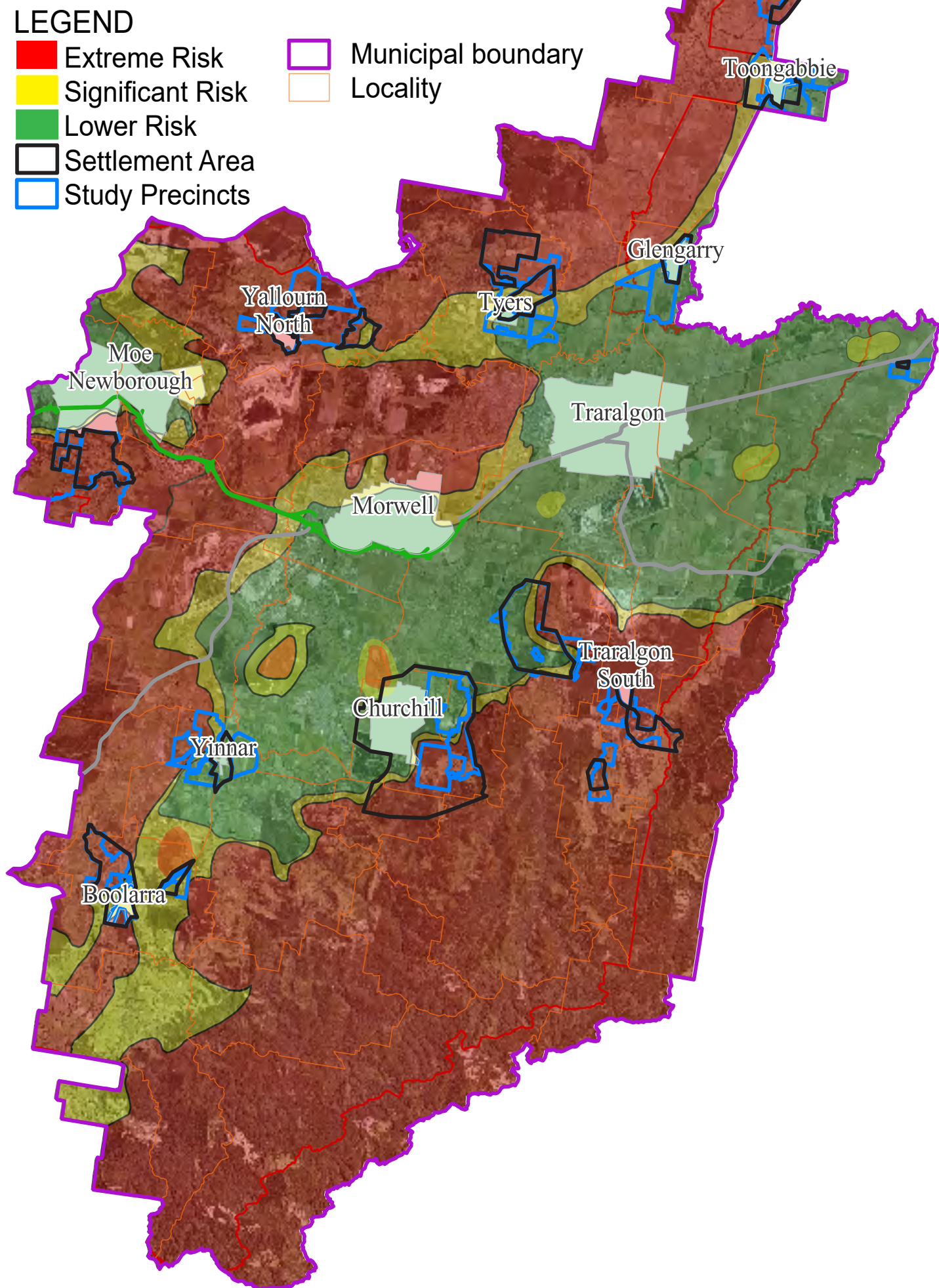
- Not within the Bushfire Management Overlay,
- Having good road access, and
- Located more than 700 metres from large areas of vegetation (such as National Parks, state parks).

Table BF1: Score indicators for risk map

Risk Level	Description
Red (Score of 30+)	Areas which pose an extreme risk to life safety. They will often have limited access and egress options available. May have multiple areas of vegetation within close proximity to the site. No effective mitigation options available. Significant ember attack would impact on the area.
Yellow (Scores between 29 - 25)	Areas where mitigation options are available either on the site or adjoining the site. Areas where development will reduce the risk to adjoining land whilst maintaining an acceptable level of risk on the site. Access and egress options are available and can be maintained. Ember attack is likely.
Green (Scores between 24 - 13)	Vegetation is some distance from the location. Excellent access and egress provisions are available. Evacuation options to a safer location are available. Ember attack may impact on the site.

Source: Fire Risk Consultants et. al, 2020.

Figure BF12: Municipal bushfire risk assessment map



Toongabbie Bushfire Risk Assessment

The following is a summary of findings for the Toongabbie precincts from the draft *Municipal Bushfire Risk Assessment 2020*. It is noted that Precinct C and D in this assessment does not align to the extent of precincts C and D in the Toongabbie Structure Plan

Table BF2: Toongabbie bushfire risk assessment by precinct

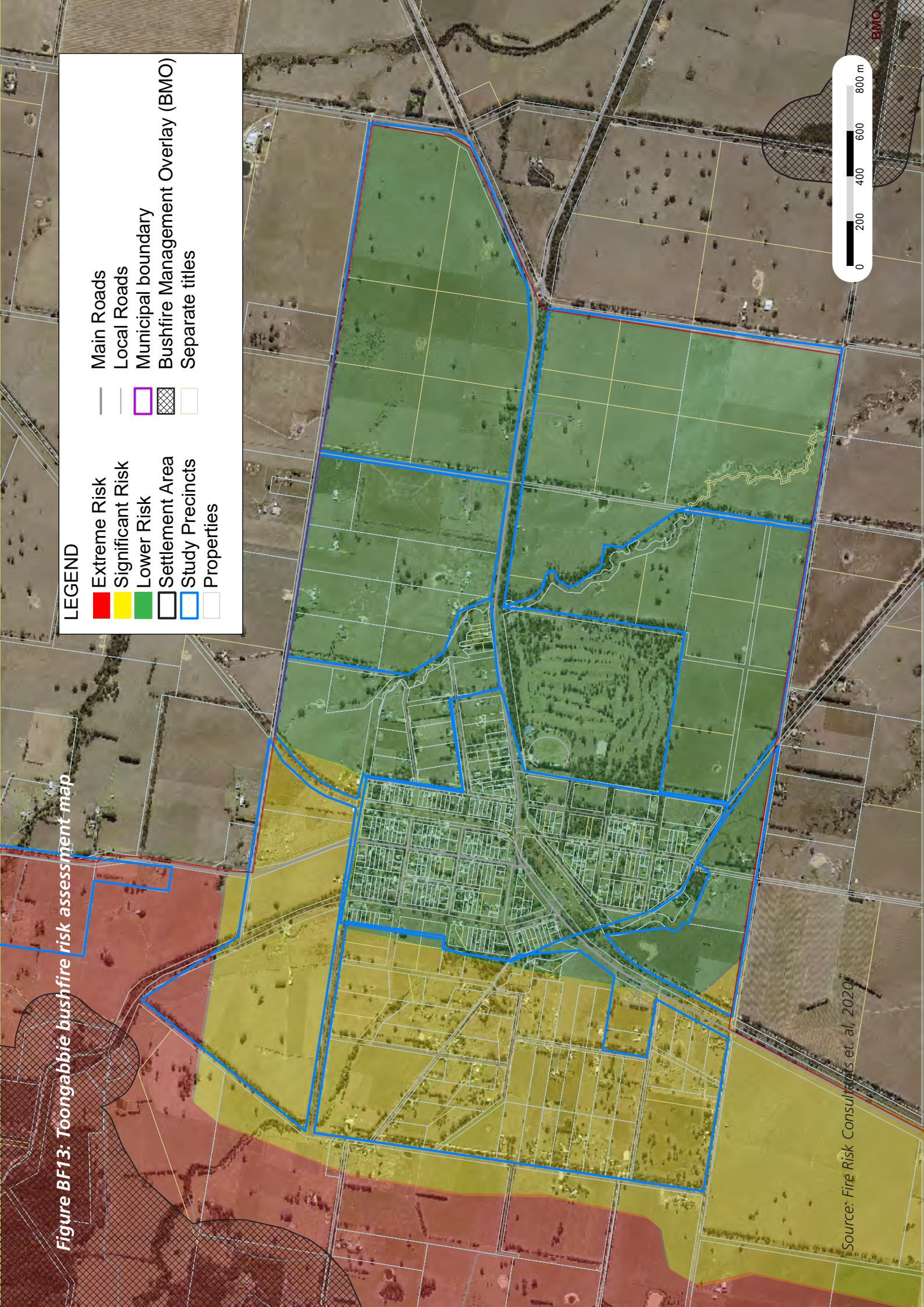
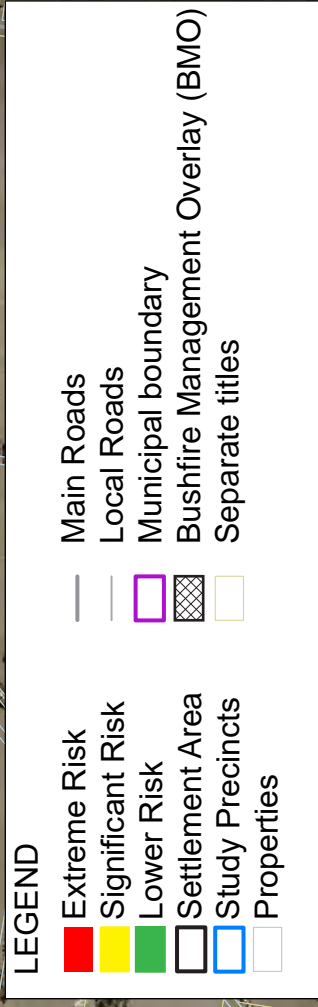
Location Description	Score	Findings
Toongabbie - Precinct A (FZ1)	25	The area is highly likely to be impacted first from a bushfire burning under a north westerly influence. The presence of vegetation along Old Walhalla Road would support the fire to travel into the township. It is noted that fuel reduction burning has been occurring along this road recently. Access and egress is considered to be good. Due to historical developments that allowed suburban sized blocks to adjoin farmland, there is the potential for bushfires to burn up to the residential area of Toongabbie. There are no buffers in place at the current time.
Toongabbie - Precinct B (FZ1)	17	This area is surrounded by grassland and is located to the east of the township. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.
Toongabbie - Precinct C (FZ1)	16	This area is surrounded by grassland and is located to the east of the township. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.
Toongabbie - Precinct D (FZ1)	15	This area is surrounded by grassland and is located to the east of the township. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.

Source: Fire Risk Consultants et. al, 2020.

<i>Location Description</i>	<i>Score</i>	<i>Findings</i>
Toongabbie - Precinct E (FZ1)	15	This area is surrounded by grassland and is located to the east of the township. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.
Toongabbie - Precinct F (FZ1)	15	This area is surrounded by grassland and is located to the east of the township. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.
Toongabbie - Precinct H (FZ1)	25	This area is likely to be impacted first from a bushfire that impacts on the township. Due to historical developments that allowed suburban sized blocks to adjoin farmland, there is the potential for bushfires to burn up to the residential area of Toongabbie. There are no buffers in place at the current time. Access and egress is effective.
Toongabbie - Precinct I (NRZ4)	19	This area is the Toongabbie township. The township is surrounded by grassland with a Golf Course to the south east. Access and egress is effective. There are a number of features that would limit a bushfires spread from the private and public forest to the west including roads and managed properties.

Source: Fire Risk Consultants et. al, 2020.

Figure BF13: Toongabbie bushfire risk assessment map



Source: Fire Risk Consultants et. al, 2020

5.3.2 PHOENIX MODELLING ON A NEIGHBOURHOOD SCALE

Latrobe City Council (2018) states the following:

In Victoria, the PHOENIX Rapidfire bushfire simulation software is utilised to simulate the spread and intensity of bushfires, including flame height, ember density, spotting distance and convection column strength and intensity. This tool was developed in conjunction with DELWP, the University of Melbourne and the Bushfire Cooperative Research Centre. Phoenix Rapidfire is used by fire agencies for both incident prediction (State Control Centre) and as a key tool for bushfire risk assessment and strategic bushfire management planning (Source: Community Bushfire Connection). It is important to note that the simulation tool doesn't predict where bushfires may start, rather is used to assess the consequence of bushfire.

The *Strategic Bushfire Management Plan – East Central* (2014) report states:

Comparisons between PHOENIX Rapidfire simulations and actual past bushfires show it accurately calculates their spread and intensity. The Victorian Bushfire Risk Profiles report describes how DELWP uses PHOENIX Rapidfire to simulate bushfires.

It has been used by DELWP and other fire agencies for both incident prediction (State Control Centre Phoenix RapidFire system) and as the key tool for bushfire risk assessment in fire management planning. All modelling has limitations however; Phoenix is a useful tool in analysing landscape scale bushfire risk.

Phoenix models can be set to simulate bushfires in different weather scenarios. All Phoenix

simulations used in the creation of this document on Forest Fire Danger Index (FFDI) 130, which is Code Red Fire Danger and occurs once a decade.

Phoenix modelling for Toongabbie

Phoenix modelling was undertaken for each of the different scenarios. The following conditions were used:

- Toongabbie weather patterns on a FFDI130 day; and
- There is only a single dwelling on the lot.

Three different situations were considered, these included:

- If there was no fire history in the Toongabbie area (NFH) - Column 1 and Column 2;
- Up to and including the 2018 fire history (FH2018) - Column 3 and 4; and
- The change in residual risk which takes into account all fire management activities including planned burns, and roadside vegetation management etc. - Column 5.

Table BF1 indicates the different areas that were considered in the risk modelling and the maximum number of houses and lots that could be considered under the associated zoning where:

- Rural Living Zone 1 (RLZ1) could be no larger than 2 hectares;
- Rural Living Zone 2 (RLZ2) could be no larger than 4 hectares; and
- Low Density Residential Zone (LDRZ) varied between 2000 sq. metres where there is currently sewer available and 4000 sq. metres where there is no sewer available.

Each of these precincts were considered separately and in various combinations to measure the increase in bushfire risk. Each scenario that was tested is shown on page 589, the first column indicates the base points allocated to it, while the second shows the percentage increase when compared to the existing dwellings.

Scenarios

1. Each precinct separately;
2. Precinct H with Precinct C and Precinct D;
3. Precinct H and Precinct A;
4. Precinct H and Precinct G;
5. Precinct H, Precinct E and Precinct F;
6. Precinct B and Precinct C with no overlap between the two precincts;
7. Precinct B and Precinct G;
8. Precinct B, Precinct E and Precinct F;
9. Precinct B, Precinct G and Precinct F; and
10. Precinct B, Precinct C with no overlap between the two precincts and Precinct D.

Implications

With the exception of the addition of:

- Only Precinct E;
- The combination of the Precinct B, Precinct E and Precinct F; and
- The combination of the Precinct H, Precinct E and Precinct F.

All of the other combinations reduce the residual risk within the town.

The Precinct G has the lowest percentage change for both the No Fire History categories and the Fire History up to 2018.

While the Precinct B, Precinct F and Precinct E has the highest increase in risk, largely due to

the number of new assets that could potentially develop in the area.

The lowest risk areas on a single precinct basis are the Precinct G, Precinct D and Precinct E precincts. While the lowest combination of areas is Precinct H and Precinct G. However, this is largely due to the fact that less dwellings that can go into these precincts. While the precincts with the highest increase will promote the most dwellings.

The Precincts A and H provide the greatest buffer between the town and the bushfire risk reducing the overall residual risk the most, but these are at greatest risk from the bushfire hazard.



Table BF3: Phoenix modelling scenarios for Toongabbie

<i>Scenarios</i>	<i>NFH</i>	<i>Change (NFH)</i>	<i>FH2018</i>	<i>Change (FH2018)</i>	<i>Residual Risk (2018)</i>
Existing dwellings	6.035	0.0%	2.219	0.0%	36.8%
Existing dwellings + Precinct B	6.472	7.2%	2.379	7.2%	36.8%
Existing dwellings + Precinct C	6.309	4.5%	2.298	3.6%	36.4%
Existing dwellings + Precinct C (no overlap with Precinct B)	6.230	3.2%	2.264	2.0%	36.3%
Existing dwellings + Precinct D	6.137	1.7%	2.256	1.7%	36.8%
Existing dwellings + Precinct A	6.614	9.6%	2.349	5.9%	35.5%
Existing dwellings + Precinct G	6.107	1.2%	2.234	0.7%	36.6%
Existing dwellings + Precinct F	6.191	2.6%	2.269	2.3%	36.7%
Existing dwellings + Precinct E	6.132	1.6%	2.269	2.3%	37.0%
Existing dwellings + Precinct H	6.312	4.6%	2.319	4.5%	36.7%
Existing dwellings + Precinct H + Precinct C + Precinct D	6.688	10.8%	2.435	9.7%	36.4%
Existing dwellings + Precinct H + Precinct A	6.891	14.2%	2.449	10.4%	35.5%
Existing dwellings + Precinct H + Precinct G	6.383	5.8%	2.334	5.2%	36.6%
Existing dwellings + Precinct H + Precinct E + Precinct F	6.564	8.8%	2.420	9.1%	36.9%
Existing dwellings + Precinct B + Precinct H (no overlap with Precinct B)	6.667	10.5%	2.424	9.2%	36.4%
Existing dwellings + Precinct B + Precinct G	6.544	8.4%	2.394	7.9%	36.6%
Existing dwellings + Precinct B + Precinct E + Precinct F	6.725	11.4%	2.480	11.8%	36.9%
Existing dwellings + Precinct B + Precinct G + Precinct F	6.699	11.0%	2.445	10.2%	36.5%
Existing dwellings + Precinct B + Precinct C (No overlap with Precinct B) + EPrecinct D	6.769	12.2%	2.461	10.9%	36.4%

5.4 Municipal Fire Management Plan 2018

The purpose of the *Municipal Fire Management Plan* (MFMP) is to chart the planned and coordinated implementation of measures designed to minimise the occurrence, and mitigate the effect of fire in Latrobe, and the planned use of fire in the landscape for a variety of purposes.

Version 4.2 of the MFMP is valid until 27 November 2020.

5.4.1 DETERMINING THE LEVEL OF RISK

Under the Register of Assets at Risk - Bushfire (Attachment 1 of the MFMP) it uses three criteria in determining treatment recommendations which include likelihood, consequence and the risk category. Detailed definitions of likelihood and consequence are shown in Appendix 1. Table BF4 gives a brief overview of the likelihood scenarios, while Table BF5 indicates how the overall level of risk can be identified.

Table BF4: Likelihood categories

	<i>Likelihood Category</i>	<i>Description</i>
1	Rare	1% chance of occurrence in any one year.
2	Unlikely	3% chance of occurrence in any one year.
3	Possible	10% chance of occurrence in any one year.
4	Likely	33% chance of occurrence in any one year.
5	Almost certain	Close to 100% chance of occurring annually.

Consequence has four different categories, these include important; serious; major; and catastrophic.

A table outlining what each of these means is shown in Appendix 1.

The following categories have been used in the risk matrix when determining a risk level:

- E - Extreme;
- H - High;
- M - Moderate; and
- L - Low

Table BF5: Matrix for determining risk category

	<i>Consequence</i>			
<i>Likelihood</i>	Minor	Moderate	Major	Catastrophic
Almost certain	M	H	E	E
Likely	M	H	H	E
Possible	L	M	H	H
Unlikely	L	M	M	H
Rare	L	L	M	M

For each of these risk categories determines a recommended course of action, these are outlined below in Table BF6:

Table BF6: Recommended actions for risk categories

<i>Risk Category</i>	<i>Recommended action</i>
Extreme	Must be managed with a detailed plan – will require resources and training
High	Requires immediate planning – resource priority and training
Moderate	Manage by specific monitoring or response procedures
Low	Manage by routine procedures



5.4.2 REGISTER OF ASSETS AT RISK - BUSHFIRE

In the *MFMP - Register of Assets at Risk from Bushfire* it states that the Toongabbie township is at risk from a direct fire attack from grassland to the north to south-west and from ember attack from the forest into grassland.

It has a medium risk rating. As the likelihood category is 'likely', and the consequence is moderate. These categories apply to the Toongabbie Primary School and the Toongabbie Mechanics' Institute as well.

If all land management treatments are undertaken to reduce the fire risk, the residual fire risk is considered to be 'medium'. It states that the following treatments are undertaken:

Table BF7: Treatments for Toongabbie

Reference No.	Action	Responsible Authority
107	Fire Ready Victoria	CFA
223	Roadside Vegetation Management, Traralgon-Maffra Rd from Glengarry to Toongabbie - full width cut from road shoulder to fence line -exclude areas where there are stands of native vegetation	VicRoads
224	Roadside vegetation management	DELWP/ Parks Victoria
231	Planned burn program	DELWP/ Parks Victoria

Reference No.	Action	Responsible Authority
413	Fire access roads and tracks, bridge inspection	Latrobe City Council
418	Traffic diversion plans	VicRoads

These actions apply to mitigating the risk for the Toongabbie Mechanics' Institute.

Toongabbie Primary School has two further actions, as shown in Table BF8 below. It was affected by the 2006 Coopers Creek fire.

Table BF8: Additional treatments for Toongabbie Primary School

Reference No.	Action	Responsible Authority
212	Routine Asset Site Maintenance	School
407	Emergency Management Plan (Site)	Department of Education and Training

The Gippsland Plains Rail Trail has its own fire management plan which is managed by the Committee of Management.

5.4.3 FIREFIGHTING ACCESS ROUTES

Harris Lane is identified as a firefighting access route and is maintained through Latrobe City Council's Road Management Plan as a rural access road from Cemetery Road to Humphrey Road.

5.4.4 STATIC WATER SUPPLY

According to the MFMP there is a static 20,000L water supply on Wykes Road, north of the study area. This was constructed in the 2017/2018 fire season.

5.4.5 STRATEGIC FIREBREAKS

The entire length of Traralgon - Maffra Road is a primary firebreak. This means that the south and south-east of the study area have a strategic firebreak between it and the bushfire hazard.

Toongabbie - Cowwarr Road between Hill Street and Shiela Court to the north of the study area is a secondary firebreak. This separates part of the northern study precinct and the eastern study precinct from the fire hazard.

5.4.6 PRESCRIBED BURNS

According to the MFMP (2018) and Forest Fire Management and CFA (2019) prescribe burns occur on public land to the north and north-west of the study area as shown in Figure BF14.

To protect the biodiversity value of the flora along Old-Walhalla Road, the CFA undertakes mosaic burns where patches of the vegetation are burnt while adjoining patches are left for a planned burned in later years.

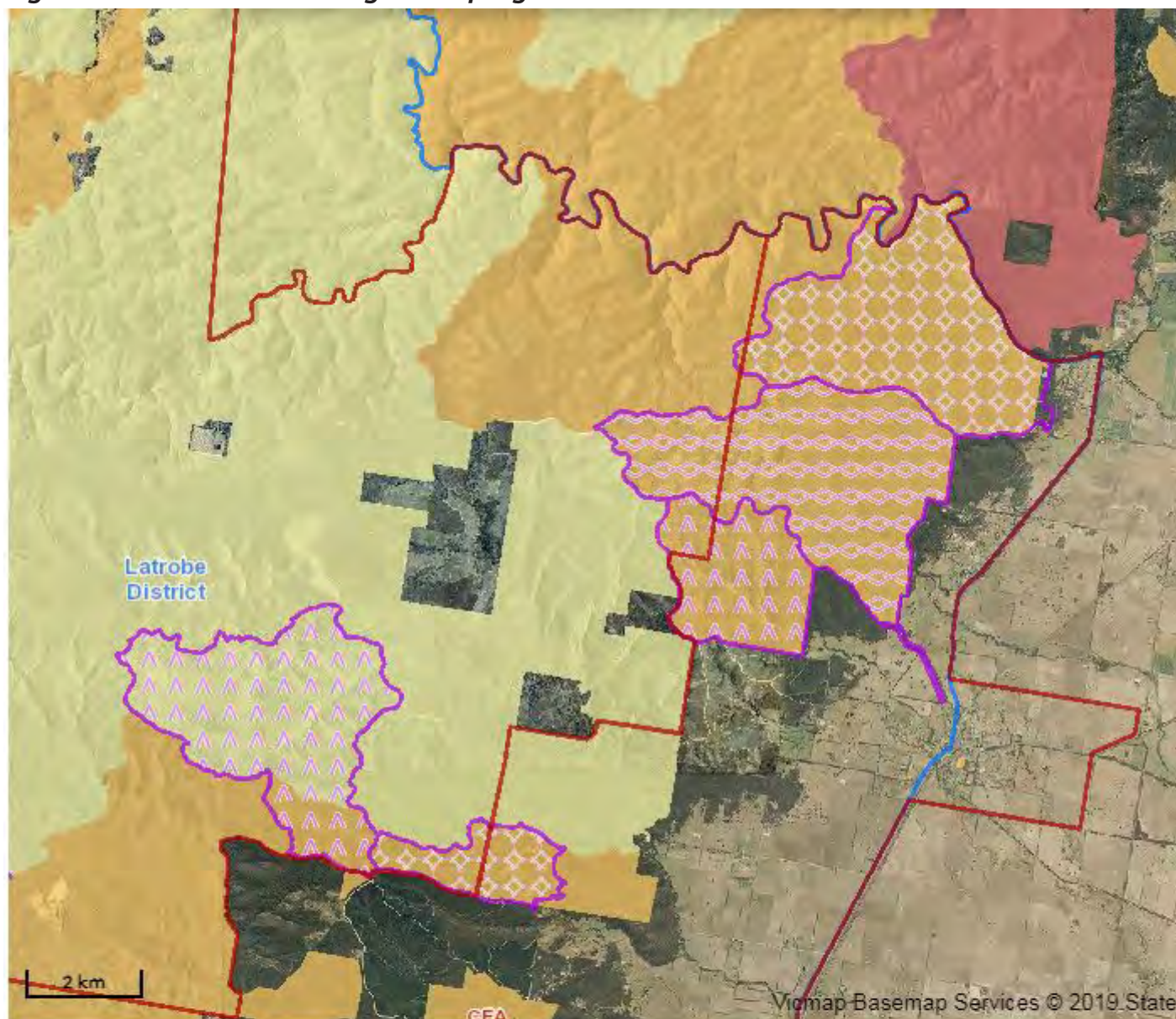
5.4.7 PRIVATE LAND MANAGEMENT NOTICES

Land Management Notices are issued to private landholders across the municipality prior to the start of a fire season. Site inspections are carried out and Infringement notices are issued if the land management is not carried out sufficiently.

*Photo: Planned burn near Toongabbie.
Source: Toongabbie Fire Brigade, 2020.*



Figure BF14: Joint fuel management program



Joint Fuel Management Program

Burn Year

	2018/2019
	2019/2020
	2020/2021

	Mechanical Works
	Fire History - Last 5 Years
	DELWP District Boundaries
	CFA District Boundaries

Fire Management Zones

	1 - Asset Protection
	2 - Bushfire Moderation
	3 - Landscape Management
	4 - Planned Burn Exclusion

Source: Forest Fire Management & CFA, 2019

6

Settlement Planning



6.1 Other considerations in relation to bushfire

There are a number of other considerations when looking at the most appropriate planning response to mitigate the bushfire risk, these include:

- The *Regional Bushfire Planning Assessment 2012*
- Lower Fuel Areas and the designated places of last resort
- Strategic access

7.1.1 REGIONAL BUSHFIRE PLANNING ASSESSMENT (RBPA)

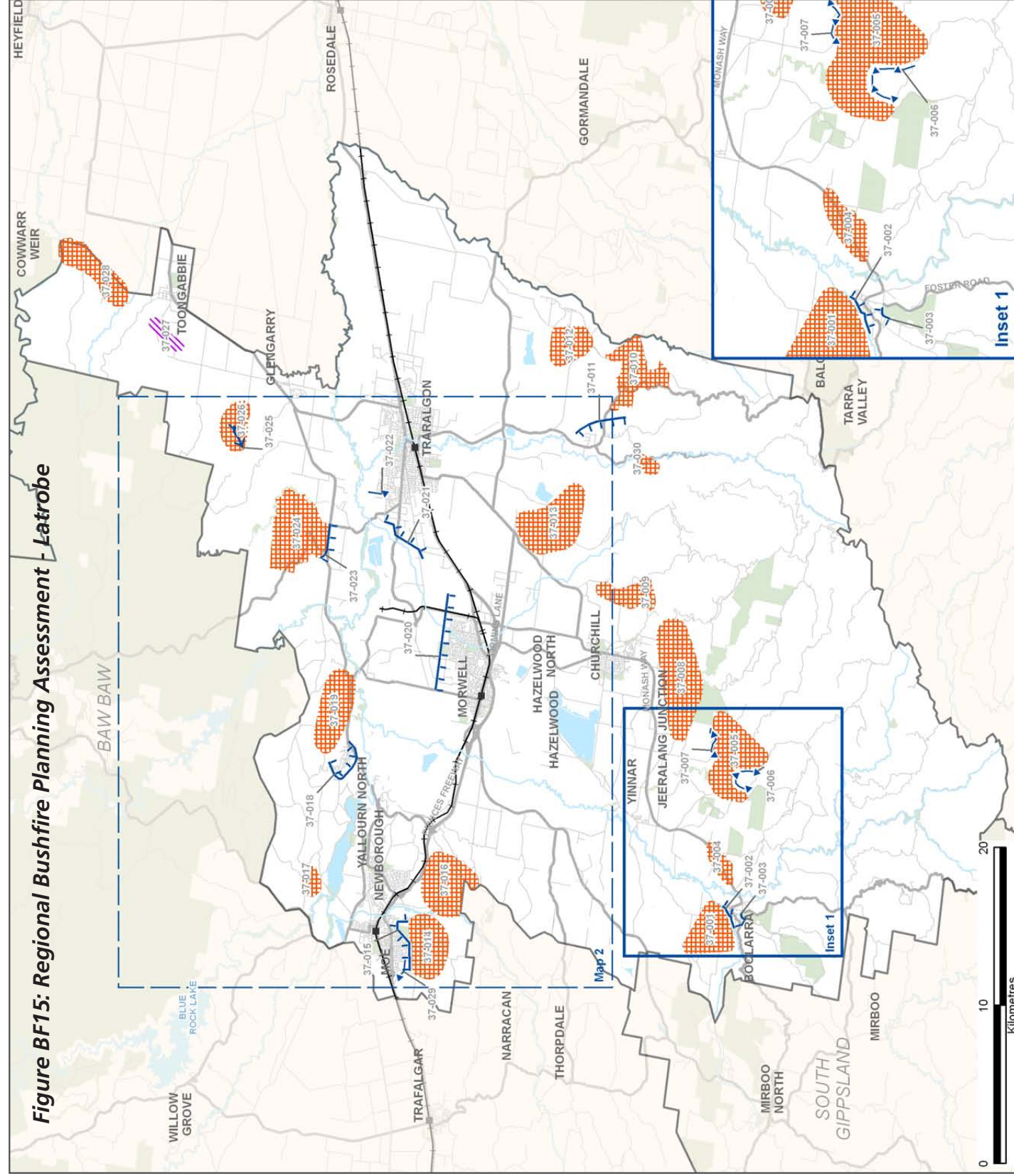
The proposed Precinct H is indicated in the RBPA as an area of interest as (p.28, DPCDb, 2012).:

The western part of Toongabbie settlement (37-027) provides a semi-rural transition area between the urban and consolidated township settlement and expansive vegetated state park further west.



Photo: 2007 Bushfire burning near Toongabbie. Source: King, M., 2007 .

Figure BF15: Regional Bushfire Planning Assessment - Latrobe



6.1.2 SHELTER OPTIONS

Hazel (2018) on behalf Latrobe City Council states the following about designated places of last resort, BAL:Low locations, and strategic access options for Glengarry, Cowwarr and Toongabbie.

Designated places of last resort

"A Neighbourhood Safer Place or Community Fire Refuge can be designed by local councils after consultation with the Country Fire Authority. Strict criteria relating to radiant heat exposure must be met. A Community Fire Refuge is a building, whereas a Neighbourhood Safer Place may be a building or an outside space. They are intended to be used by people as a last resort when their primary bushfire plan has failed. There is no Neighbourhood Safer Place or Community Fire Refuge located in or around Toongabbie."

BAL:Low locations

Hazel (2018) on behalf Latrobe City Council states that *"BAL:Low is a typology of a location used in AS3959-2009 Construction of buildings in bushfire prone areas (Standards Australia). It defines a location that is not exposed to flame contact or levels of radiant heat from a fire front that is harmful to people. BAL:Low does not consider the risk from the ember attack, especially where ember attack arises from vegetation more than 100m from a location more than 100m from a location such as Toongabbie. An area of BAL:Low is available in Toongabbie, being land generally along Cowen Street between the General Store and the Toongabbie Village Green. Sheltering in an open environment creates a complex sheltering option for people as the conditions under ember attack can be dangerous and are difficult to mitigate."*

6.1.3 STRATEGIC ACCESS

Toongabbie is a relatively isolated community in the Gippsland Plains. It is more than 7km away from the nearest settlement and the roads are exposed to grasslands. Some of these grasslands are managed as a result of agricultural production.

Glengarry

To the south, towards Glengarry, access is provided via a 7km journey along Traralgon - Maffra Road. The journey would be vulnerable to grassfires, particularly ember attack from the large forested areas to the west. The journey would be particularly vulnerable under a south-west wind change that could bring ember attack towards the road from the large forested areas. The *Latrobe City Municipal Fire Management Plan 2017* identifies Traralgon-Maffra Road as a strategic fuel break and is subject to fuel management. It describes the intervention as full-width cut from the road should to the fence, excluding areas where there are stands of native vegetation (p.33) This affords the road enhanced protection for the purpose of strategic access from Toongabbie to Glengarry. There is alternative access to Glengarry south via River Road which connects to Cairnbrook Road. This provides an option with less vulnerability to grass fires due to the separation from the forested areas, however, it is still vulnerable to ember attack.

Cowwarr and Heyfield

To the north-east, access is provided to Cowwarr via a 10Km journey along Traralgon-Maffra Road. This journey is exposed to grasslands for most of its journey and runs parallel for the majority of the journey to the Great Dividing Ranges. The journey would be vulnerable to grassfires, particularly from ember attack from the large

forested areas to the west.

Another 10km on (20km from Toongabbie) is Heyfield. The journey from Cowwarr to Heyfield is relatively lower in risk as the separation distance between the large forested areas increases the further east travelled.

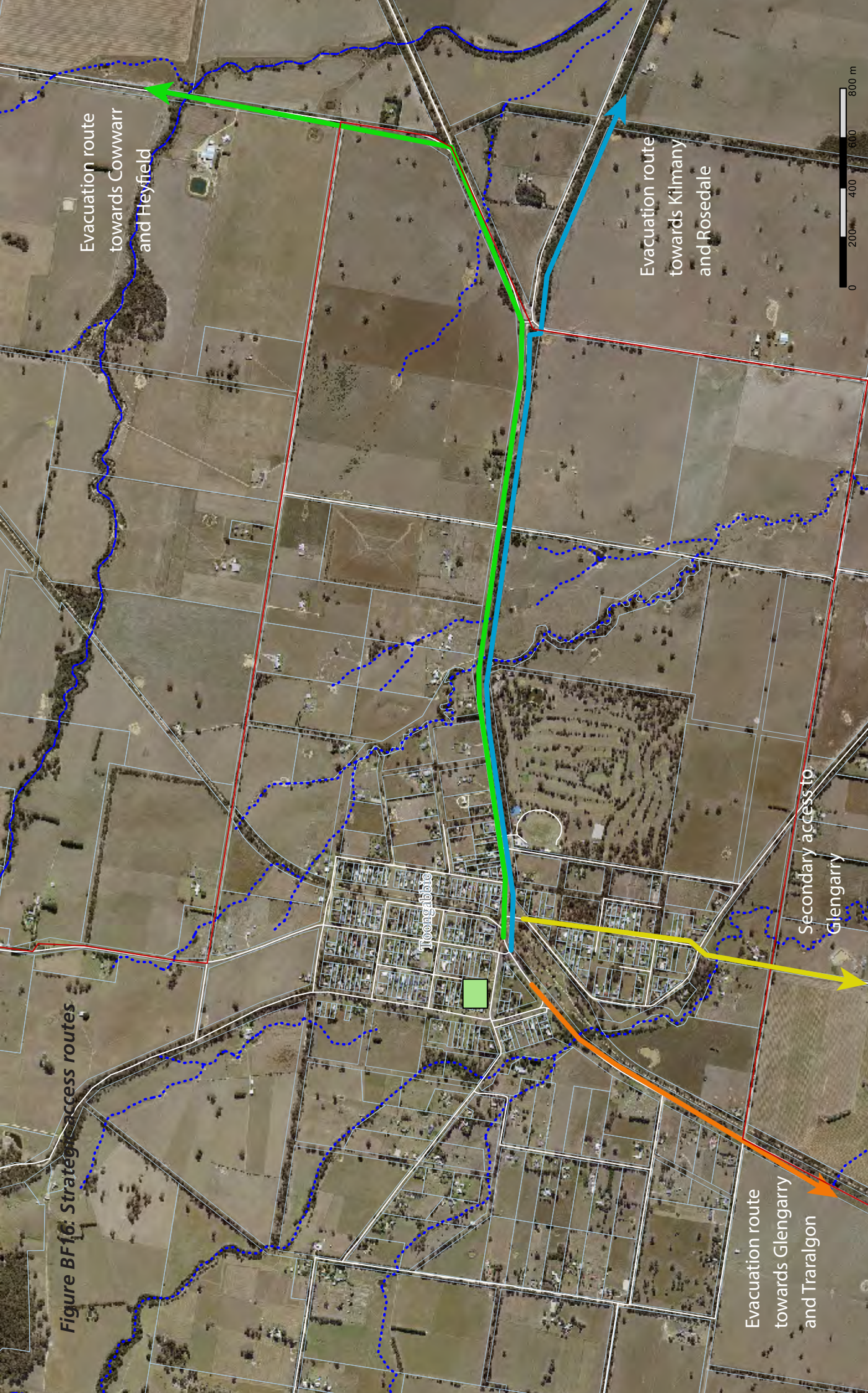
Kilmany and Rosedale

The safest exit route is via Sale-Toongabbie Road travelling 26.5km east towards Kilmany or 22.5Km towards Rosedale turning off Sale-Toongabbie Road down Rosedale-Heyfield Road. As the strategic access route travels east it is the least vulnerable to grassfires that have started due to ember attack.

Sale-Toongabbie Road could also be used to access Heyfield.

*Photo: Example of a grassfire.
Source: CFA, 2019*





6.2 Planning Scheme Responses

6.2.1 BUSHFIRE MANAGEMENT OVERLAY SCHEDULE

A schedule to the BMO can be applied to areas that following a bushfire risk analysis, have been identified as having a risk that is so high that the BMO should be extended to cover these areas.

Fire Risk Consultants (2020) state that:

The benefits of this approach are three-fold. Firstly, application of the Bushfire Management Overlay will ensure that all new development has proper regard for the localised extreme landscape bushfire risk profile. Secondly, in residential areas, including rural living zones, the land owner takes benefit of the defendable space exemptions at Clause 52.12-5. Finally, the Responsible Authority takes benefit of the mandatory conditions of Clause 44.06 – Bushfire Management Overlay, including, not limited to:

'The bushfire protection measures forming part of this permit or shown on the endorsed plans, including those relating to construction standards, defendable space, water supply and access, must be maintained to the satisfaction of the responsible authority on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.'

Further, the purpose-fit Bushfire Management Overlay is a statewide provision proven to be effective in application.

However, only one property within the study area in Precinct A is likely to be affected by an extreme risk as shown in section 4.2.

6.2.2 DESIGN AND DEVELOPMENT OVERLAY SCHEDULE

A Design and Development Overlay (DDO) is principally intended to implement requirements based on a demonstrated need to control built form and the built environment, using performance-based rather than prescriptive controls.

While the majority of the study precincts are not within an extreme bushfire risk area, and sits in a Bushfire Prone Area, it is subject to extreme ember attack.

It is acknowledged that a Design and Development Overlay (DDO) could achieve outcomes similar to the BMO, or any other schedule to Clause 44.06 of the Latrobe Planning Scheme, through specified siting and design requirements and as such, it could apply to areas that have a higher risk from the bushfire hazard but are not deemed an extreme risk.

However, the exemptions for creation of defendable space to new development at Clause 52.12-5 would not apply where the land is not located within a Bushfire Management Overlay.

The design and development overlay does however allow for further flexibility in facilitating specific design outcomes.

The *Planning Permit Applications Bushfire Management Overlay - Technical Guide (2017)* states (p. 39):

Avoid building design that allows for embers to lodge in re-entrant corners, complex roof lines, gaps between building materials and unenclosed underfloor spaces.

In higher risk landscapes the following should be considered:

- *Construct a concrete slab or fully enclose under floor spaces;*
- *For BAL 12.5 and 19 decks, eaves and fascia should be constructed to comply with BAL 29*
- *Fire induced winds should be considered. This means constructing to lower cyclone levels;*
- *External materials attached to the building should be non-combustible. This includes decks and other structures;*
- *Building should be of simple design with minimal re-entrant corners and basic roof lines; and*
- *A compliant private bushfire shelter might also be considered.*

A design standard similar to this can be implemented through a DDO as well as defensible space, in areas such as Precinct H which has a significant threat. This would ensure that the risk is mitigated in that area which does not currently have any bushfire mitigation measures applied through the Latrobe Planning Scheme. This is shown in Figures BF17 and BF18.

6.2.3 DEVELOPMENT PLAN OVERLAY SCHEDULE

A Development Plan Overlay (DPO) is primarily for where some form of plan is required to specify requirements over the development of an area. It does not allow permits to be granted that are inconsistent with a development plan. A DPO can be used where new roads and a larger number of lots are proposed to be created.

Fire Risk Consulting (2020) states:

Subdivision design can establish passive risk mitigation that ensures new development is not exposed to direct flame contact or

excessive levels of radiant heat. It can also ensure that fire authorities are able to establish control lines, effectively attack a bushfire and implement fuel management strategies such as prescribed burning...The proposed planning scheme provisions should require a buffer to be established to all areas of permanent bushfire hazard, achieved by a combination of measures including the creation of perimeter roads, introduction of building envelopes and lineal reserves. A perimeter road, water bodies and open spaces managed in a minimal fuel state are examples of effective buffers.

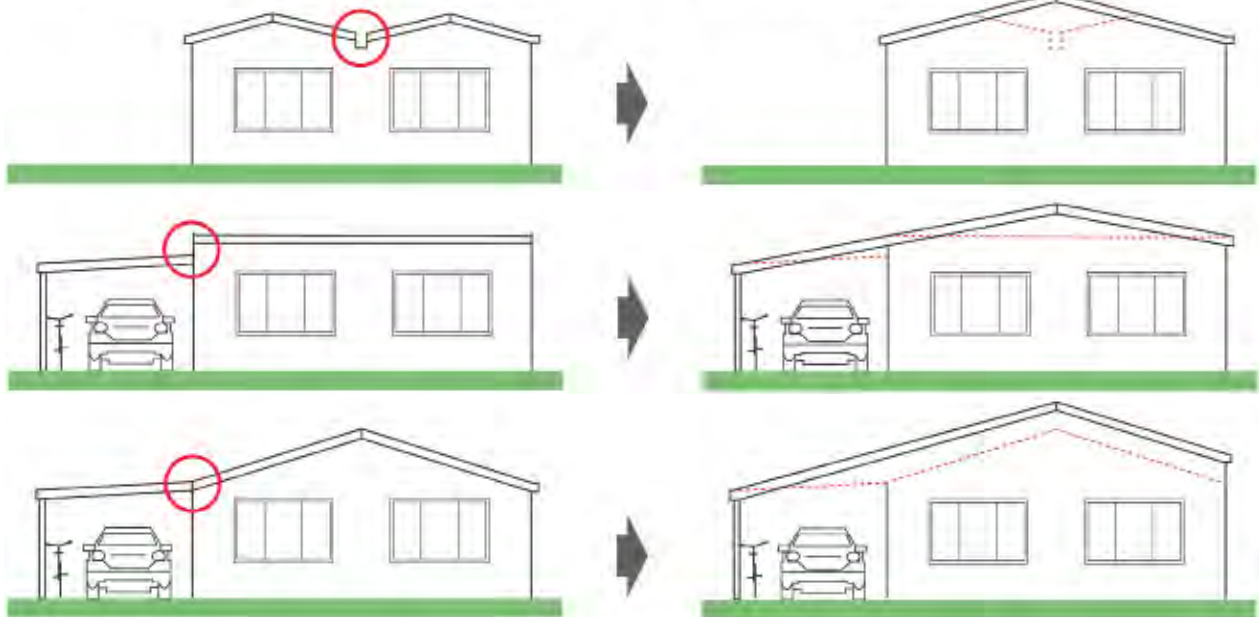
This is shown in Figure BF19.

Figure BF17: Improvements to roof design

Improvements to roof design

Existing complex roof design

Improved roof design



Source: DELWP, 2017

Figure BF18: Minimising ember attack

Minimise ember hazard

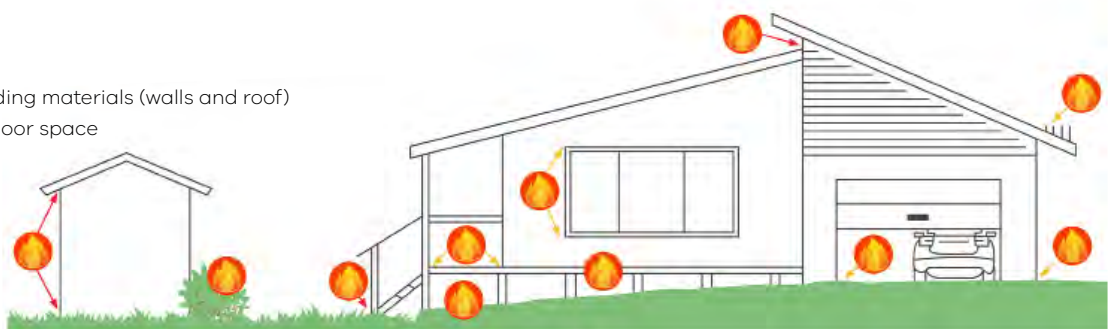
Existing complex roof design

Building design should minimise ember hazards.



Ember Hazards

- Re-entrant corners
- Complex roof lines
- Gaps between building materials (walls and roof)
- Unenclosed underfloor space



Source: DELWP, 2017

Figure BF19: Guidance for new subdivision

Approach

- 1 Subdivision should manage the bushfire risk within its boundaries.
- 2 Staged subdivisions should provide for the management of the bushfire risk to new lots as the stages of subdivision progress.
- 6 Avoid introducing bushfire hazards into subdivisions, including those that allow for the passage of bushfire into an area. This includes wetlands, gullies, or bushland reserves. Where landscaping and design features are included ensure they are capable of being managed in a low fuel condition.

Hazard management

- 3 Ensure the design of landscaped areas and areas to be revegetated do not result in a bushfire hazard to future development.
- 4 Locate any offsets away from new lots and future development.
- 5 Use low-hazard areas like golf courses, managed parklands, sports ovals and public spaces to separate new lots from the bushfire hazard.
- 7 Consider how future public uses may be impacted by a bushfire and the opportunities they may provide to enhance bushfire protection for the area (for instance, through the location of car parking and other low-fuel areas).



Buffers

- 8 Perimeter roads are effective in separating new lots from the bushfire hazard.
- 9 Perimeter roads in combination with defensible space in front setbacks of new lots is an effective way to achieve the defensible space required under approved measures without requiring larger lots adjoining the bushfire hazard.
- 10 Where new bushfire hazards are introduced (for example, for environmental reasons) such hazards may also require a perimeter road to separate the hazard from lots.
- 11 Carefully consider larger lots adjoining the bushfire hazard. Larger lots require more management intervention to maintain defensible space. Where poorly maintained they will become a bushfire hazard.
- 12 Opportunities for communal water supplies are encouraged. They may be more useful for fire authorities during a bushfire emergency. The location of shared water supplies should be responsive to operational needs of the relevant fire authority.

Roads

- 13 Future residents and fire authorities require safe access within the subdivision and to and from the subdivision.
- 14 Two different access options to the wider road network will enhance bushfire safety and support more effective fire fighting.
- 15 Direct roads away from the bushfire hazard and avoid situations where roads pass through areas of unmanaged vegetation.
- 16 Apply the requirements of Clause 56 of planning schemes when designing the road network.

6.3 Precinct Assessments

The following sections are a summary of each precinct including the two possible low density residential areas and the township as assessed against the settlement planning section of Clause 13.02-1S and *Planning Practice Note 37: Rural Residential Development*.

6.3.1 PRECINCT A

Site Description

The precinct is bounded by the Gippsland Plains Rail Trail to the east, Afflecks Road and Old Walhalla Road to the north and Hill Street and the extension of Hill Street to the south. The property fence line of 35 Old Walhalla Road serves at the western border of the precinct. It has tributaries of Rosedale Creek and Toongabbie Creek that pass through the precinct. Toongabbie-Cowwarr Road and Old Walhalla

Road both serve as access point to tourist destinations such as the historic town of Walhalla and to Cowwarr Weir; however both roads are not designated tourist routes. The precinct is located in a Bushfire Prone Area. It starts to slope upwards from the tip of the precinct. There is native vegetation along all of the property boundaries of 35 Old Walhalla Road. The township is to the south of the precinct.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

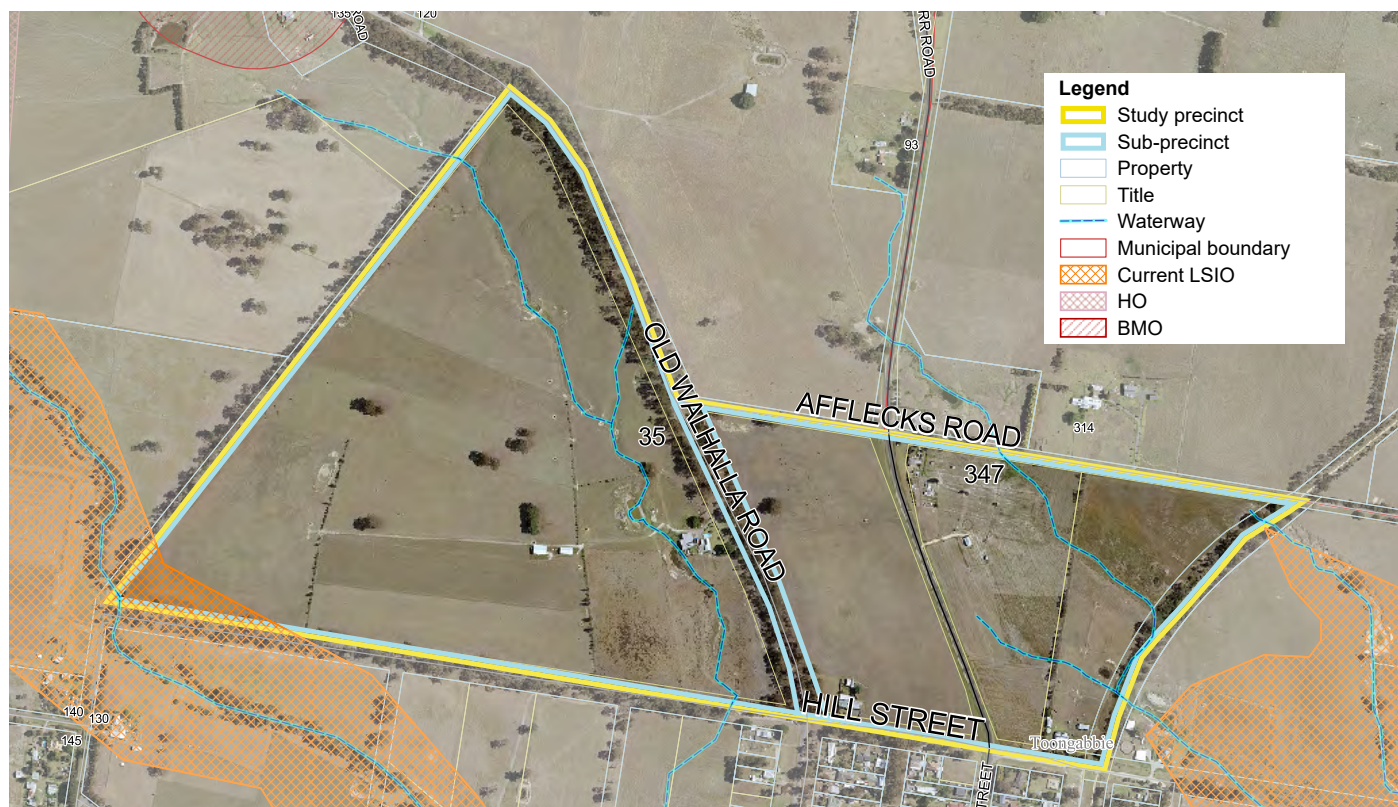
Number of Existing Lots: 4

Lot Size: From left to right - 43.40Ha, 9.84Ha, 7.26Ha, and 5.86Ha.

Proposed Zone: Rural Living Zone - Schedule 1

Lot yield: 22 lots

Figure BF20: Precinct A - Overlays



Summary of Issues

Precinct A is the closest precinct to the bushfire hazard with the northernmost tip being approximately 570m away from the edge of the forested area. As such, there is potential for a landscape fire run from the predominant north-westerly direction to affect the precinct, and for it to travel along the dense native vegetation along Old Walhalla Road.

Access and Egress

Afflecks Road provides a route in the east direction, while Traralgon-Maffra Road can be accessed via King Street or Victoria Street in a southerly direction. 35 Old Walhalla Road may have limited access due to the high quality vegetation along the roadside and the scattered tree cover along the other boundaries. Any potential lots at 1-3 Hill Street would need to orient towards Toongabbie-Cowwarr Road to avoid the native vegetation on Old Walhalla Road.

BAL:Low locations

The Bal:Low area is located approximately 1 Kilometre to the south of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Perimeter road around 35 Old Walhalla Road;
- Application of the Bushfire Management Overlay to the highest risk area at the top pf 35 Old Walhalla Road; and/or
- Application of Design and Development Overlay to ensure:
 - Building to a BAL-29 standard to mitigate th ember attack risk;

- Buffer zones from Rosedale Creek;
- Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;

A Development Plan Overlay is not recommended due to the small number of landowners, and the additional roads affecting one landowner only.

Agricultural Capability

The precinct is used for grazing and cropping, and has some rural residential development. There is a mixture of small rural residential lots and mixed use farms to the north of the precinct with the two dwellings sit across the road from 347 Afflecks Road. The township abuts the precinct to the south-east, while the south-west (Precinct H) and east (Precinct C) are highly fragmented and consist of rural residential type areas, these areas do not contribute to the agricultural capability.

Flooding Risks

The south-eastern corner of 35 Old Walhalla Road and portions of the eastern side of the precinct are affected by the flooding extent. If these lots were developed for rural living purposes, lots on the east side may not be able to support a septic system.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) could be triggered on all properties as cultural sensitivity areas are shown on all properties. The exception may be 23-25 Hill Street as due to the size of the land, it would only have the potential for an additional lot. A CHMP is triggered for 3 or more lots.

Figure BF21: Precinct A - Proposed flood overlays

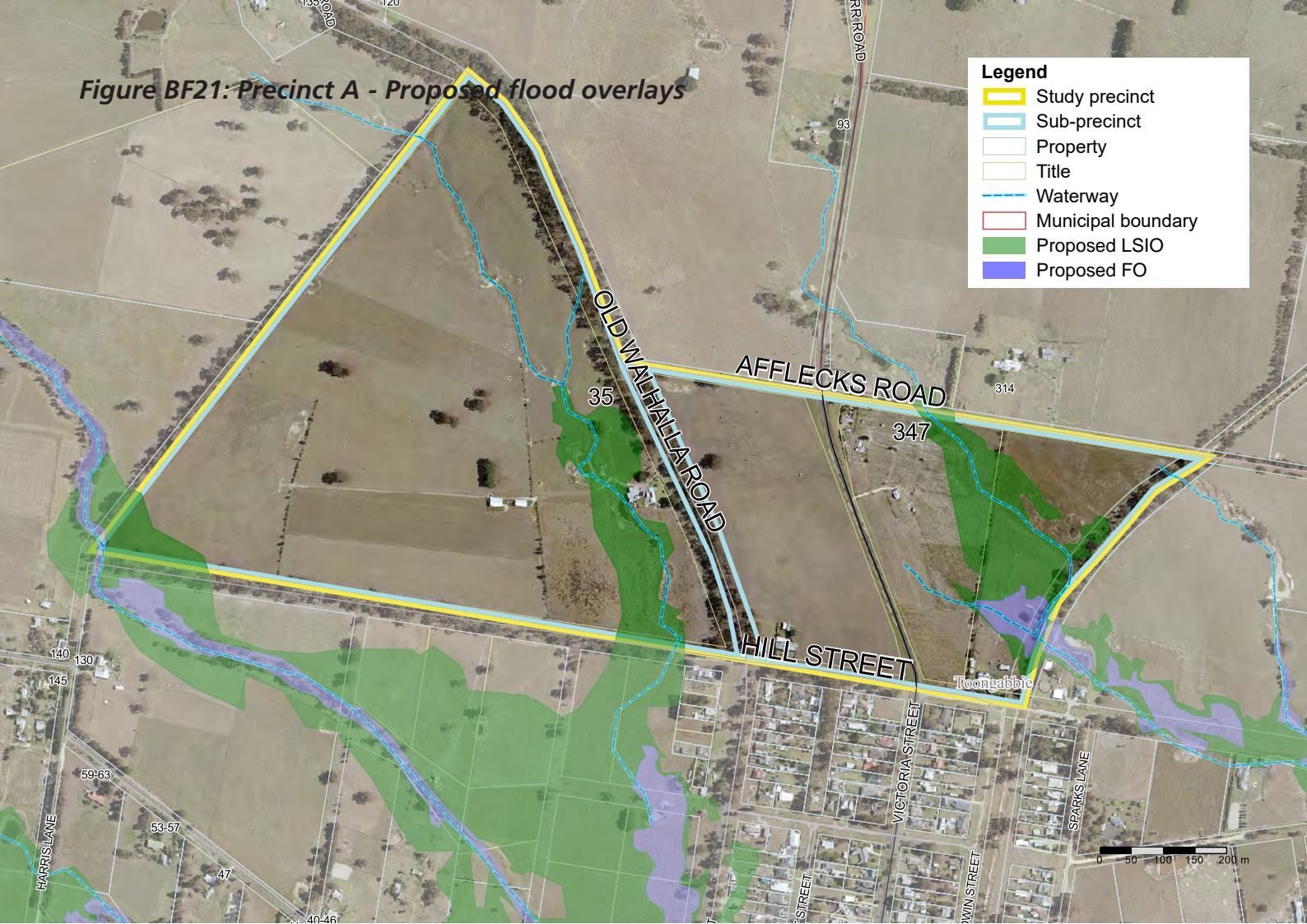
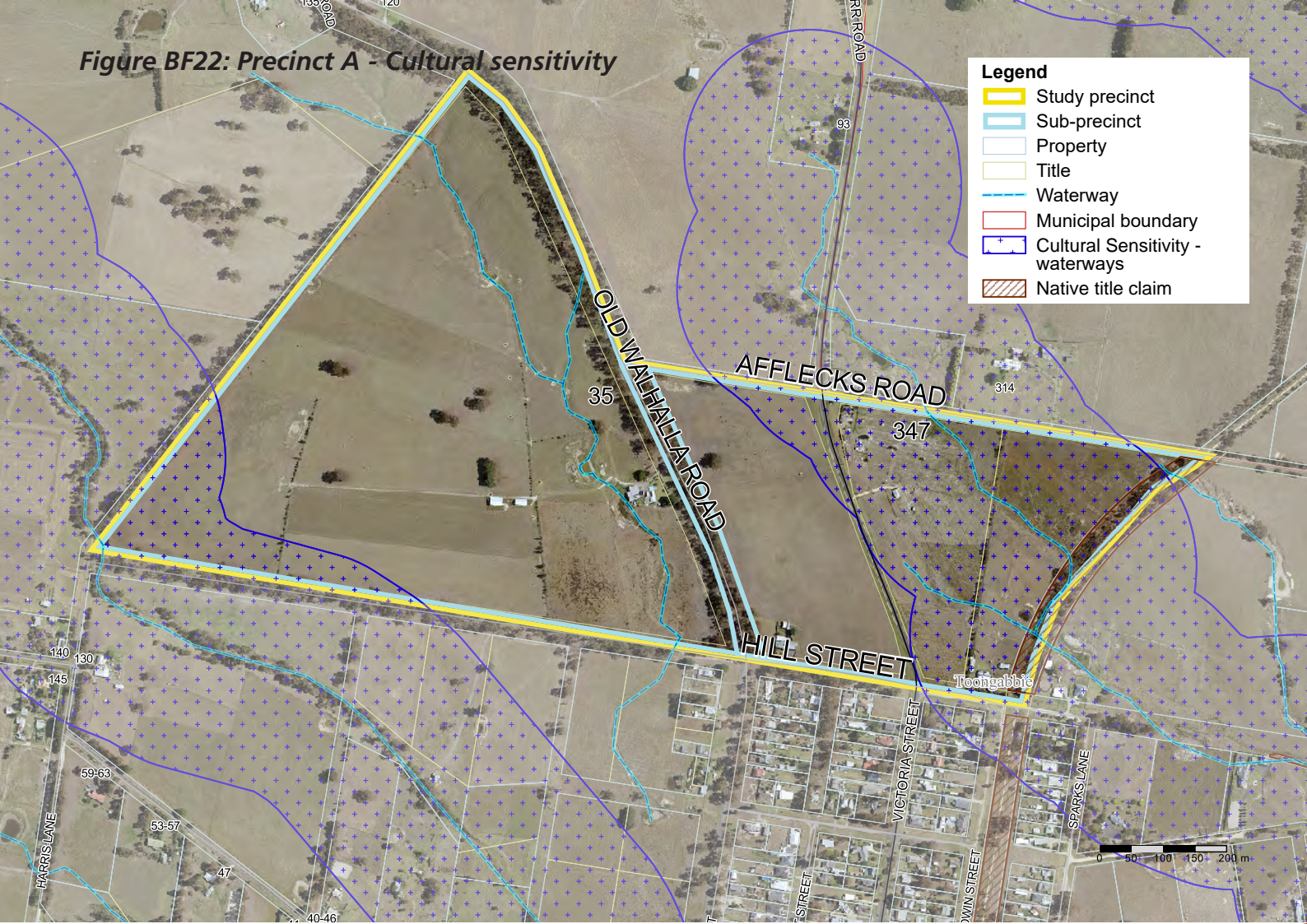


Figure BF22: Precinct A - Cultural sensitivity



Environmental Values

Precinct A is considered to have scattered tree cover along the southern section of Old Walhalla Road, the fence line of 35 Old Walhalla Road, Hill Street extension and the Gippsland Plains Rail Trail with patches of dense tree cover along the northern section of Old Walhalla Road, and medium tree cover along the upper tributary of Rosedale Creek on 23-25 Hill Street.

There is the Plains Grassy Woodland EVC in the scattered tree cover sections, Swampy scrub along the waterways and Box Ironbark Forest along the upper section of Old Walhalla Road.

Old Walhalla Road, the extension of Hill Street, the Gippsland Plains Rail Trail and the fence line of 35 Old Walhalla Road all have patches of endangered vegetation. This vegetation would impact on access points to properties and it would affect the siting of new buildings that would need to provide adequate separation distances from the vegetation.

Old Walhalla Road is shown as having a high roadside conservation value.

Servicing Capability

Electricity

No issues

Water

There are no water mains to the south of the North Area west of the Hill St and Old-Walhalla Rd intersection. It would require a significant upgrade.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* (DWMP) shows Precinct A as having a medium to high hazard. A high risk classification can mitigate the risk through design

standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

Access

No issues

Recommendation: No change, the bushfire risk and the possible impacts on biodiversity are considered to be too high to support rezoning.

Figure BF23: Precinct A - Native vegetation

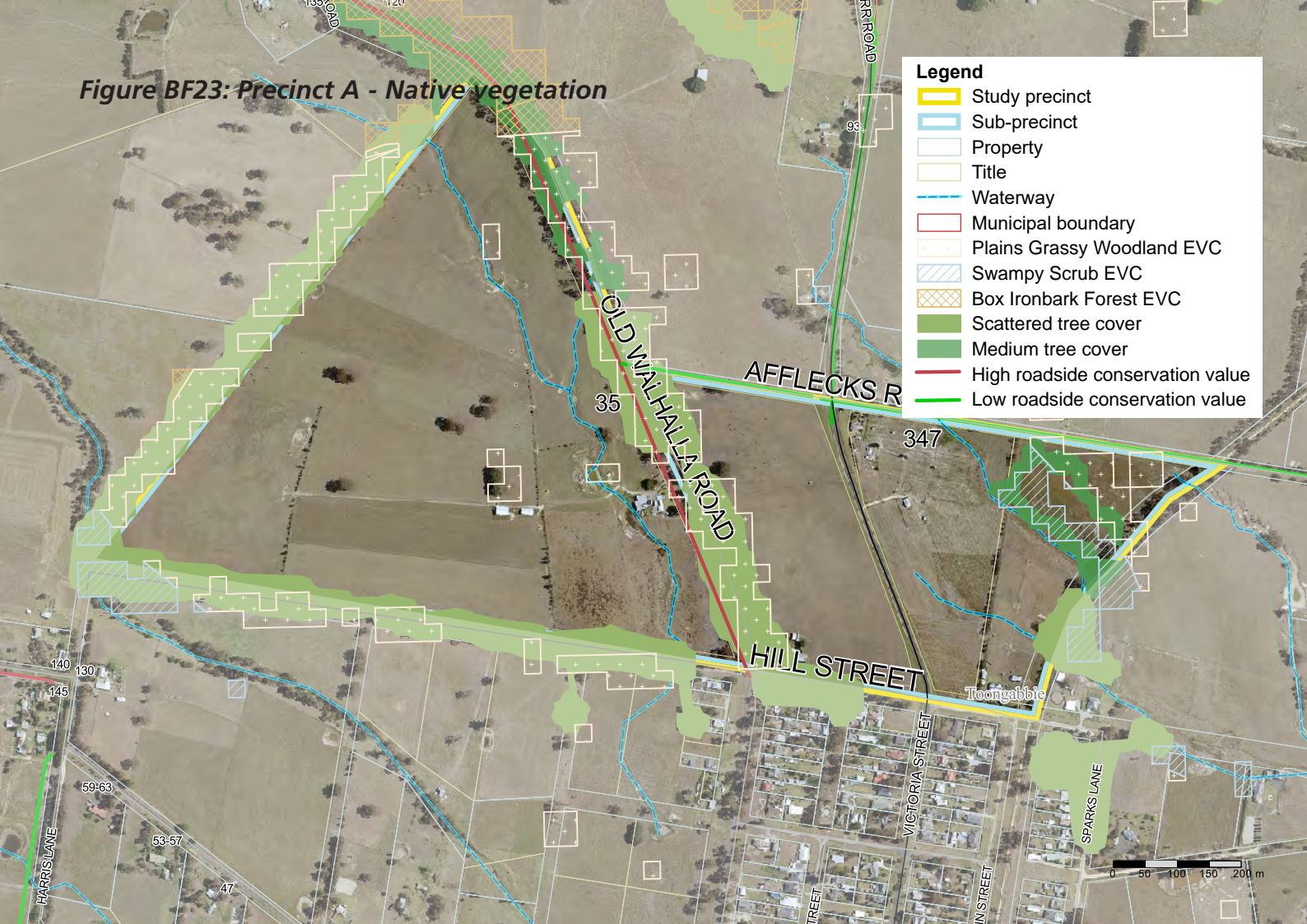
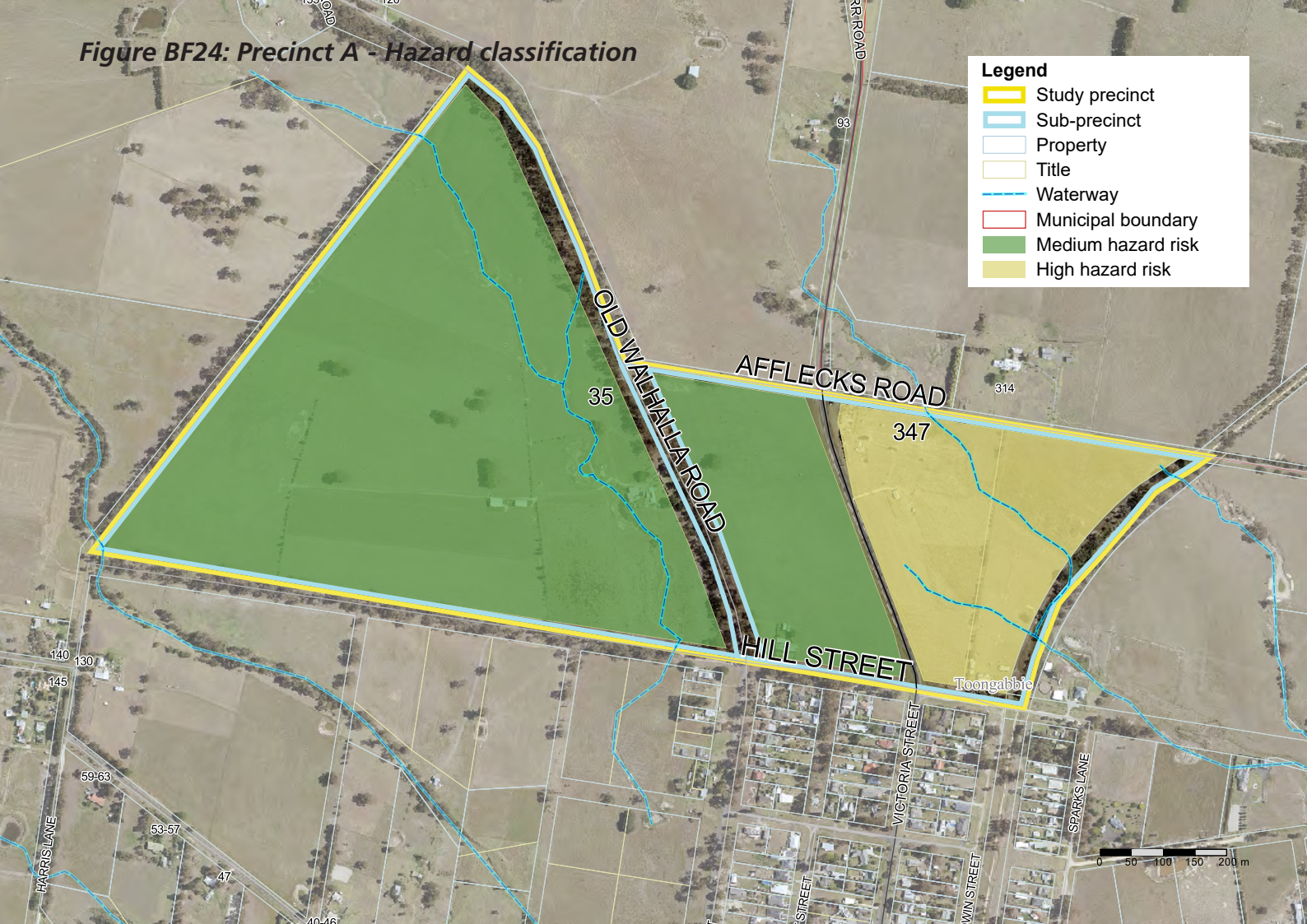


Figure BF24: Precinct A - Hazard classification



6.3.2 PRECINCT B

Site Description

The precinct is bounded by the Gippsland Plains Rail Trail and Sparks Lane to the west, Afflecks Road to the north, Traralgon-Maffra Road to the south, and Rosedale Creek that pass through the precinct. The precinct has potential for grassfires to run from the landscape fire run from the north-west, it could also potentially have grassfires start from falling ember attack. Localised fire threats from vegetation along the Gippsland Plains Rail Trail and Rosedale Creek are also possible. It is separated from the fire threat by a secondary fuel break of Toongabbie-Cowwarr Road and the township. This precinct does not have a perimeter road due to Rosedale Creek and the Gippsland Plains Rail Trail. This precinct overlaps with Precinct C as part of

Precinct C was considered for Low Density Residential as well as Rural Living.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 12

Lot Size: Ranges from 16.19Ha to 1.83Ha with an average lot size of 3.50Ha.

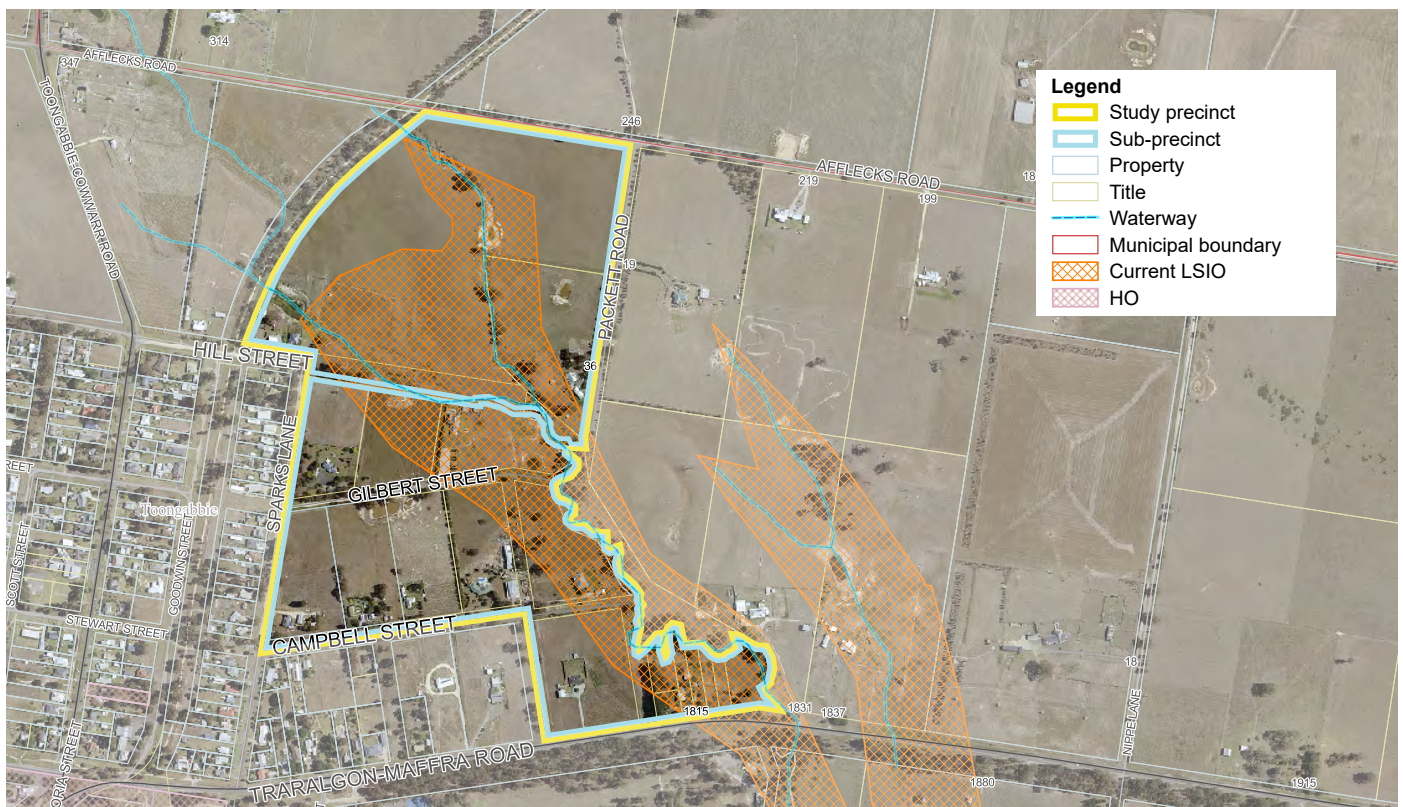
Proposed Zone: Low density Residential Zone

Lot yield: 84 lots

Summary of Issues

Precinct B is highly fragmented and used as a rural residential area, with only one lot in the precinct at 29 Hill Street being identified as used for grazing. All lots south of Hill Street between Sparks Lane and Rosedale Creek have been

Figure BF25: Precinct B - Overlays



developed and cannot be further subdivided. The precinct sits within a bushfire prone area. The properties are largely cleared of native vegetation with scattered trees. Rosedale Creek borders the precinct to the east. However, the properties can provide for adequate defensible space to maintain a Column A separation distance and should contribute to an improved interface with the grasslands as bushfire risk mitigation measures will be implemented into the Planning Scheme.

Access and Egress

Afflecks Road provides a route in the east direction, while Traralgon-Maffra Road can be accessed via Sparks Lane in a southerly direction. All east-west roads are no through roads within the precinct.

BAL:Low locations

The Bal:Low area is located at its shortest distance 900m to the west of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in closer proximity to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Low Density Residential Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Development Plan Overlay that includes:
 - Building to a BAL-29 standard to mitigate the ember attack risk;
 - Buffer zones from Rosedale Creek;
 - Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;

- Road network to allow effective access and egress.

This could potentially be a Design and Development Overlay if additional roads are not needed.

Agricultural Capability

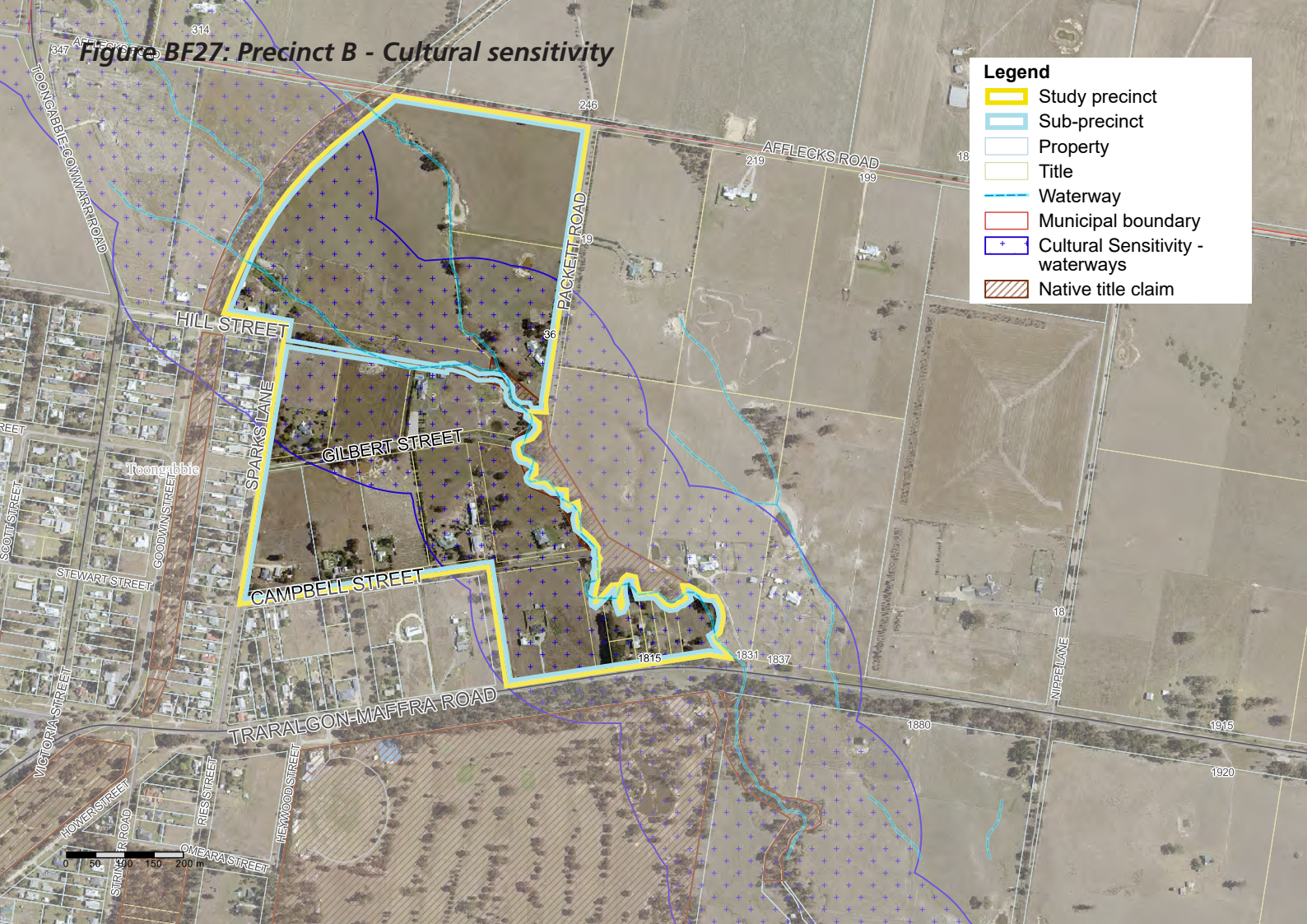
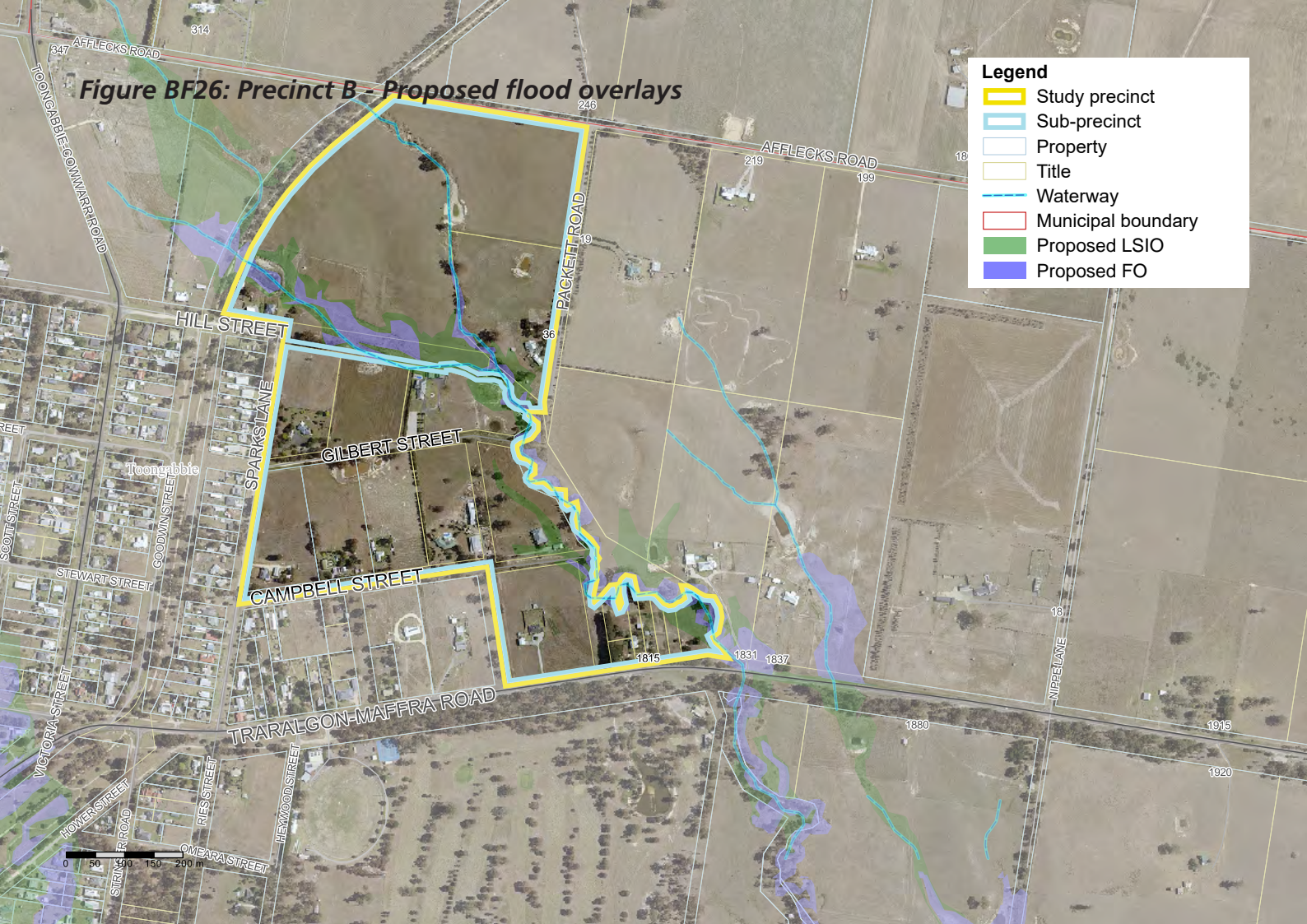
Precinct B adjoins the township to the west and the Toongabbie Recreation Reserve to the South. It has farmland to the north and rural residential development to the east. It is not anticipated to affect the agricultural capability of adjoining land.

Flooding Risks

The eastern precincts are largely unaffected by the flooding extent with it being contained outside of private property boundaries. The corner of the precinct north of Hill Street and east of the Gippsland Plains Rail Trail is partially affected by the flood extent. However, it is not expected to significantly affect subdivision or development opportunities.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would likely be triggered on all lots except for 18-34 Sparks Lane. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. The other lots that have cultural sensitivity on it are not identified as triggering a CHMP because they could not create 3 or more lots.



Environmental Values

Precinct C is considered to have scattered tree cover along the Rosedale Creek near Traralgon-Maffra Road, and along the Gippsland Plains Rail Trail between Hill Street and Afflecks Road.

There is the Plains Grassy Woodland EVC in the scattered tree cover sections, Swampy scrub along the waterways and tributaries. All identified tree cover is shown to be endangered.

Afflecks Road is identified as having low roadside conservation value.

Servicing Capability

Electricity

New transformers may be needed for lots in the middle of the precinct as they are at the end of low voltage cables.

Water

To service this area, would require a main extension from Afflecks Rd south to Traralgon-Maffra Rd and also west to Hill St.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct C as varying between a low to high hazard. A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment. Lots shown with no colour are connected to reticulated services.

Access

Any new lots fronting onto Traralgon-Maffra Road would need to be accessed via a service road.

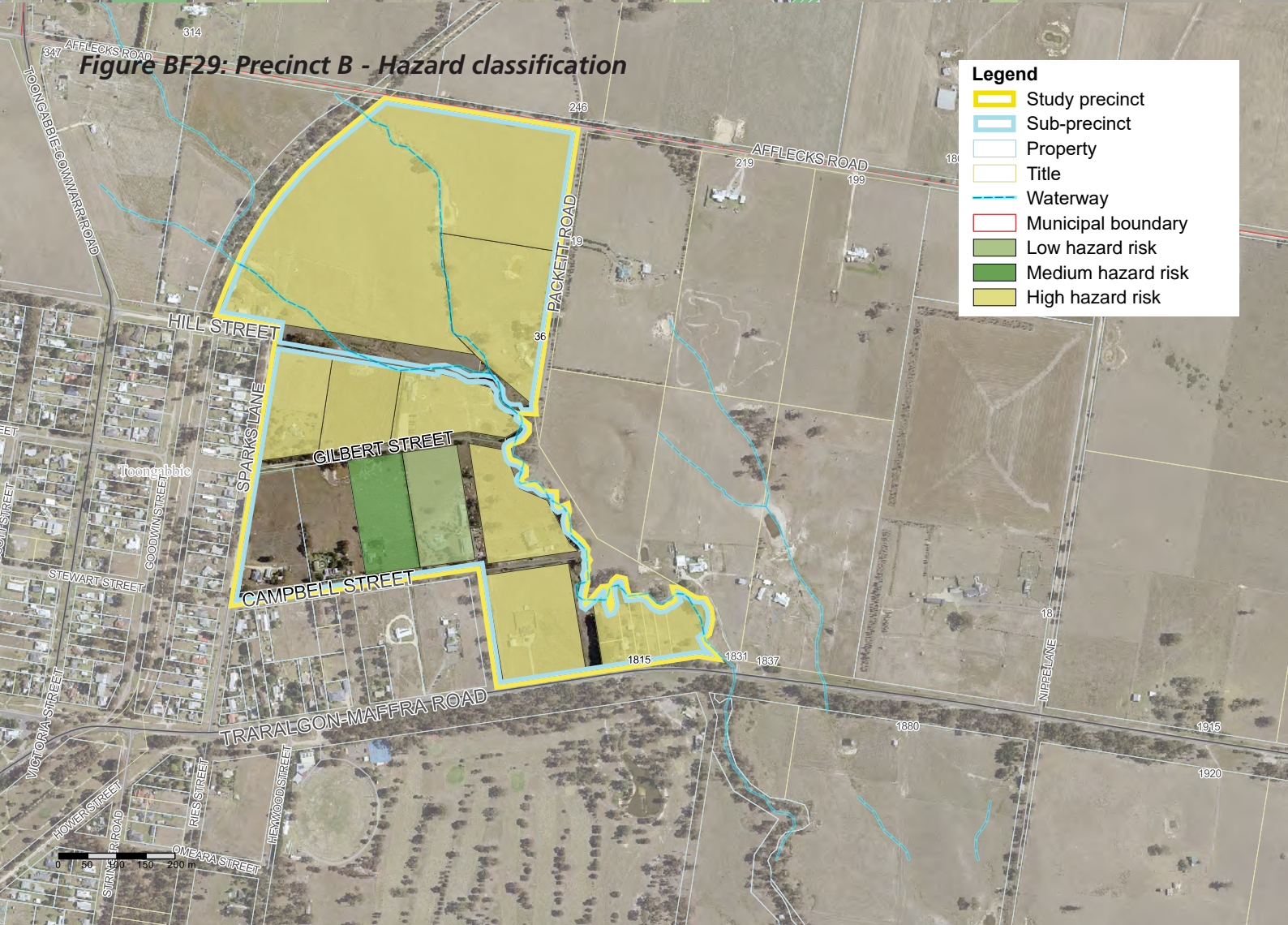
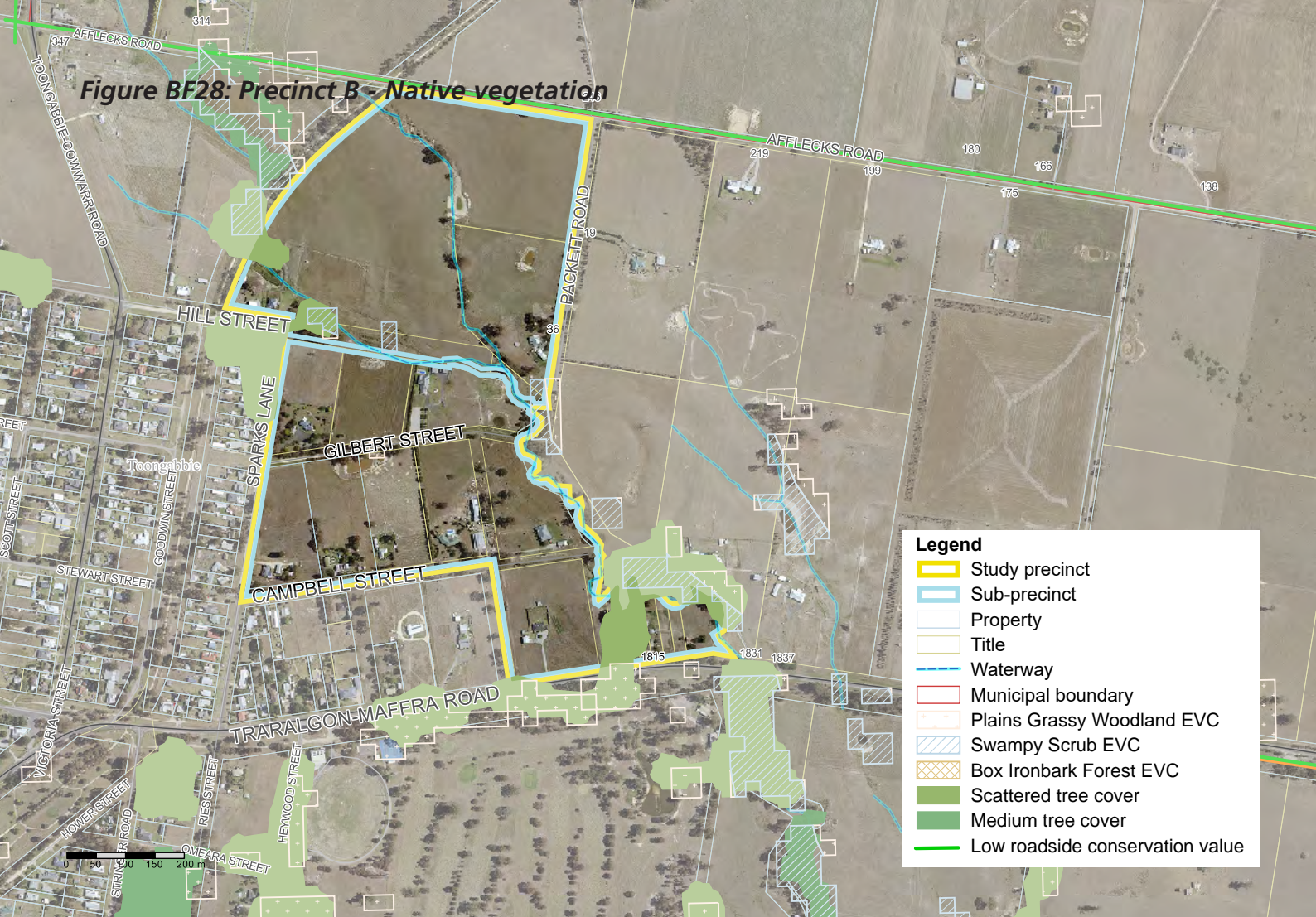
The Gippsland Plains Rail Trail and Rosedale Creek will be barriers to creating effective access and

egress, particularly for lots north of Hill Street.

Recommendation: Partial rezoning to Low Density Residential Zone. Lots north of Hill Street should not be included in the precinct.

Revised Lot Yield:

44 Lots



6.3.3 PRECINCT C

Site Description

The precinct is bounded by the Gippland Plains Rail Trail to the west, Afflecks Road to the north, Sparks Lane to the west, Traralgon-Maffra Road to the South and the property boundaries of 199 Afflecks Road and 1937 Traralgon-Maffra Road to the east. It has tributaries of Rosedale Creek that pass through the precinct. The precinct has potential for grassfires to run from the landscape fire run from the north-west, it could also potentially have grassfires start from falling ember attack. Localised fire threats from vegetation along the Gippsland Plains Rail Trail and Rosedale Creek are also possible. It is separated from the fire threat by a secondary fuel break of Toongabbie-Cowwarr Road.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 18

Lot Size: Ranges from 16.19Ha to 1.83Ha with an average lot size of 4.96Ha.

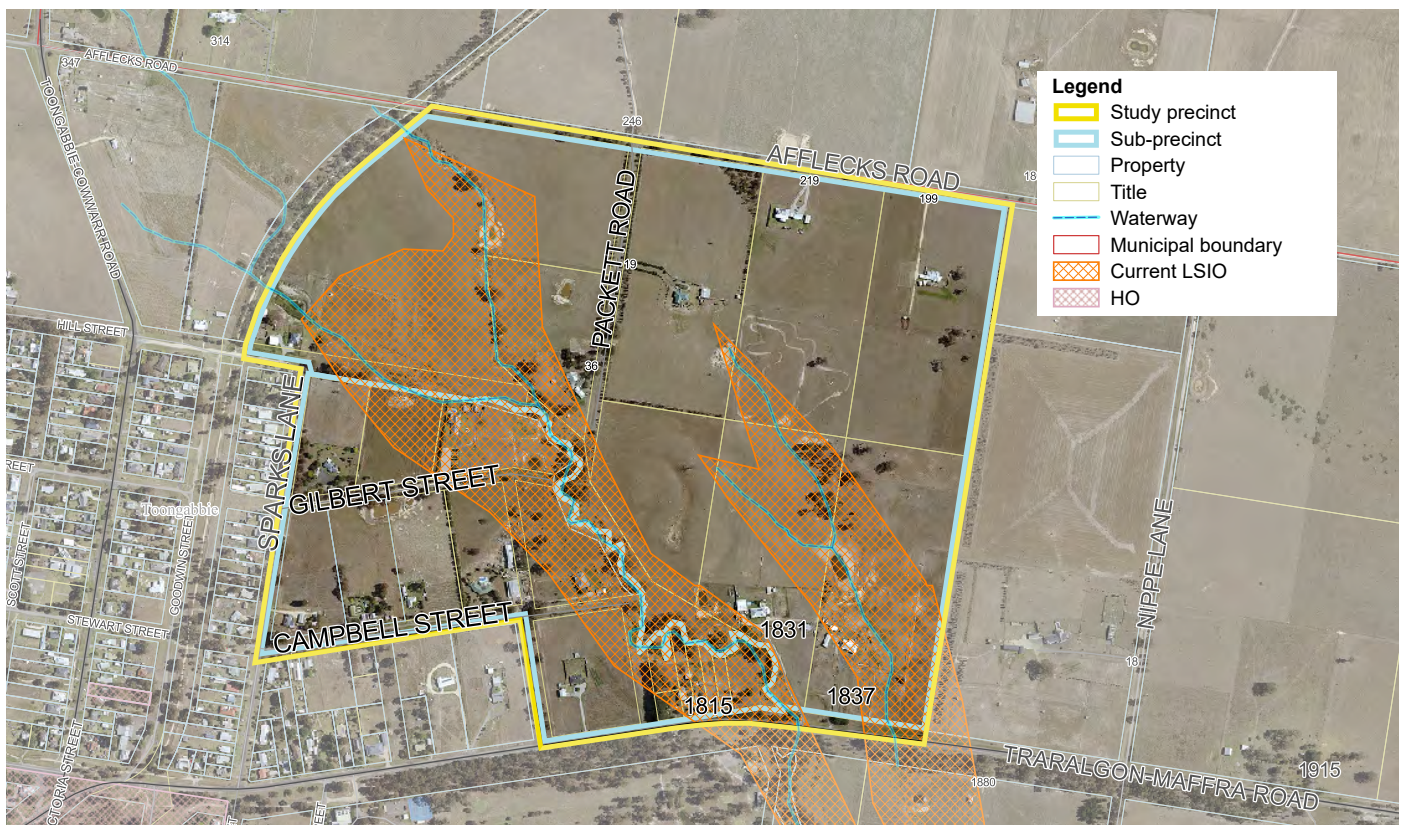
Proposed Zone: Rural Living Zone - Schedule 1

Lot yield: 22 lots

Summary of Issues

Precinct C is highly fragmented and used as a rural residential area, with only one lot in the precinct at 29 Hill Street being identified as used for grazing. All lots south of Hill Street between Sparks Lane and Rosedale Creek have been developed and cannot be further subdivided. The precinct sits within a bushfire prone area.

Figure BF30: Precinct C - Overlays



The properties are largely cleared of native vegetation with scattered trees. Rosedale Creek runs through the middle of the precinct from the northwest corner to the south of the precinct. However, the properties can provide for adequate defensible space to maintain a Column A separation distance and should contribute to an improved interface with the grasslands as bushfire risk mitigation measures will be implemented into the Planning Scheme.

Access and Egress

Aflecks Road provides a route in the east direction, while Traralgon-Maffra Road can be accessed via Sparks Lane or Nippe Lane in a southerly direction. A connecting road from the bottom of Packett Road to Nippe lane will be required for access to lots and an additional egress point.

BAL:Low locations

The Bal:Low area is located between 900m and 2.8 kilometres to the west of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in closer proximity to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Development Plan Overlay that includes:
 - Building to a BAL-29 standard to mitigate the ember attack risk;
 - Buffer zones from Rosedale Creek;
 - Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;

- Road network to allow effective access and egress.

Agricultural Capability

Precinct C adjoins the township to the west and the Toongabbie Recreation Reserve to the South. It has farmland to the north and rural residential development to the east. It is not anticipated to affect the agricultural capability of adjoining land.

Flooding Risks

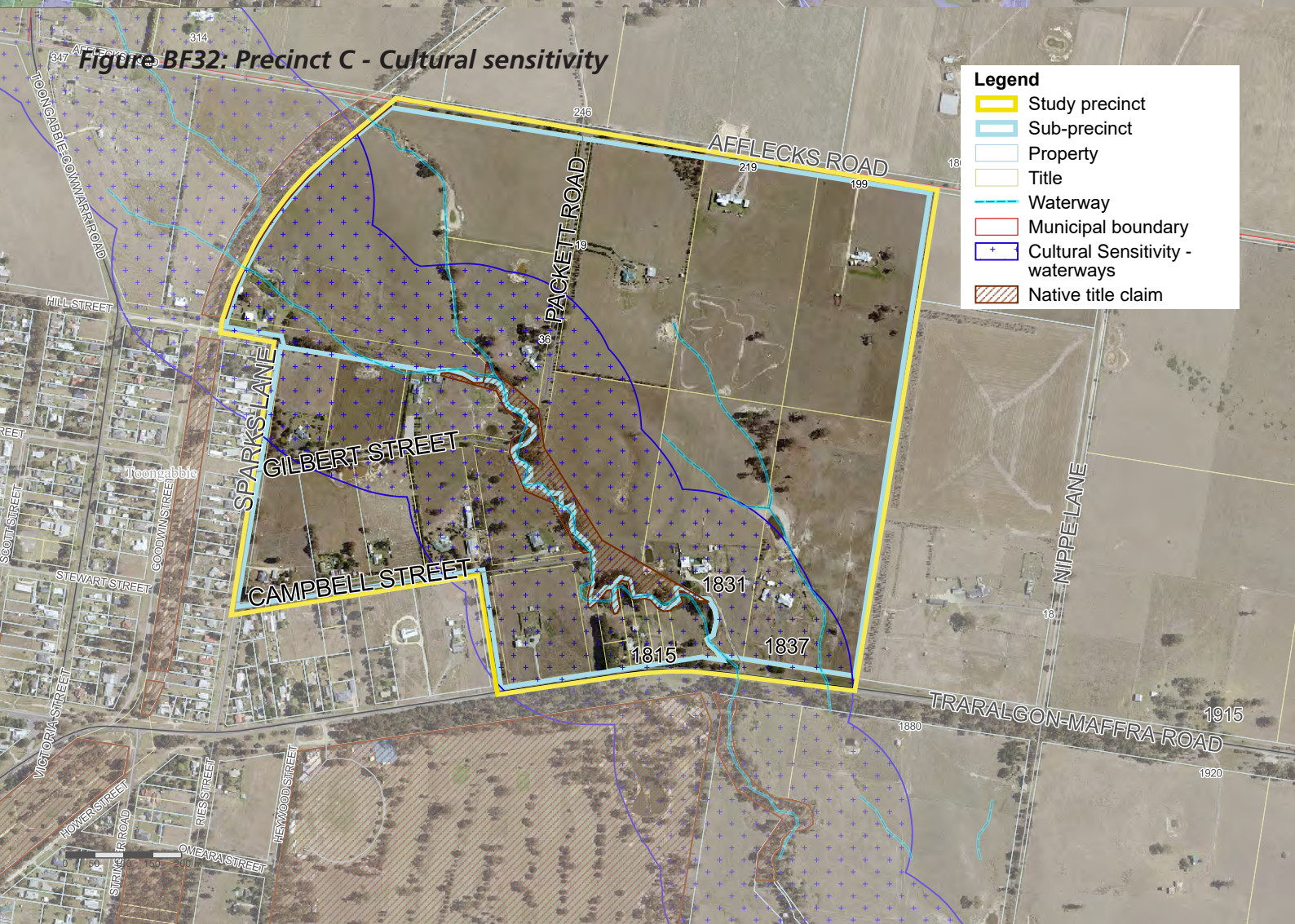
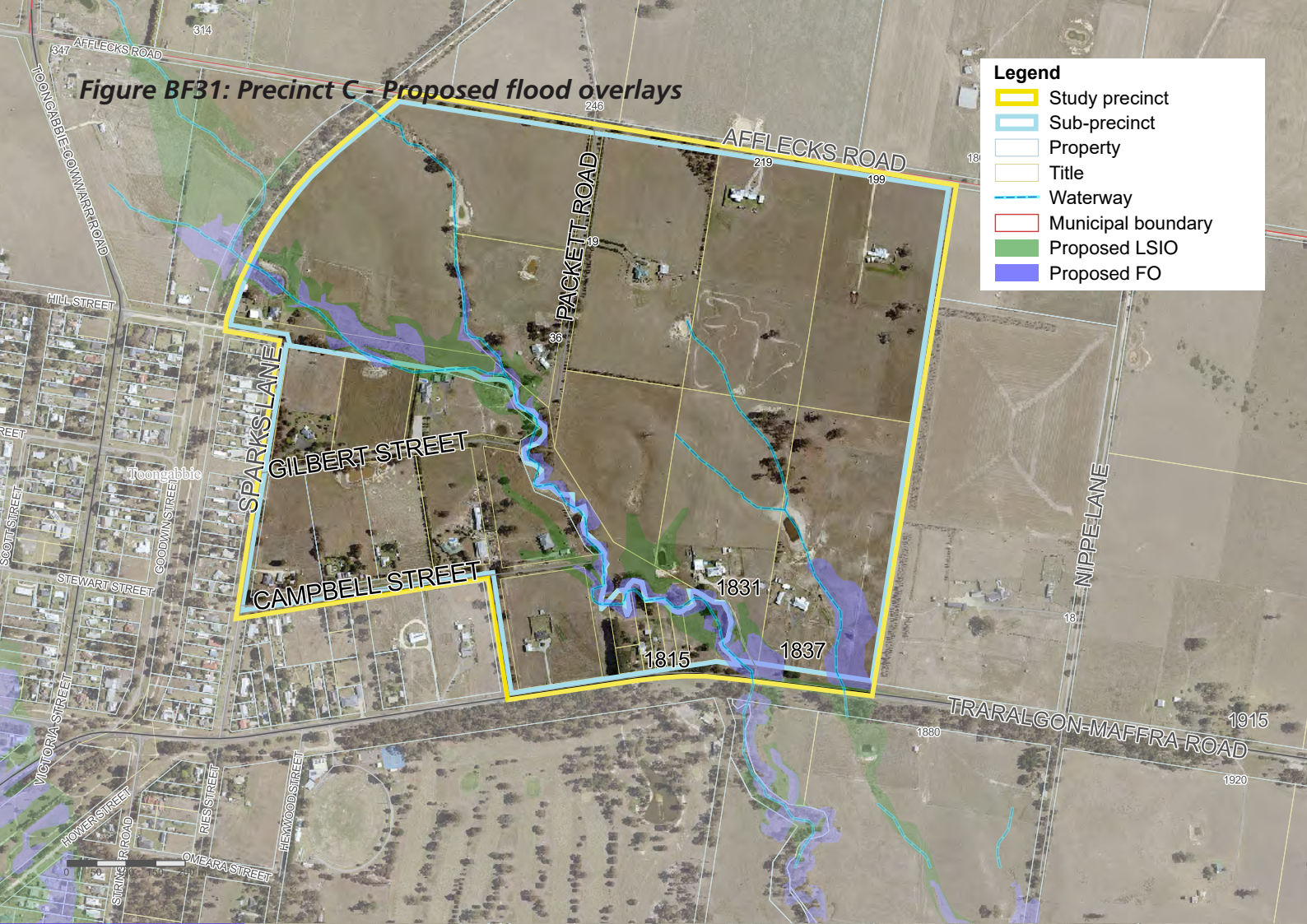
The eastern precincts are largely unaffected by the flooding extent with it being contained outside of private property boundaries. The corner of the precinct north of Hill Street and east of the Gippsland Plains Rail Trail is partially affected by the flood extent. The two properties directly east of Rosedale Creek along Traralgon-Maffra Road are partially affected by the flooding extent, however, it is not expected to significantly affect subdivision or development opportunities.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would likely be triggered on:

- 1831 and 1837 Traralgon-Maffra Road;
- 19 Packett Road; and
- 29 Hill Street.

A CHMP will identify any places or artefacts that have aboriginal cultural heritage. The other lots that have cultural sensitivity on it are not identified as triggering a CHMP because they could not create 3 or more lots.



Environmental Values

Precinct C is considered to have scattered tree cover along the Rosedale Creek near Traralgon-Maffra Road, and along the Gippsland Plains Rail Trail between Hill Street and Afflecks Road.

There is the Plains Grassy Woodland EVC in the scattered tree cover sections, Swampy scrub along the waterways and tributaries. All identified tree cover is shown to be endangered.

Afflecks Road is identified as having low roadside conservation value.

Servicing Capability

Electricity

New transformers may be needed for lots in the middle of the precinct as they are at the end of low voltage cables.

Water

To service this area, would require a main extension from Afflecks Rd south to Traralgon-Maffra Rd and also west to Hill St.

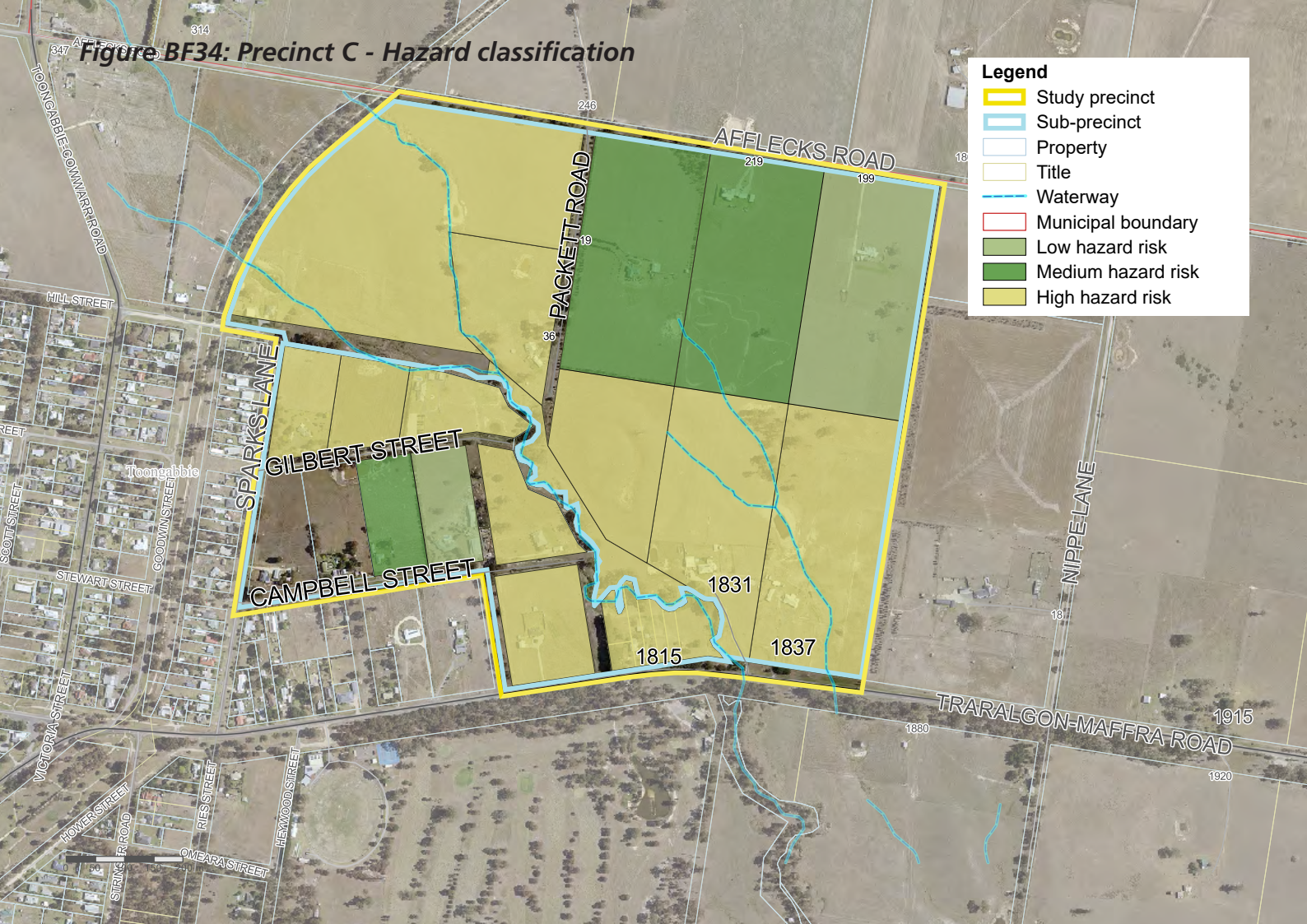
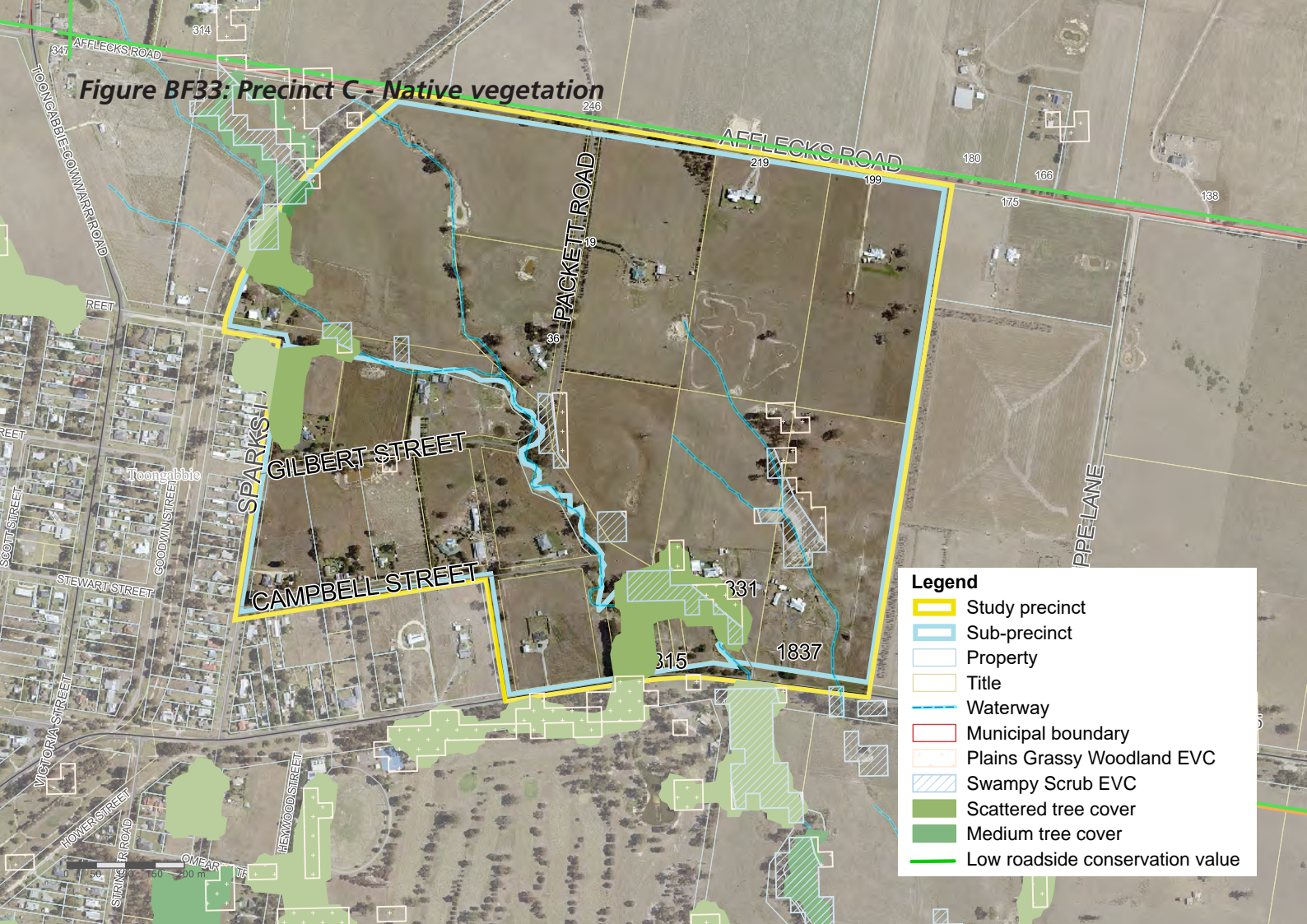
Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct C as varying between a low to high hazard. A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

Access

Any new lots fronting onto Traralgon-Maffra Road would need to be accessed via a service road.

Recommendation: Partial rezoning to Rural Living Zone - Schedule 1. Lots south of Hill Street between Sparks Lane and Rosedale Creek should transition to a Low Density Residential Zone in the long term as a growth area for the township. The potential lot yield does not change with a partial rezoning.



6.3.4 PRECINCT D

Site Description

The precinct is bounded by Afflecks Road to the north, and Traralgon-Maffra Road to the South and west, and the property boundaries of 175 Afflecks Road and 18 Nippe Lane to the west. It has a tributary of Fells Creek that passes through 1915 Traralgon-Maffra Road. The precinct is surrounded by grassland and located to the east of the township away from the bushfire hazard. Access and egress is effective with Traralgon-Maffra Road and Afflecks Road acting as a perimeter road to the north, east and south. This would limit the spread of any bushfire or grassfire run into the precinct.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 3

Lot Size: Properties are 21.13Ha, 6.04Ha and 111.10Ha. The 111.10 Hectare property has 6 separate titles.

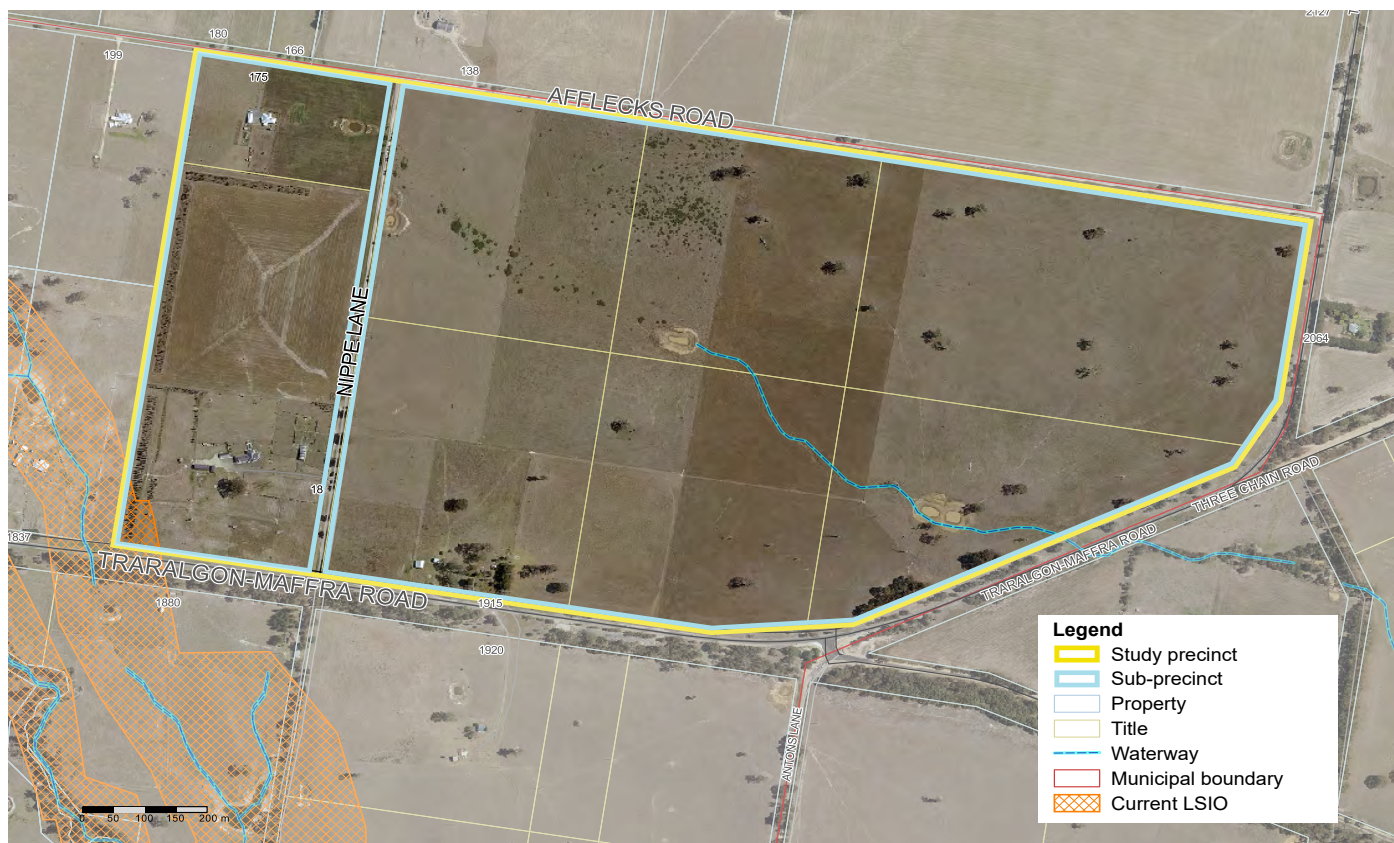
Proposed Zone: Rural Living Zone - Schedule 2

Lot yield: 27 lots

Summary of Issues

The precinct is in a Bushfire Prone Area and is most at risk from a grassfire run from the north-west and spot fires starting from ember attack. However, as the land is largely cleared, siting can

Figure BF35: Precinct D - Overlays



ensure adequate separation distances.

Access and Egress

Afflecks Road provides a route in the east direction, while Traralgon-Maffra Road can be accessed via Nippe Lane in a southerly direction. A connecting road through the middle of 1915 Traralgon-Maffra Road would be required to provide adequate access and egress.

BAL:Low locations

The Bal:Low area is located 2.8 kilometres to the west of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in closer proximity to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Development Plan Overlay that includes:
 - Building to a BAL-29 standard to mitigate the ember attack risk;
 - Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;
 - Road network to allow effective access and egress.

Agricultural Capability

Precinct D is largely used for grazing and cropping with one rural residential property. It adjoins the rural residential properties to the west, farmland to the south, east and north. There are a number of dwellings proliferated along Afflecks Road in nearby proximity. It is not anticipated that any further rural development would impact on the agricultural capability of the

surrounding land.

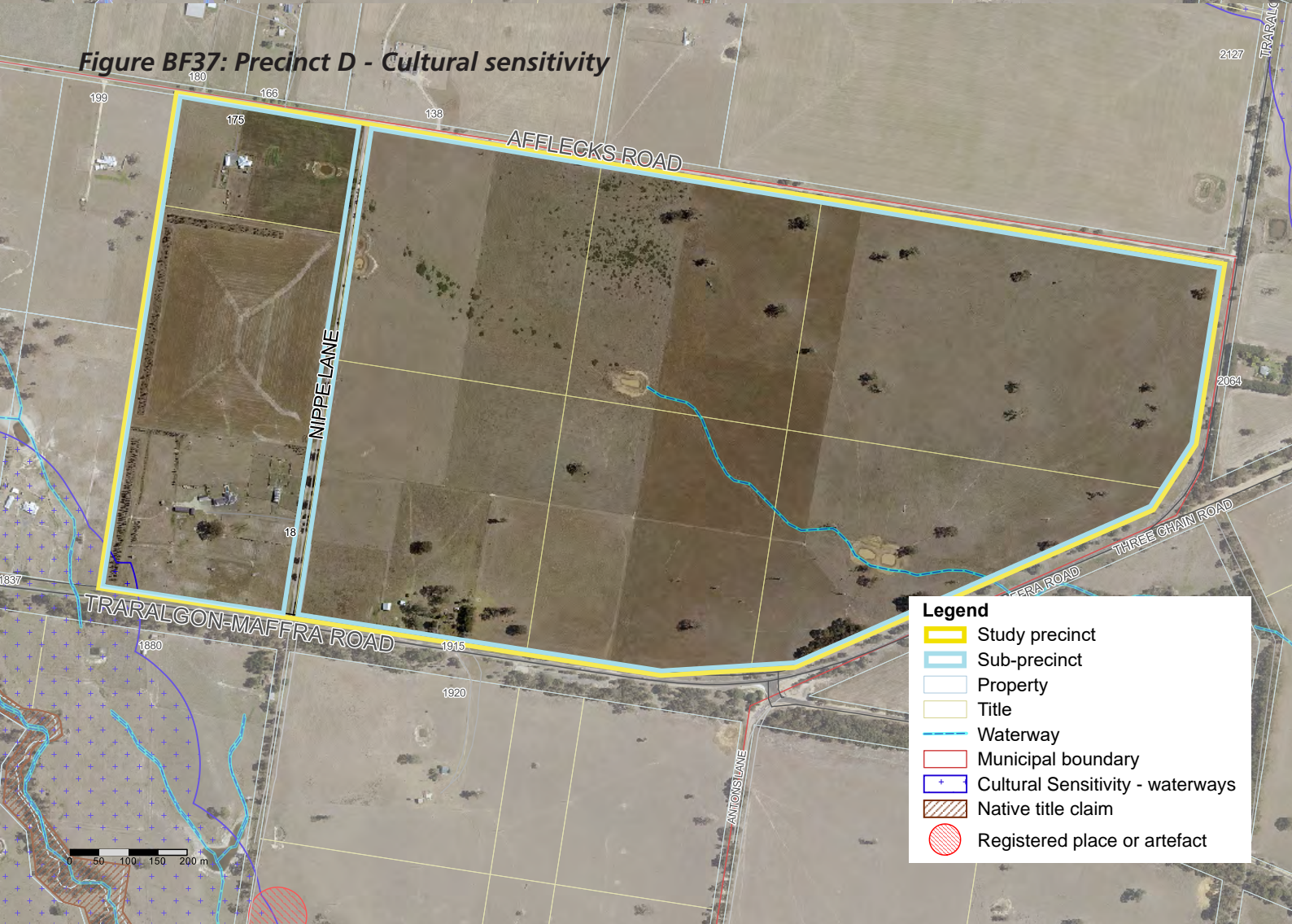
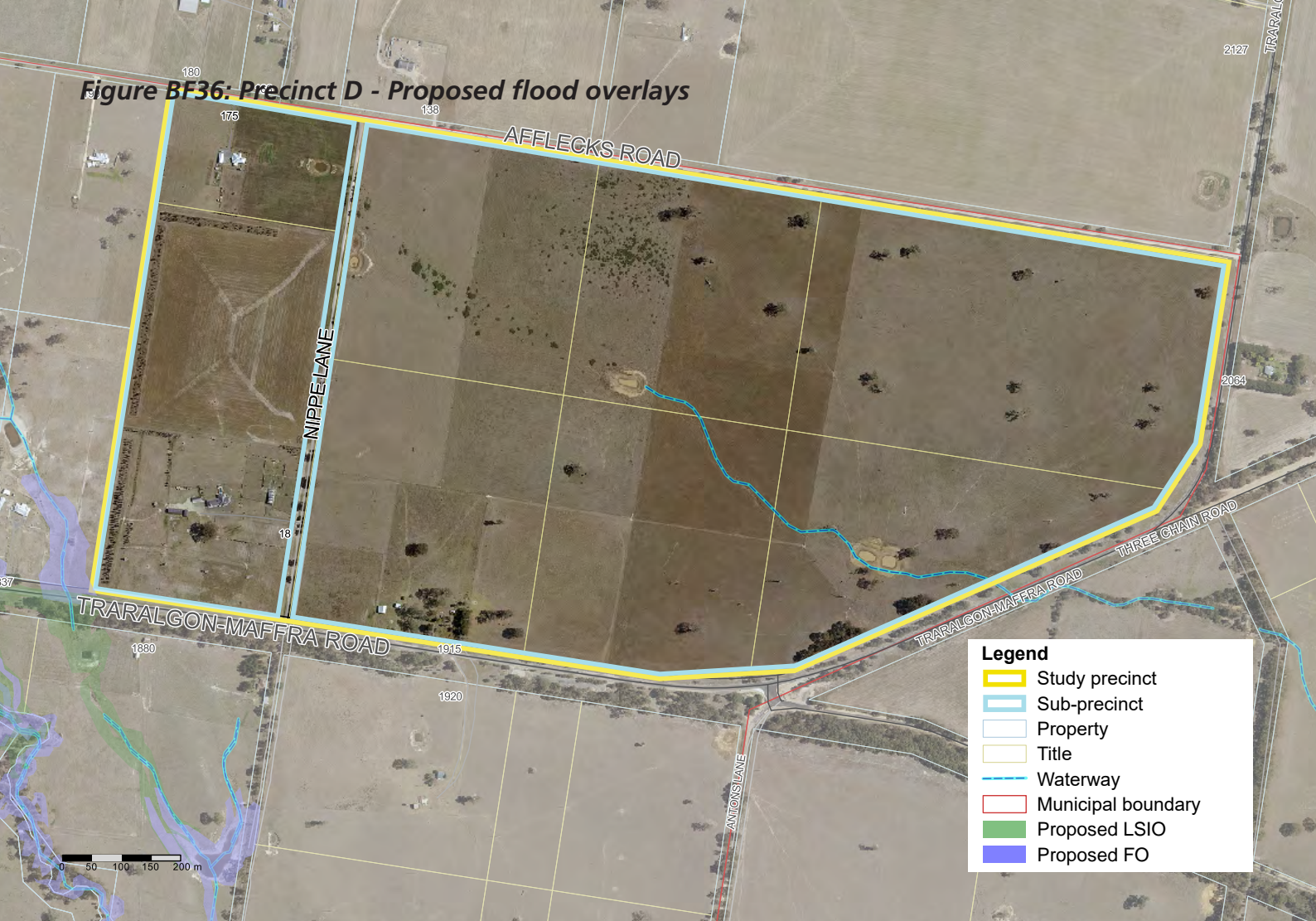
Flooding Risks

There are no identified flood risks in this precinct.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would be triggered 18 Nippe Lane. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. A CHMP is triggered for 3 or more lots.





Environmental Values

Precinct D is considered to have no tree cover. There are isolated patches of Plains Grassy Woodland, likely to be the isolated trees on the property at 1915 Traralgon-Maffra Road and there is some swamp scrub identified along the Fells Creek tributary. All identified tree cover is shown to be endangered.

Afflecks Road is identified as having low roadside conservation value. The precinct side of Traralgon-Maffra Road is also shown as having a low roadside conservation value.

Servicing Capability

Electricity

New transformers may be needed for lots in the middle of the precinct as they are at the end of low voltage cables.

Water

To service this area, would require a main extension from Afflecks Rd south to Traralgon-Maffra Rd and also west to Hill St.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct D as having a medium risk.

Access

Any new lots fronting onto Traralgon-Maffra Road would need to be accessed via a service road. VicRoads does not support additional road intersections on Traralgon-Maffra road.

VicRoads have also stated that they would prefer new growth fronts to be north of Traralgon-Maffra Road.

Recommendation: Rezoning to Rural Living Zone - Schedule 1. Rural Living Zone - Schedule 2 was

originally considered for this precinct, however, due to the land constraints as identified in Figure BG2 on page 10 and the lack of available land supply across the municipality, Rural Living Zone - Schedule 1 is considered a better option. Further details on rural living land supply can be found in the draft *Bushfire Assessment and Rural Rezoning Strategy 2020*.

Revised Proposed Zone:

Rural Living Zone - Schedule 1.

Revised Lot Yield:

53 Lots

Figure BF38: Precinct D - Native vegetation

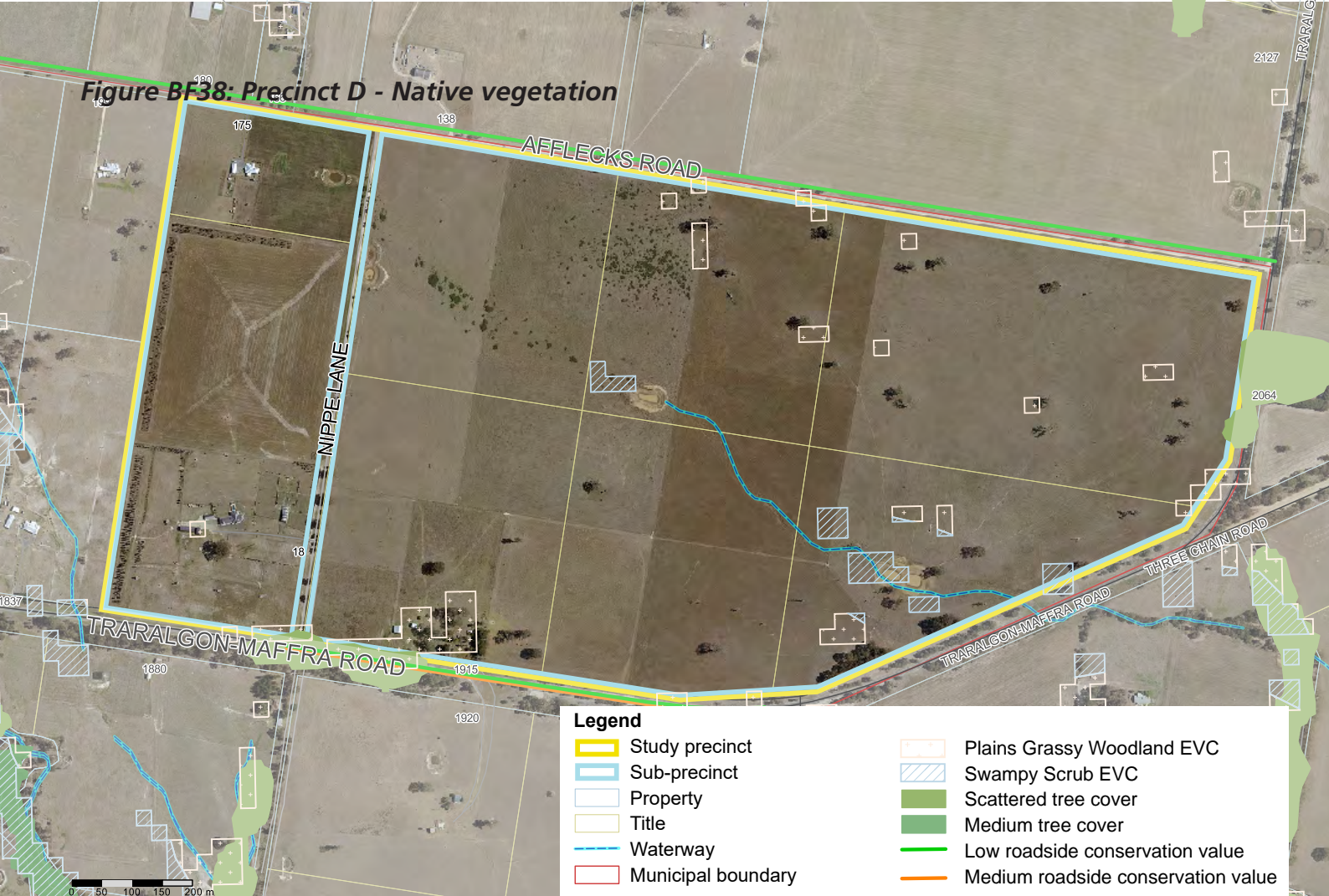


Figure BF39: Precinct D - Hazard classification



6.3.5 PRECINCT E

Site Description

The precinct is bounded by Nippe Lane south and Rosedale Creek to the west, Traralgon-Maffra Road to the north, Antons Lane to the east, Guyatts Road East to the South. Rosedale Creek passes through the precinct. Precinct E is surrounded by grassland and is located east of the township. It is separated from the bushfire hazard by Traralgon-Maffra Road which is a primary strategic fuel break to the west and the north of the precinct.

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 3 (Only partially includes 1 lot at 1880 Traralgon-Maffra Road as Rosedale Creek acts as a natural precinct border).

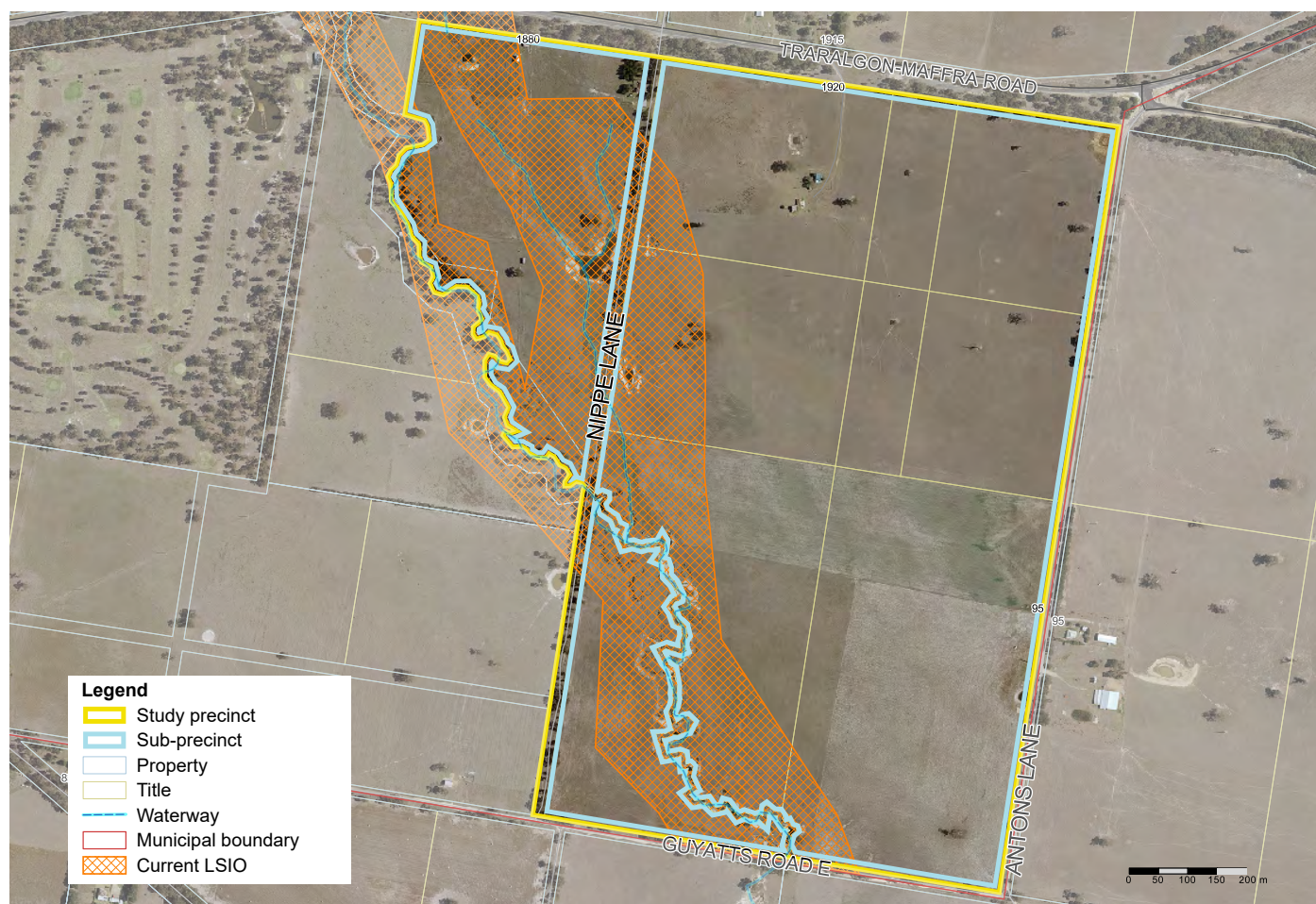
Lot Size: 51.23Ha, 53.48Ha and approximately 21.8 Ha.

Proposed Zone: Rural Living Zone - Schedule 2

Lot yield: 26 lots

Zone: Farming Zone - Schedule 1

Figure BF40: Precinct E - Overlays



Summary of Issues

The precinct sits in a Bushfire Prone area and is the precinct that is furthest away from the bushfire hazard. The biggest risk to the precinct is from grassfire runs from the south-west and from ember attack. The land is largely cleared, as such any further development opportunities can meet separation distances that maintain a radiant heat flux of less than 12.5 Kilowatts/square metres.

Access and Egress

Trarakgon-Maffra Road provides a route in the east and south-westerly directions and Toongabbie-Sale Road in an easterly direction; both can be accessed travelling north on Nippe Lane and Antons Lane, while River Road can be accessed via Guyatts Road in a westerly direction. There would likely need to be a further east-west connection between Nippe Lane and Antons Lane.

BAL:Low locations

The Bal:Low area is located approximately 1.5Km to the north-west of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in closer proximity to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Development Plan Overlay that includes:
 - Building to a BAL-29 standard to mitigate the ember attack risk;
 - A buffer zone between Rosedale Creek and any buildings;
 - Building envelopes to effectively site dwellings so that they can meet Column

A of Clause 53.02;

- Road network to allow effective access and egress.

Agricultural Capability

Precinct E is largely used for grazing and cropping. It is surrounded by farmland. This area is currently being used for farmland, while it has potential to become fragmented due to the number of separate titles in the precinct. It should continue to operate as farmland in the immediate term and be retained for future rural living opportunities while it remains productive farmland.

Flooding Risks

The identified flood risks for precinct E are largely confined to within the 30m buffer around waterways and is not anticipated to affect the development potential.

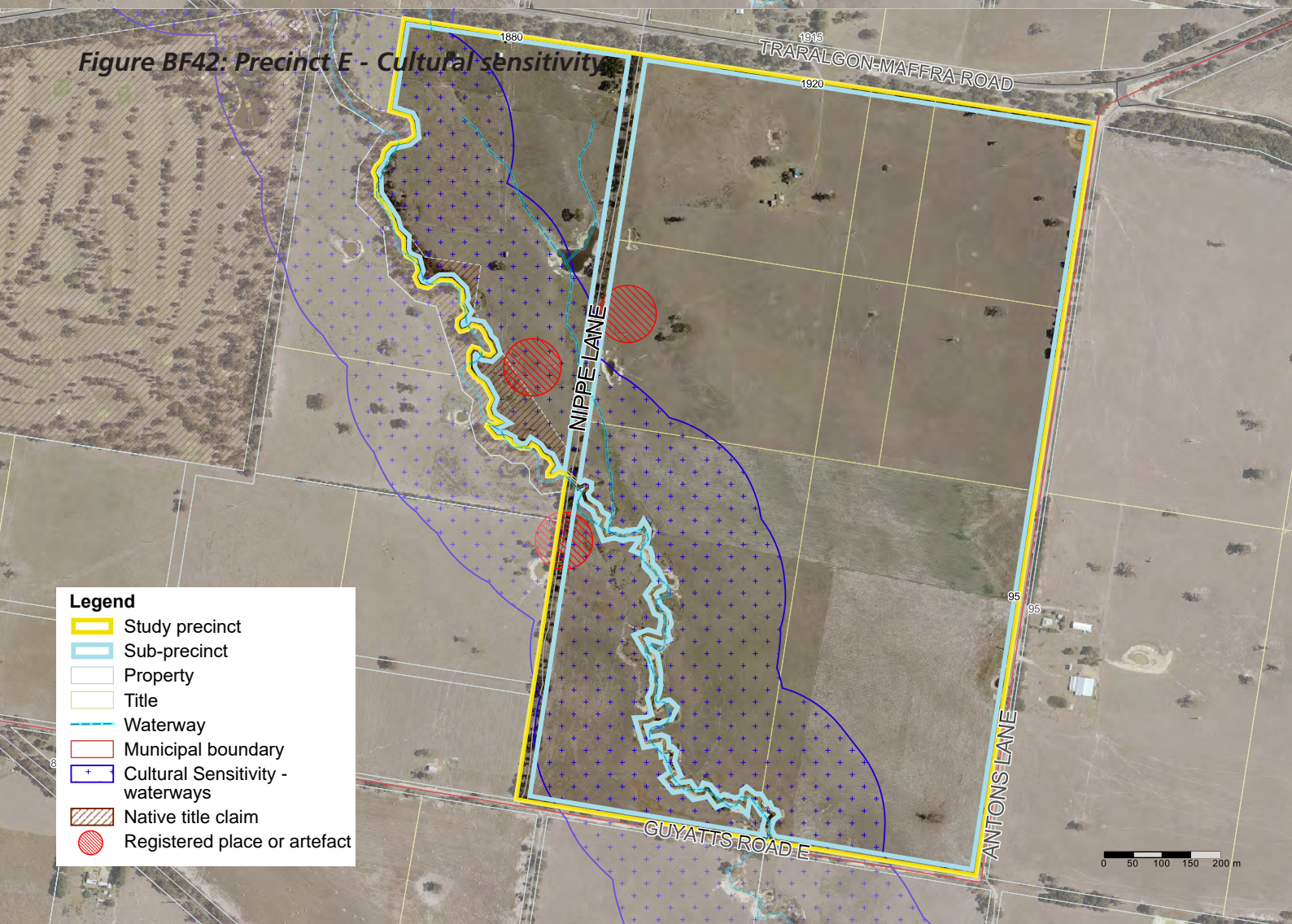
Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would be triggered on all properties. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. A CHMP is triggered for 3 or more lots. Precinct E has registered artefacts or places and it is likely that further artefacts or places could be identified in this precinct. It is noted that details the registered places or artefacts are not publically available.

Figure BF41: Precinct E - Proposed flood overlays



Figure BF42: Precinct E - Cultural sensitivity



Environmental Values

Precinct E is largely cleared of vegetation with scattered individual trees and vegetation along the fenceline of 1880 Traralgon-Maffra Road, and Rosedale Creek. Subdivision layout and siting of dwellings can avoid the removal of the native vegetation in accordance with the first principle of Clause 52.17.

Precinct E has some scattered tree cover along Nippe Lane South, on Traralgon-Maffra Road, and along Rosedale Creek at the junction of Traralgon-Maffra Road. It has some medium tree cover along Rosedale Creek.

There is some Plains Grassy Woodland identified along Nippe Lane South and Swamp Scrub identified along Rosedale Creek. An inspection of Rosedale Creek at 1880 Traralgon-Maffra Road was carried out in January 2019 and found the habitat to be largely degraded and that is showed no evidence of Swamp Scrub. All identified tree cover is shown as endangered.

Traralgon-Maffra Road on is shown as having a medium roadside conservation value on the precinct side.

Antons Lane and Guyatts Road East are all identified as having a low roadside conservation value. Nippe Lane is not identified as having a roadside conservation value.

Servicing Capability

Electricity

SP Ausnet has no issues with servicing this precinct. There is a large electricity easement that passes through the precinct and consideration will need to be given as to how subdivision is managed around this.

Water

The mains along Traralgon-Maffra Road and Hendersons Road do not have capacity to service these areas and would require a considerable upgrade.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct E as having a medium to high risk.

A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

Access

Any new lots fronting onto Traralgon-Maffra Road would need to be accessed via a service road. VicRoads does not support additional road intersections on Traralgon-Maffra road.

VicRoads have also stated that they would prefer new growth fronts to be north of Traralgon-Maffra Road.

Recommendation: Retain as Farming Zone - Schedule 1 to rezone to Rural Living Zone - Schedule 1 in the long-term. Rural Living Zone - Schedule 2 was originally considered for this precinct, however, due to the land constraints as identified in Figure BG2 on page 10 and the lack of available land supply across the municipality, Rural Living Zone - Schedule 1 is considered a better option. Further details on rural living land supply can be found in the draft *Bushfire Assessment and Rural Rezoning Strategy 2020*.

Revised Proposed Zone:

Rural Living Zone - Schedule 1.

Revised Lot Yield: 48 Lots

Figure BF43: Precinct E - Native vegetation

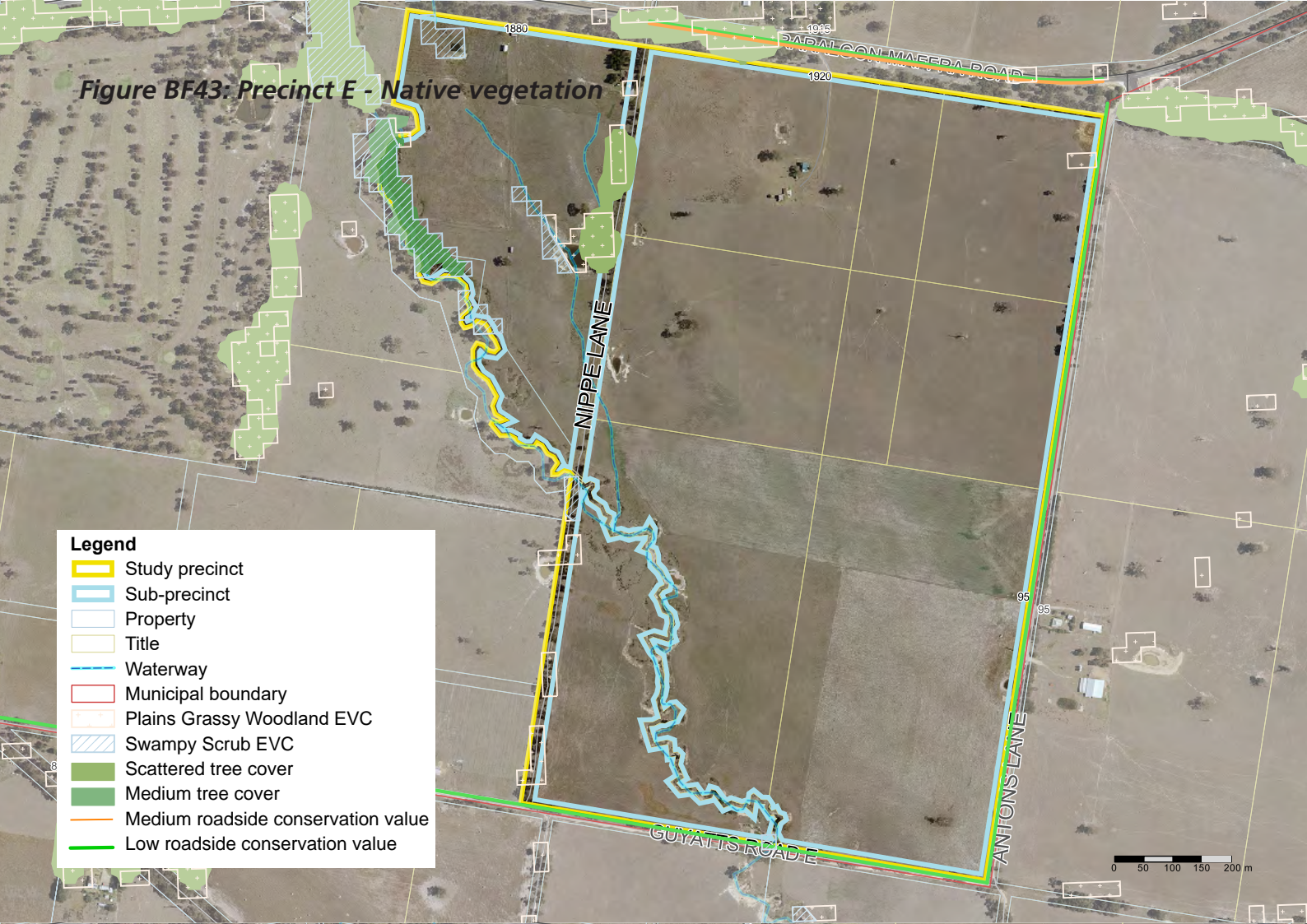
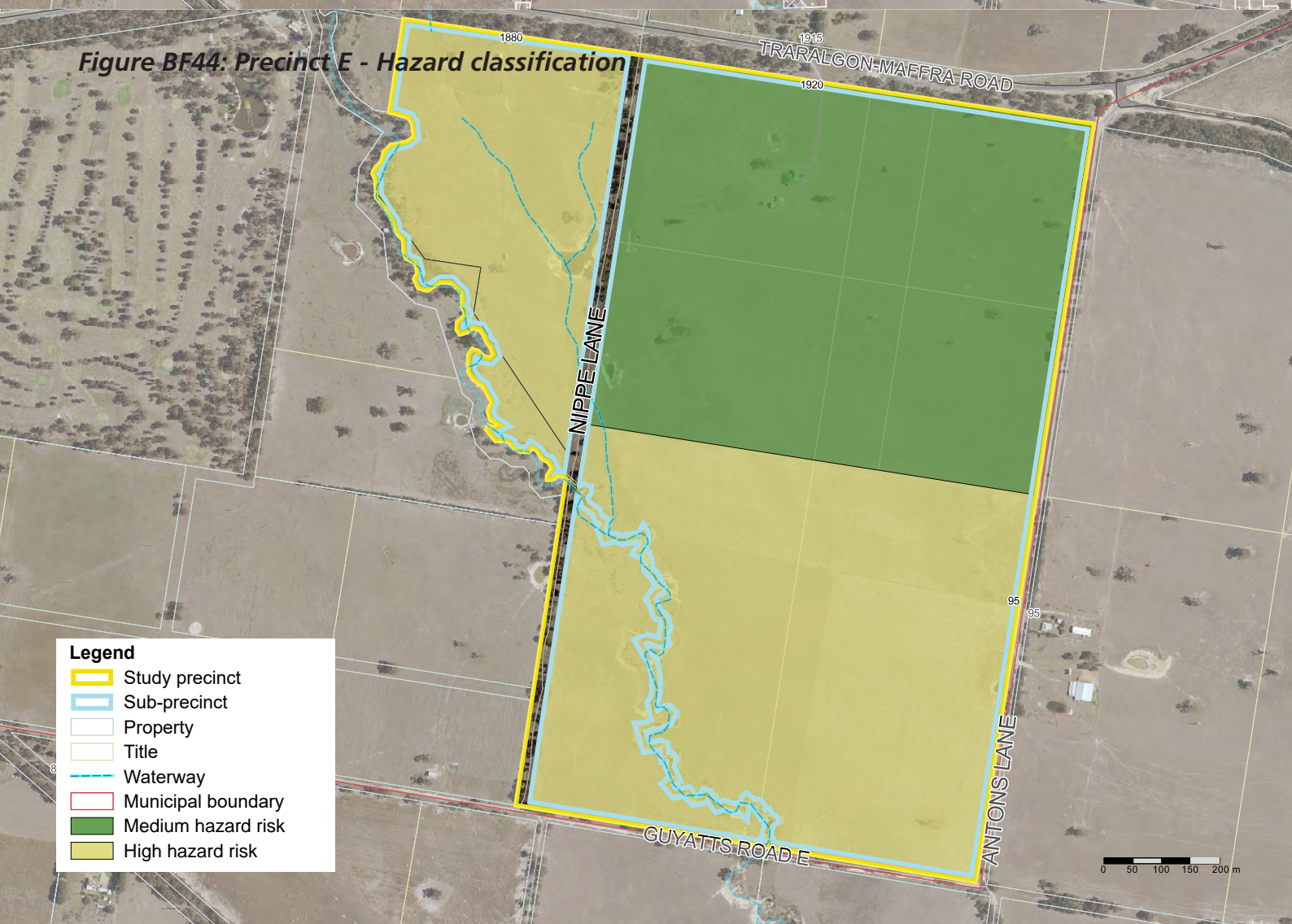


Figure BF44: Precinct E - Hazard classification



6.3.6 PRECINCT F

Site Description

The precinct is bounded by the Heywood Street to the west, Rosedale Creek and the Toongabbie Golf Course to the north, Nippe Lane to the east, Hendersons Road and Guyatts Road East to the south. Rosedale Creek borders the precinct. The precinct is surrounded by grassland and adjoins the Toongabbie Golf Course to the north which is considered to be a managed landscape. Heywood Street, Hendersons Road, Guyatts Road East and Nippe Lane South provide perimeter roads to the west, east and south. It is separated

from the bushfire hazard by Traralgon-Maffra Road which is a primary strategic fuel break to the west and the north of the precinct.

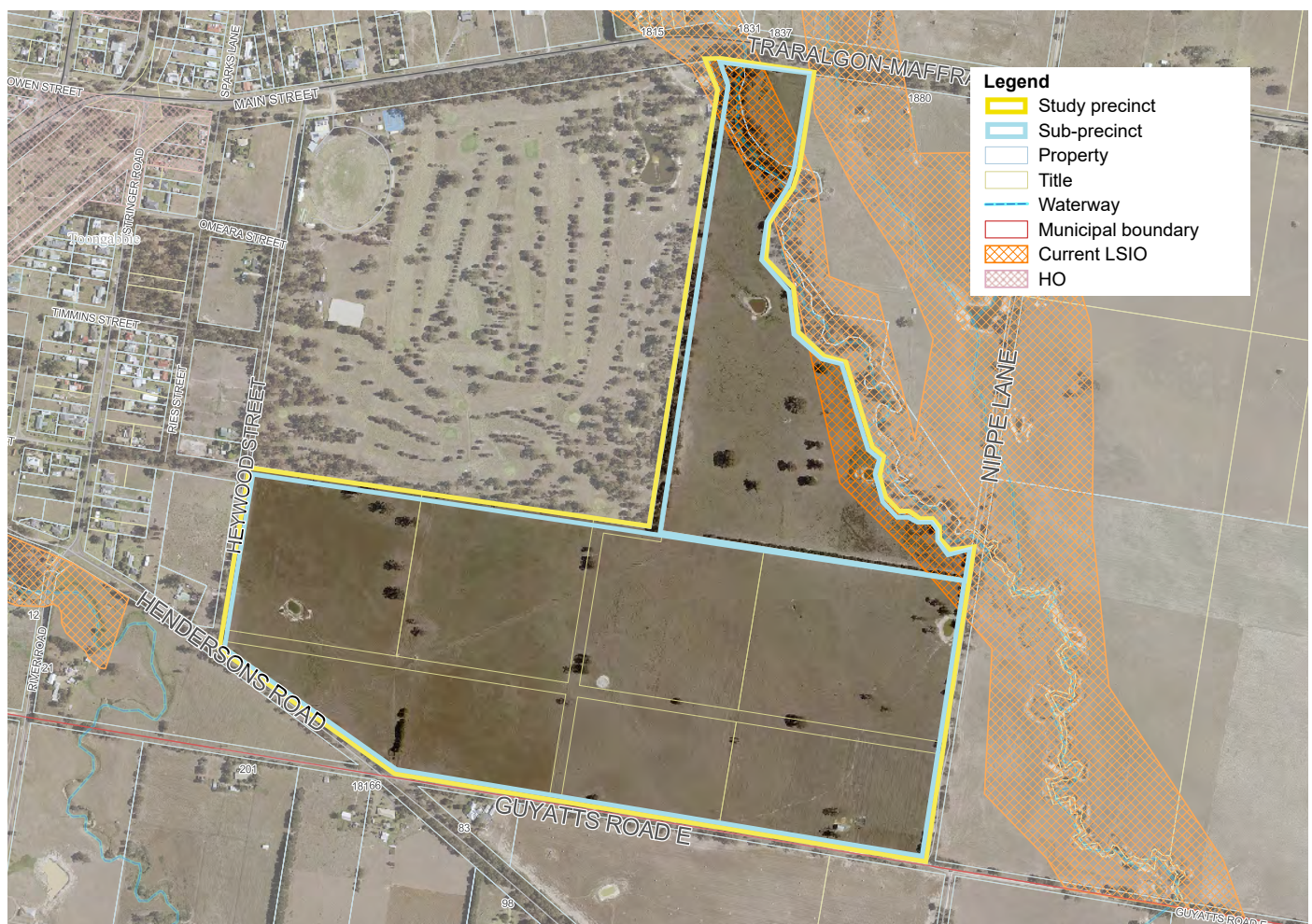
Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 3 (Only partially includes one lot at 1880 Traralgon-Maffra Road as Rosedale Creek acts as a natural precinct border).

Lot Size: 29.71Ha, 25.24Ha and 22.7Ha.

Figure BF45: Precinct F - Overlays



Proposed Zone: Rural Living Zone - Schedule 1
Lot yield: 33 lots

Summary of Issues

The precinct sits in a Bushfire Prone Area and is the precinct that separated from the bushfire hazard by the township. The biggest risk to the precinct is from grass fire runs from the south-west and from ember attack. The land is largely cleared, as such any further development opportunities can meet separation distances that maintain a radiant heat flux of less than 12.5 Kilowatts/square metres.

Access and Egress

Traralgon-Maffra Road provides a route in the east and south-westerly directions and Toongabbie-Sale Road in an easterly direction; both can be accessed travelling north on Nippe Lane, while River Road and Hendersons Road can be accessed either directly or via Guyatts Road in a westerly direction. The existing road reserves provide an adequate road network for access and egress. There may need to be a through road from Heywood Street to the road reserve along the rear boundary of the Toongabbie Golf Course.

BAL:Low locations

The Bal:Low area is located the west of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in closer proximity to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Development Plan Overlay

that includes:

- Building to a BAL-29 standard to mitigate th ember attack risk;
- A buffer zone between Rosedale Creek and any buildings;
- Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;
- Road network to allow effective access and egress. The road network will also provide an additional buffer between the golf course and development.

Agricultural Capability

Precinct F is largely used for grazing and cropping. It adjoins the township to the north and west and has farmland to the south and east. This area is currently being used for farmland, while it has potential to become fragmented due to the number of separate titles in the precinct. It should continue to operate as farmland in the immediate term.

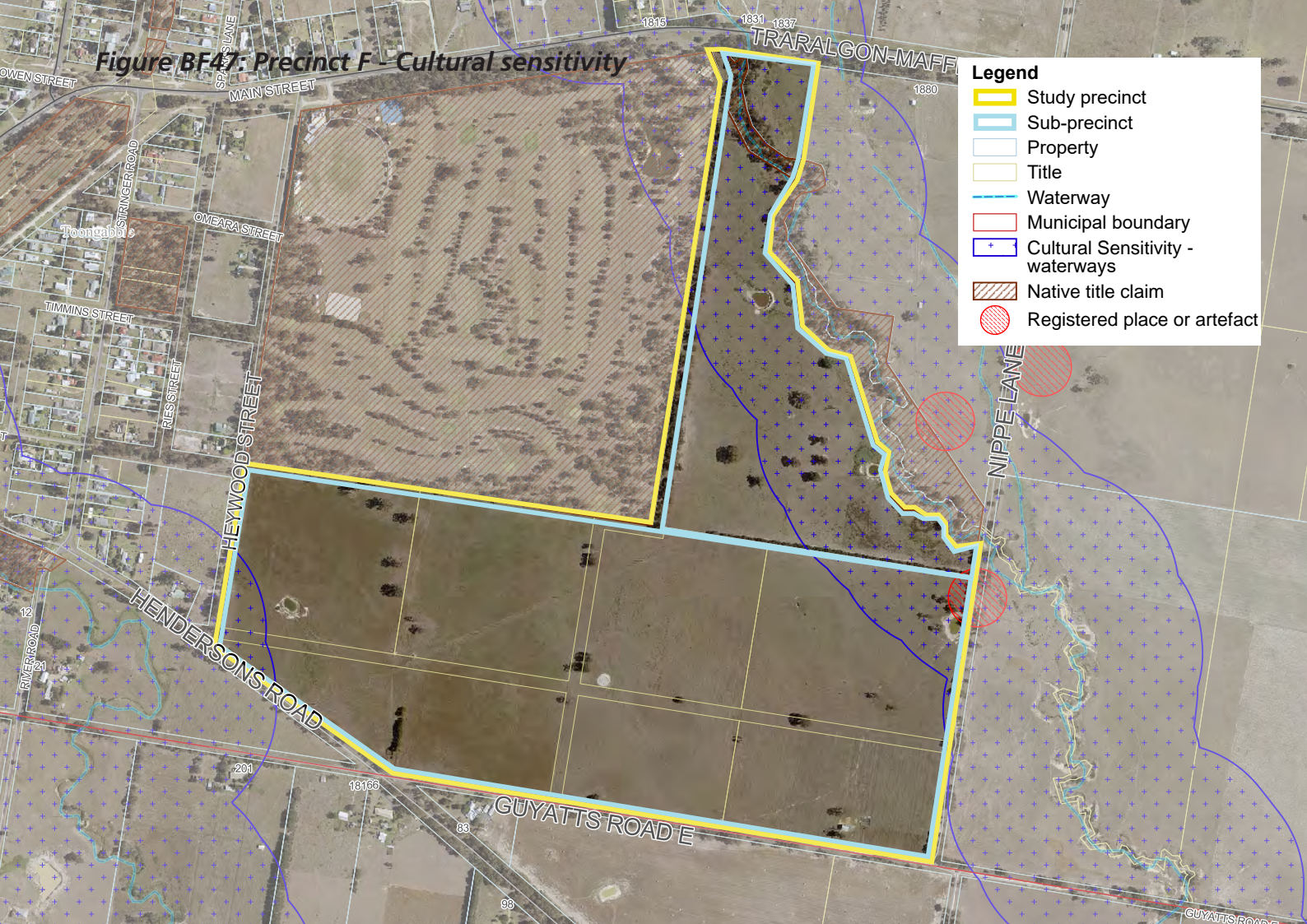
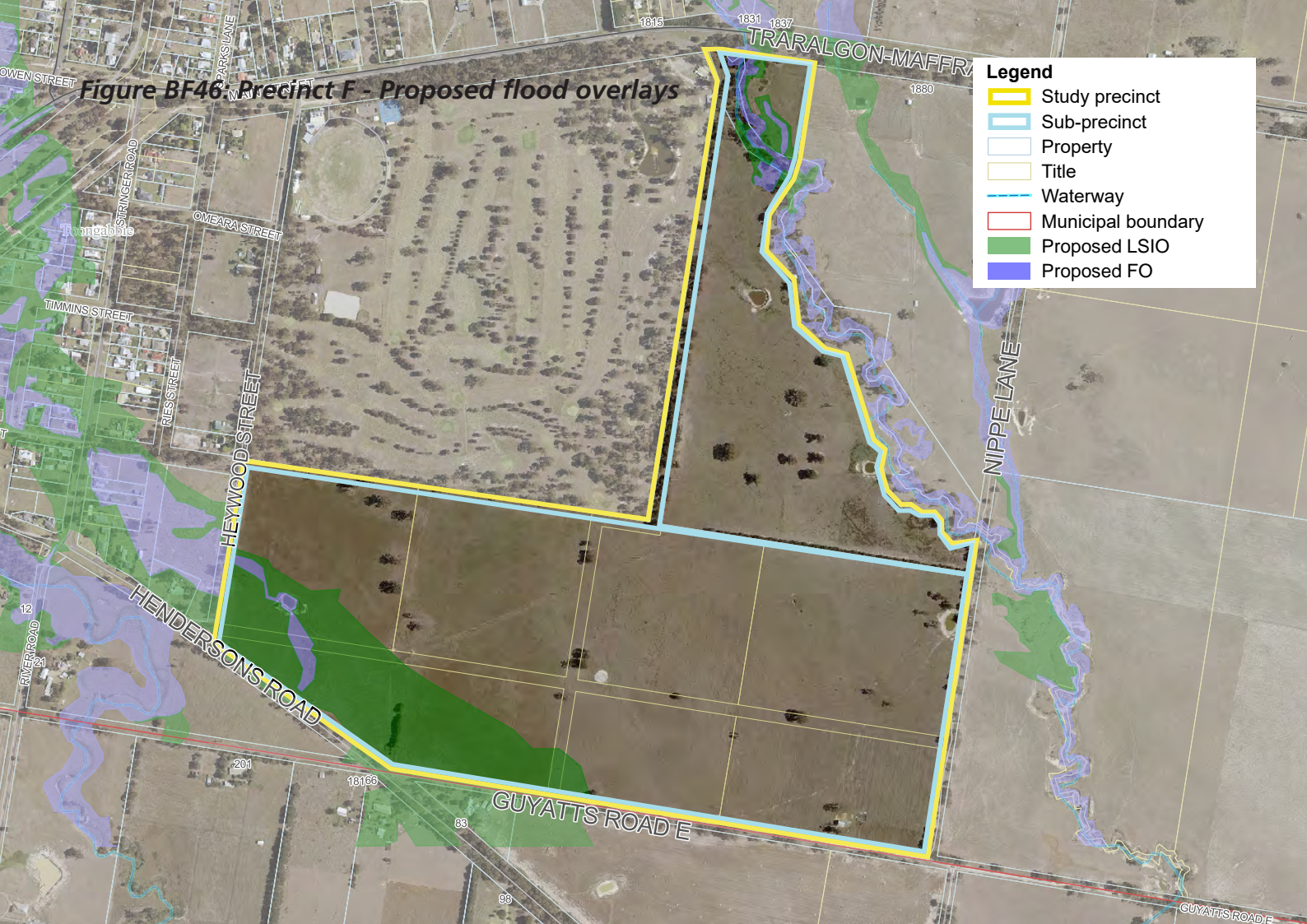
Flooding Risks

The identified flood risks for precinct E are largely confined to within the 30m buffer around waterways and is not anticipated to affect the development potential.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would be triggered on all properties. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. A CHMP is triggered for 3 or more lots. Precinct F has registered artefacts or places and it is likely that further artefacts or places could be identified in this precinct. It is noted that details the registered places or artefacts are not publically available.





Environmental Values

There is significant vegetation identified along Rosedale Creek, at the entrance to the road reserve along the eastern fence line of the Toongabbie Golf Course and along Heywood Street. Any further accessways would need to consider how to manage the landscape to avoid these areas of biodiversity. There would need to be a buffer between the waterway and the siting of dwellings. There are isolated trees across the precinct that could be avoided with careful consideration of the subdivision layout.

Precinct F has minimal tree cover with scattered trees appearing along the boundary of the golf course and along Rosedale Creek. Rosedale Creek has a patch of medium coverage. There is some Plains Grassy Woodland identified along Nippe Lane South and at the Toongabbie Golf Course, and Swamp Scrub identified along Rosedale Creek. An inspection of Rosedale Creek at 1880 Traralgon-Maffra Road was carried out in January 2019 and found the habitat to be largely degraded and that is showed no evidence of Swamp Scrub. All identified tree cover is shown as endangered.

Guyatts Road East is identified as having a low roadside conservation value.

Servicing Capability

Electricity

SP Ausnet may require additional transformers to service the precinct. The subdivision layout will also need to consider the electricity easement for high voltage lines that run diagonally through the precinct.

Water

The mains along Traralgon-Maffra Road and Hendersons Road do not have capacity to service these areas and would require a considerable

upgrade.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct F as having a medium to high risk.

A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

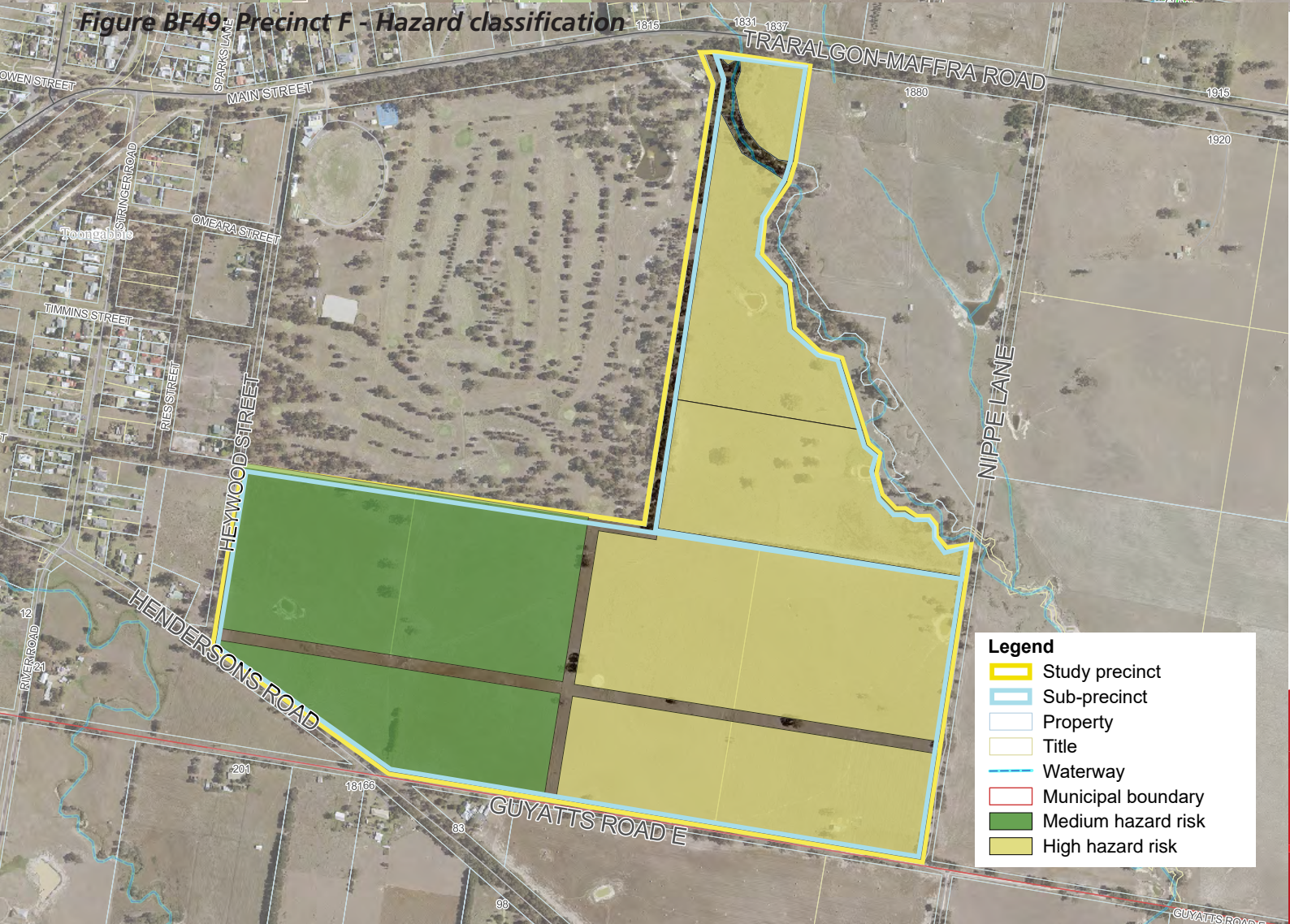
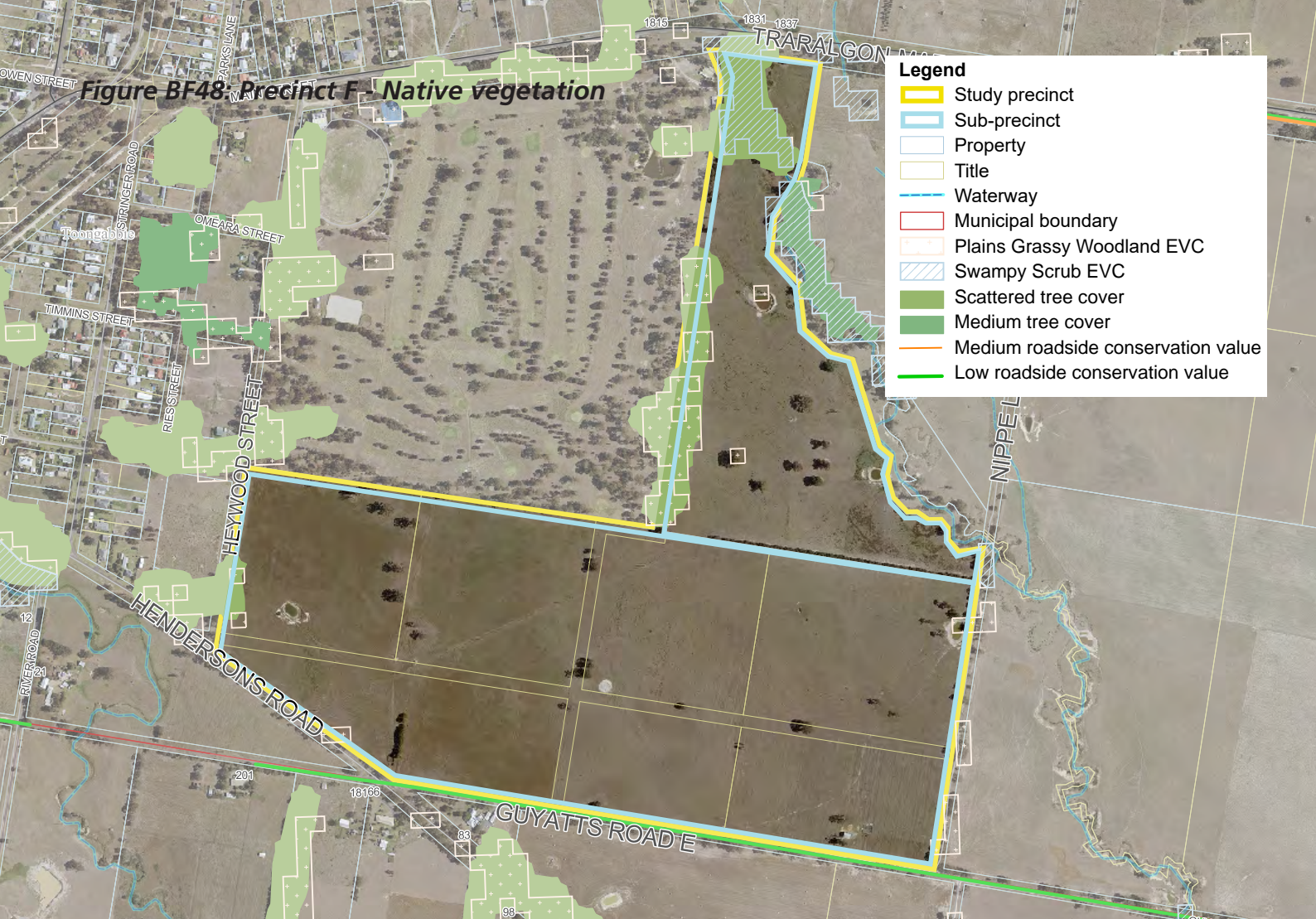
Access

Any new lots fronting onto Traralgon-Maffra Road would need to be accessed via a service road. VicRoads does not support additional road intersections on Traralgon-Maffra road.

VicRoads have also stated that they would prefer new growth fronts to be north of Traralgon-Maffra Road.

Recommendation: Retain as Farming Zone - Schedule 1 to rezone to Rural Living Zone - Schedule 1 in the long-term.





6.3.7 PRECINCT G AND PRECINCT J

Site Description

The precinct is bounded by the Gippland Plains Rail Trail to the west, Hower Street and Hendersons Road to the north, and Guyatts Road to the South. Toongabbie Creek passes through the precinct. It is adjacent to grassland to the south. It sits to the east of the bushfire hazard and is separated from the hazard as Traralgon-Maffra Road is a primary strategic fuel break.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 5

Lot Size: 14.87Ha, 5.57Ha, 8.22Ha, 0.81Ha and 0.9Ha

Proposed Zone (Precinct G): Rural Living Zone - Schedule 1

Lot yield (Precinct G): 10 lots

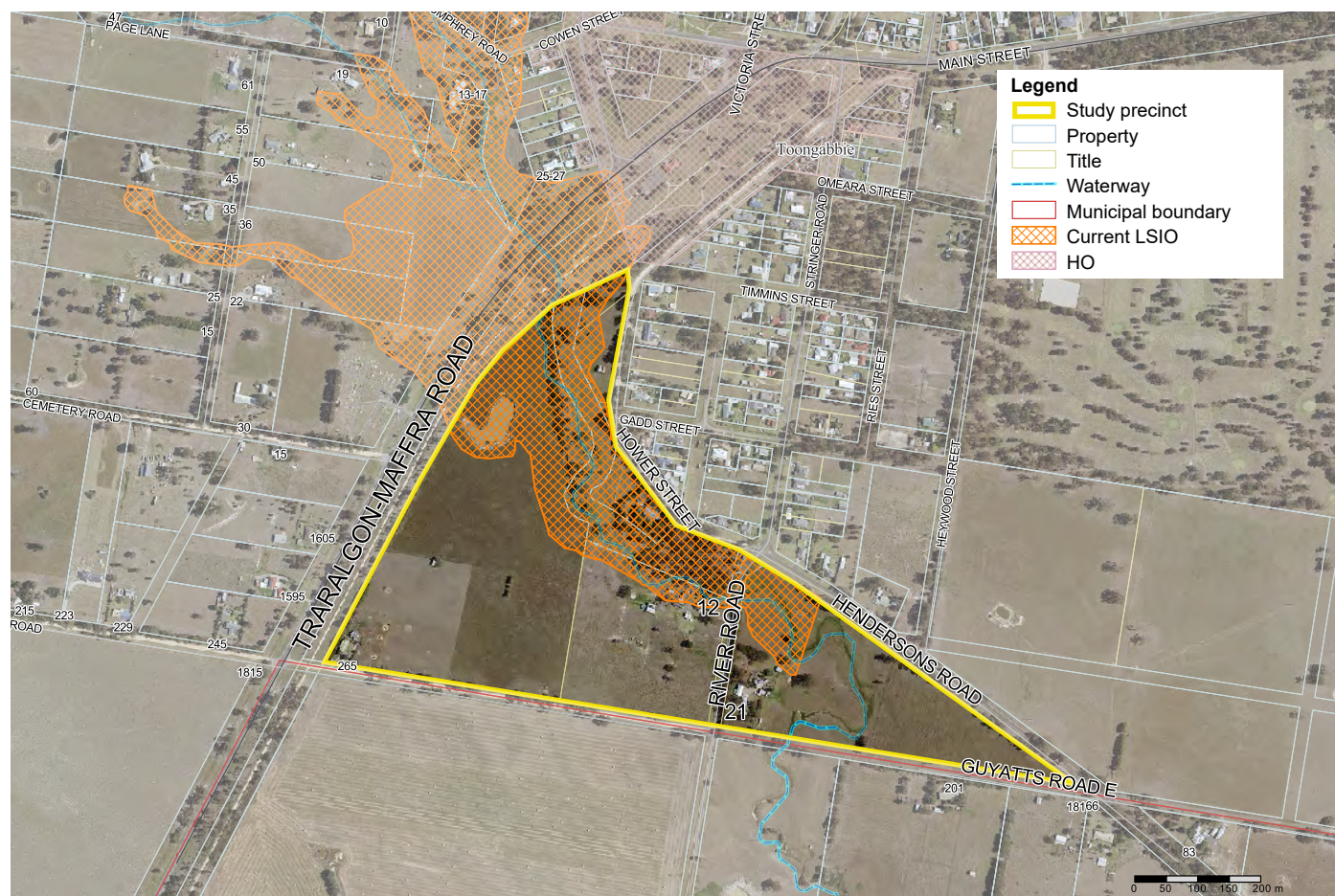
Proposed Zone (Precinct J): Low Density Residential Zone

Lot yield (Precinct J): 63 lots

Summary of Issues

The precinct sits within a bushfire prone area. It is most at risk from grass fire runs and ember attack. Through design and siting of lots and dwellings, a radiant heat flux of less than 12.5 Kilowatts/square metre could be maintained.

Figure BF50: Precinct G/J - Overlays



Access and Egress

Traralgon-Maffra Road provides a route in the north-east and south-westerly directions and can be accessed via Guyatts Road to the west.. River Road runs south through the precinct, and Hendersons Road runs to the south-east which can be accessed directly or via Guyatts Road.

BAL:Low locations

The Bal:Low area is located between 900m and 1.5 kilometres to the north of the precinct at the Village Green on Cowen Street and can be accessed via King or Victoria Streets. It is noted that in the event of a landscape fire, the BAL:Low area is in a direction travelling toward to the hazard than the precinct.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone or Low Density Residential Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Design and Development Overlay that includes:
 - Building to a BAL-29 standard to mitigate the ember attack risk;
 - A buffer zone between Toongabbie Creek and any buildings; and
 - Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02.

A Development Plan Overlay is not recommended as any roads required would be internal roads for one property and there is a low lot yield.

Agricultural Capability

Precinct G/J is used for grazing on the larger property and as rural residential property on the other four lots, one of which is vacant. It abuts

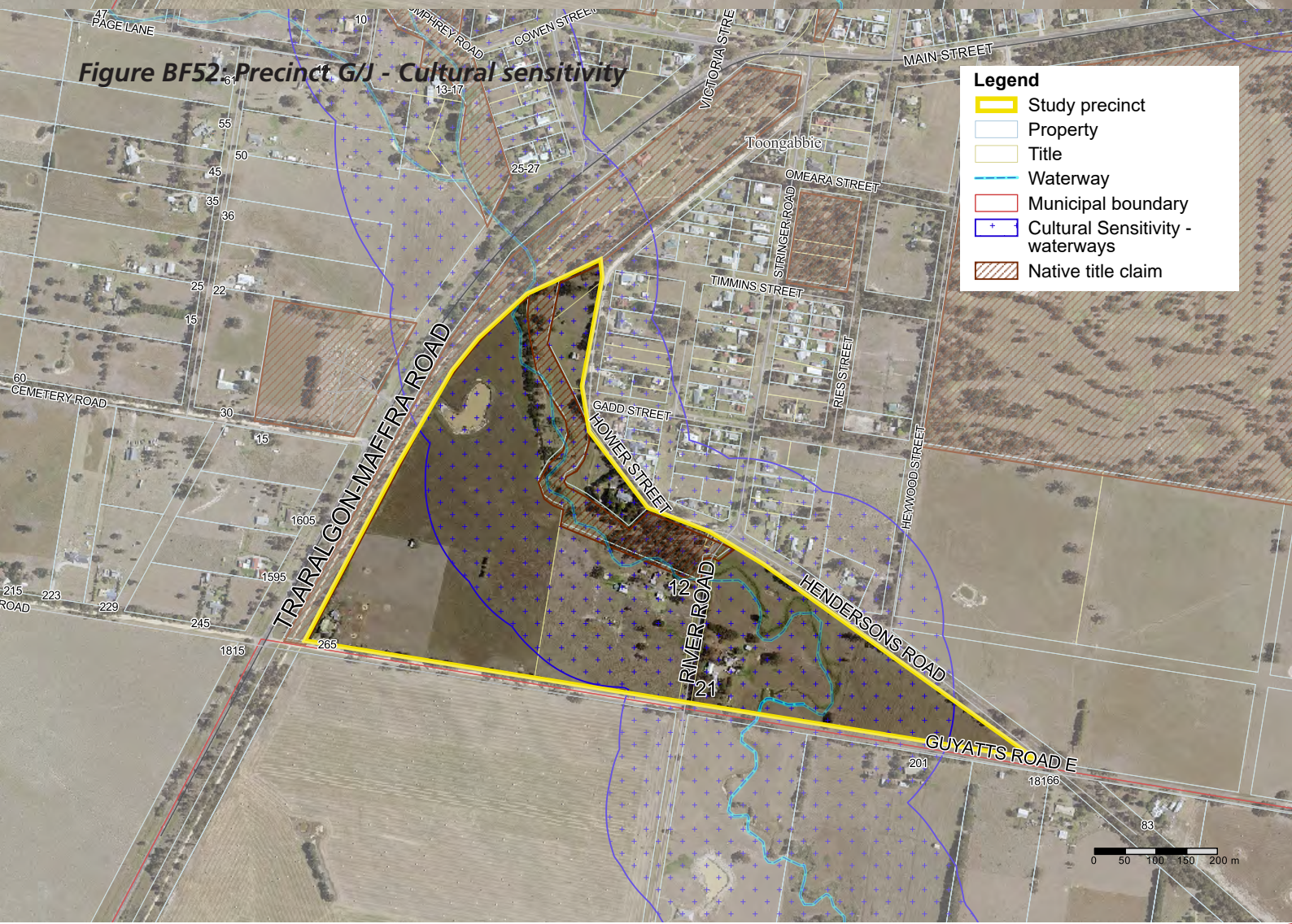
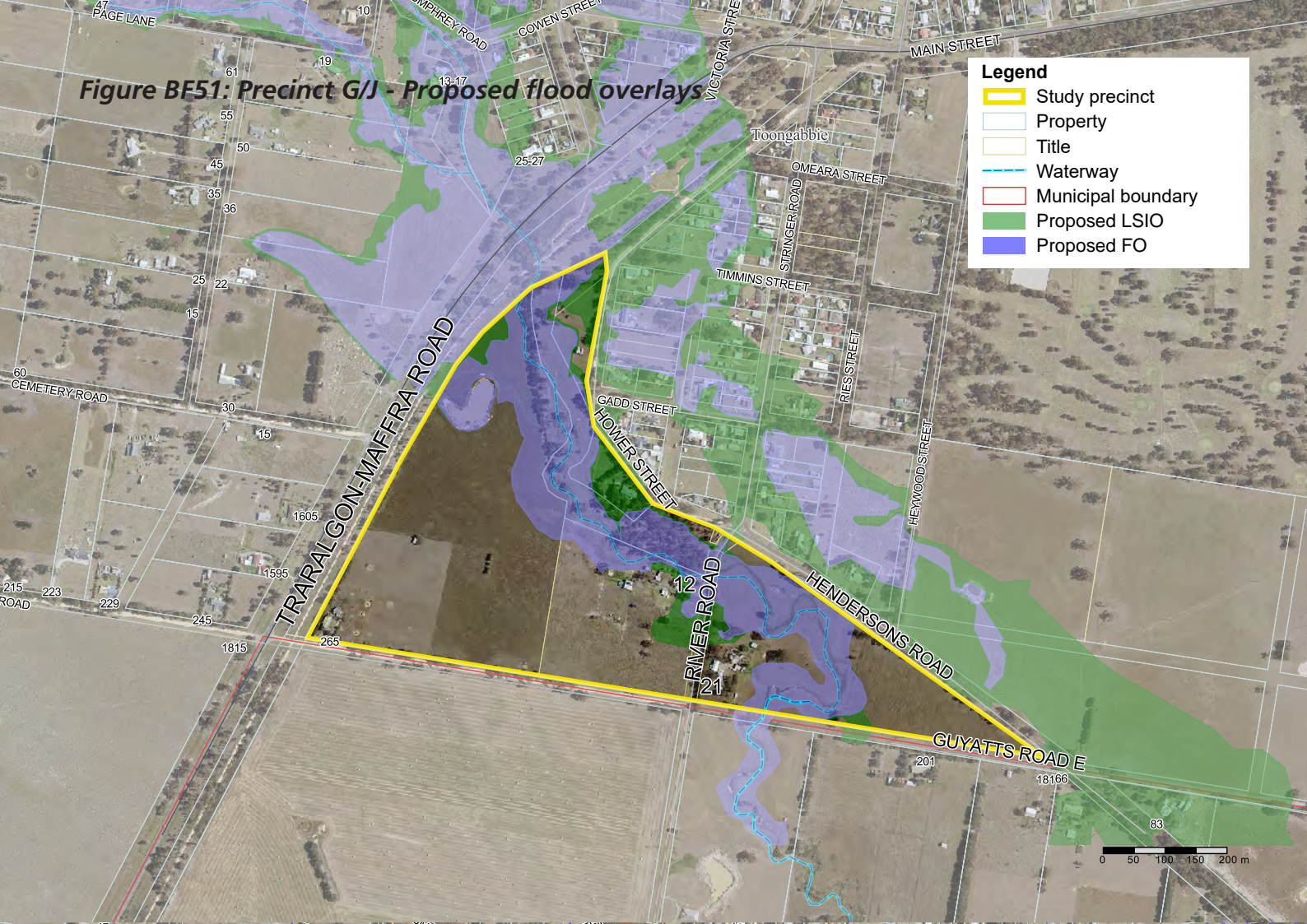
the township to the north and has farmland to the south and east of the precinct. Areas to the west (Precinct H) are highly fragmented and consist of rural residential type areas, these areas do not contribute to the agricultural capability.

Flooding Risks

The north of the precinct, just south of Toongabbie Creek and the lot between Hendersons Road, River Road and Guyatts Road are significantly affected by flooding. Depending on whether Low Density Residential or Rural Living were supported would change the outcome on whether the subdivisions would be able to support septic systems, particularly on the lot at 21 River Road.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would be triggered on 265 Guyatts Road and 21 River Road under Rural Living provisions, if the precinct was to go to a Low Density Residential Zone, it would be triggered on all lots. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. A CHMP is triggered for 3 or more lots.



Environmental Values

Toongabbie Creek in the north of the precinct has some patches of vegetation that should be retained, any further development is unlikely to impact on these areas as it is contained within the 30m buffer around waterways.

Precinct G/J is considered to have scattered tree cover along the northern border where Toongabbie Creek meets Hendersons Road. There are isolated trees on the properties but they are largely cleared. There is some Swampy scrub along the waterways and some Plains Grassy Woodland shown on the adjoining roads. However, the precinct is largely cleared of vegetation. All identified tree cover is shown to be endangered.

Guyatts Road to the south of the precinct is shown as having low roadside conservation value, no other roads in the precinct are identified. The Gippsland Plains Rail Trail to the west of the precinct is shown as having a medium roadside conservation value.

Servicing Capability

Electricity

No additional upgrades are required to service this precinct.

Water

New water mains and extensions are required to service this area.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct G/J as having a high risk.

A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It

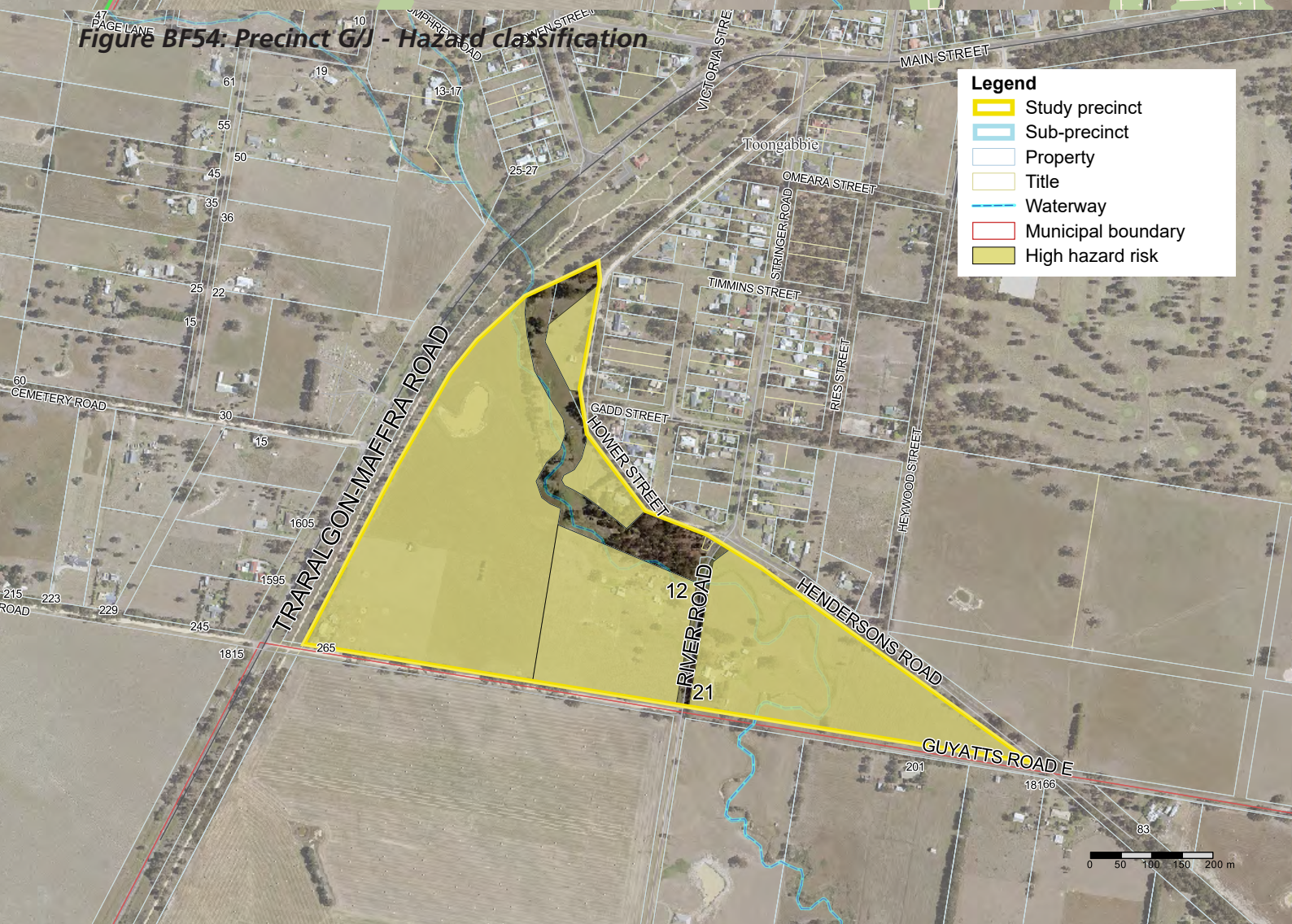
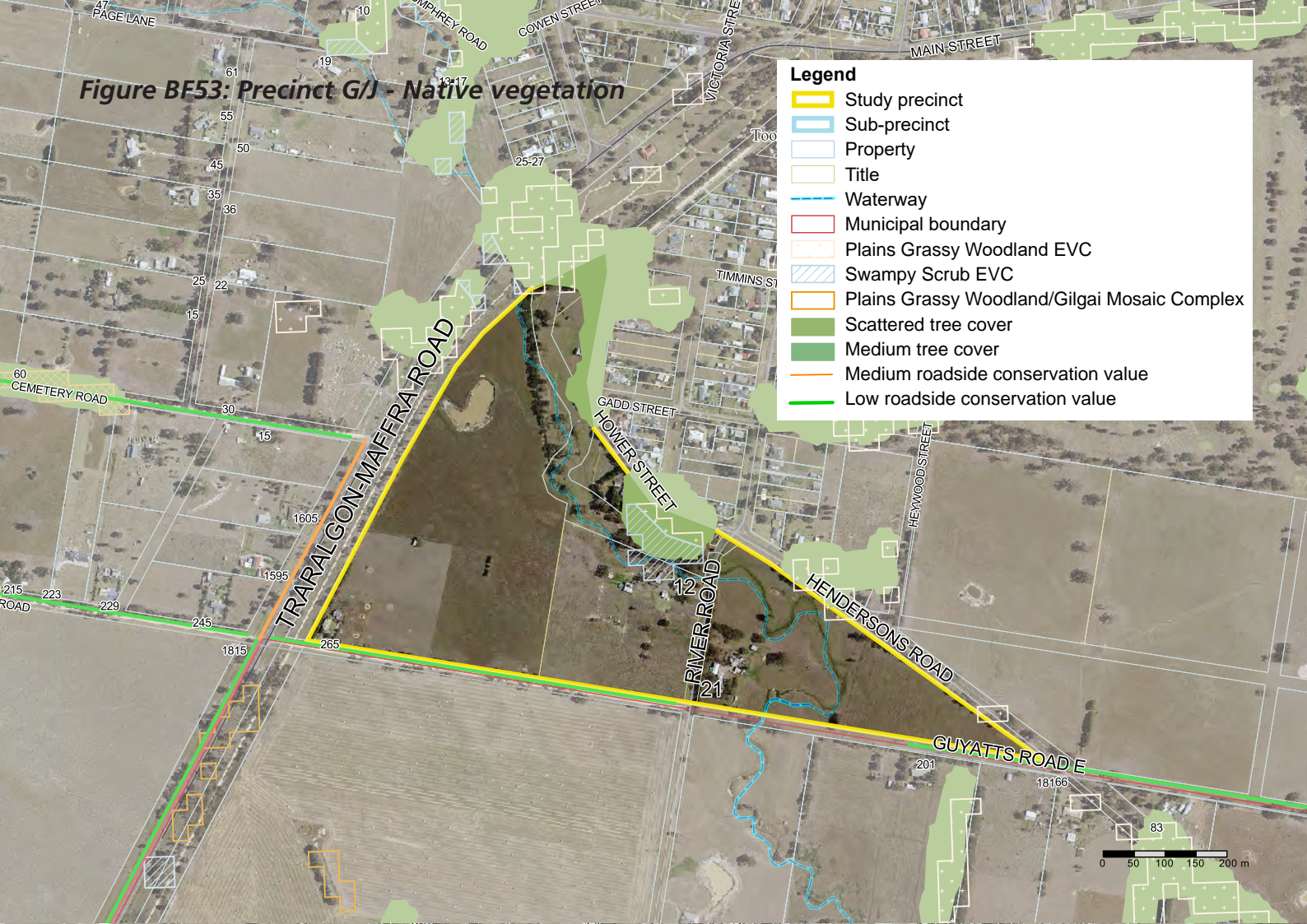
is likely these lots will require a land capability assessment.

Access

Further access to Traralgon-Maffra Road from this precinct is unlikely.

VicRoads have also stated that they would prefer new growth fronts to be north of Traralgon-Maffra Road.

Recommendation: Retain as Farming Zone - Schedule 1 to rezone to Low Density Residential Zone in the long-term. This would be the secondary growth front after the possible East Low Density Residential area.



6.3.8 PRECINCT H

Site Description

The precinct is bounded by the Harris Lane to the west, Hill Street extension road reserve to the north, the rear boundary of properties on King Street to the east, Traralgon-Maffra Road to the south-east and Guyatts Road to the south. It has tributaries of Toongabbie Creek that pass through the precinct. It has farmland used for grazing to the west, north and south of the precinct.

Zone: Farming Zone - Schedule 1

Overlays: Land Subject to Inundation Overlay

Number of Existing Lots: 49

Lot Size: Ranges from 15.67Ha to 0.18Ha with an average lot size of 2.78Ha.

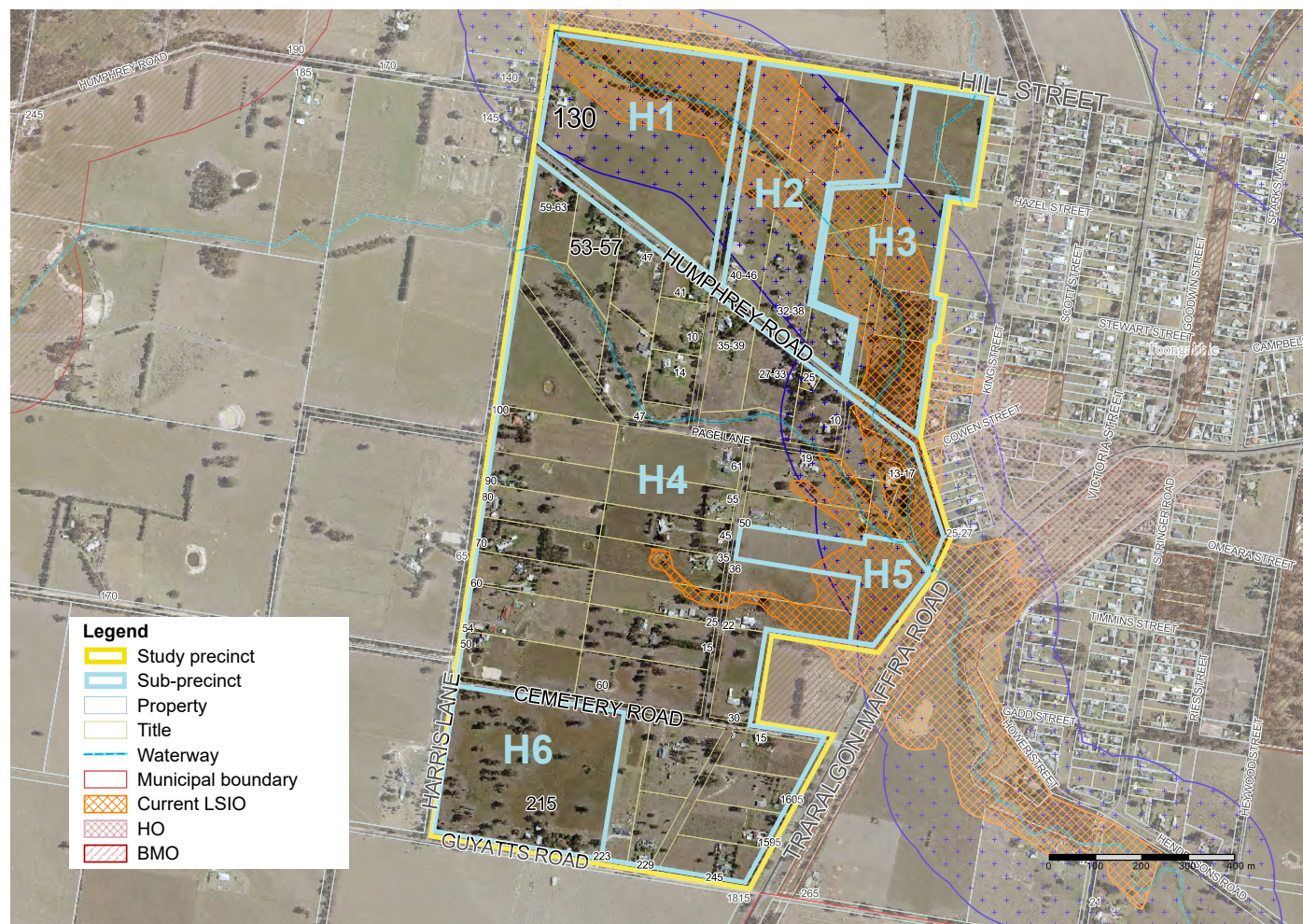
Proposed Zone: Rural Living Zone - Schedule 1

Lot yield: 11 lots

Summary of Issues

The precinct sits within a bushfire prone area. It is most at risk from landscape fire, grassfire runs and ember attack. Through design and siting of lots and dwellings, a radiant heat flux of

Figure BF55: Precinct H - Overlays



less than 12.5 Kilowatts/square metre could be maintained. Precinct H is highly fragmented and there are a number of separate titles that, if sold, allow for a dwelling to be built with a planning permit without consideration of adequate bushfire mitigation measures. In the past five years, five dwellings have been approved in this precinct without having to adequately address consideration of the bushfire risk.

Access and Egress

Traralgon-Maffra Road provides a route in the north-east and south-westerly directions and can be accessed via Guyatts Road, Cemetery Road and Humphrey Road travelling in an easterly direction.

BAL:Low locations

The Bal:Low area is located between 250m and 2 Kilometres to the east of the precinct at the Village Green on Cowen Street and can be accessed via Humphrey Road, or King Streets. It has adequate access and egress in the event of a bushfire to get to the BAL:Low area or to leave Toongabbie.

Potential mitigation measures

If the precinct was to go to a Rural Living Zone and allow further subdivision, potential planning bushfire risk mitigation measures would include:

- Application of a Design and Development Overlay that includes:
 - Building to a BAL-29 standard to mitigate th ember attack risk;
 - A buffer zone between Toongabbie Creek and any buildings;
 - Building envelopes to effectively site dwellings so that they can meet Column A of Clause 53.02;

A Development Plan Overlay is not recommended

as there is an established road network, further development to the north of Humphrey Road where new roads would be needed are unlikely to be supported due to flooding, association with a timber haulage route and native vegetation. There is a low lot yield that would not justify the Development Plan Overlay.

Applying a Design and Development Overlay will help reduce the risk by ensuring development can withstand ember attack and have a BAL12.5 separation distance.

Agricultural Capability

The precinct consists mainly of rural residential properties with some grazing occurring on properties in the north-west and south-west corner. It abuts farmland to the north, west and south. The southern area is identified as productive agricultural land. As the area is heavily fragmented, it is not anticipated to impact on future agricultural capability.

Natural Resources

The north-west property at 130 Humphrey Road abuts a timber haulage route. Policy in Clause 21.02 discourages new rural living areas next to timber haulage routes. As such, this property is not recommended to go to a rural living zone.

Flooding Risks

The properties within the north east corner of the precinct between King Street, Hill Street and the Toongabbie Creek are significantly affected by the 1% AEP Extent.

Some of these lots may not be able to support a septic system. The floodway overlay is proposed to be applied to the two lots immediately north of the cemetery.

The property at Nicholsons Road could not be further subdivided as it will create a lot wholly

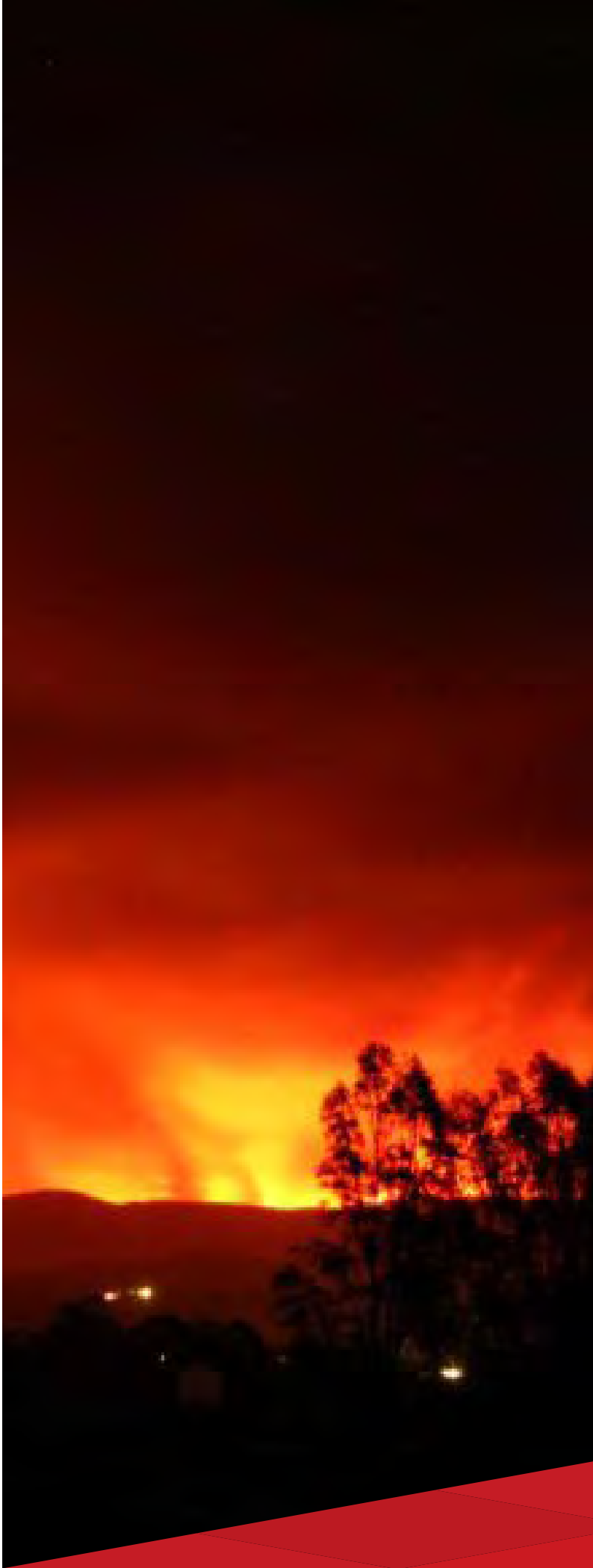


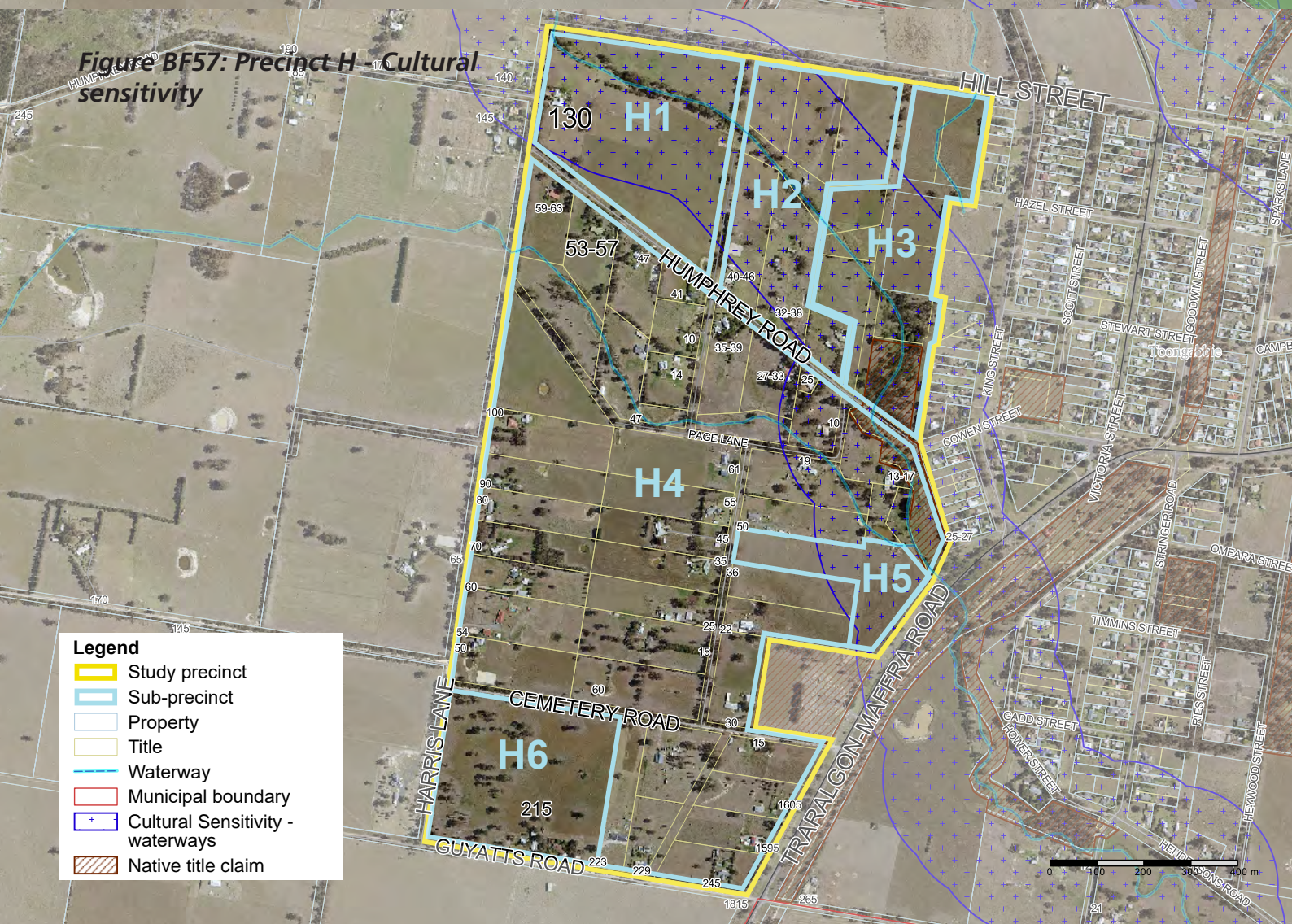
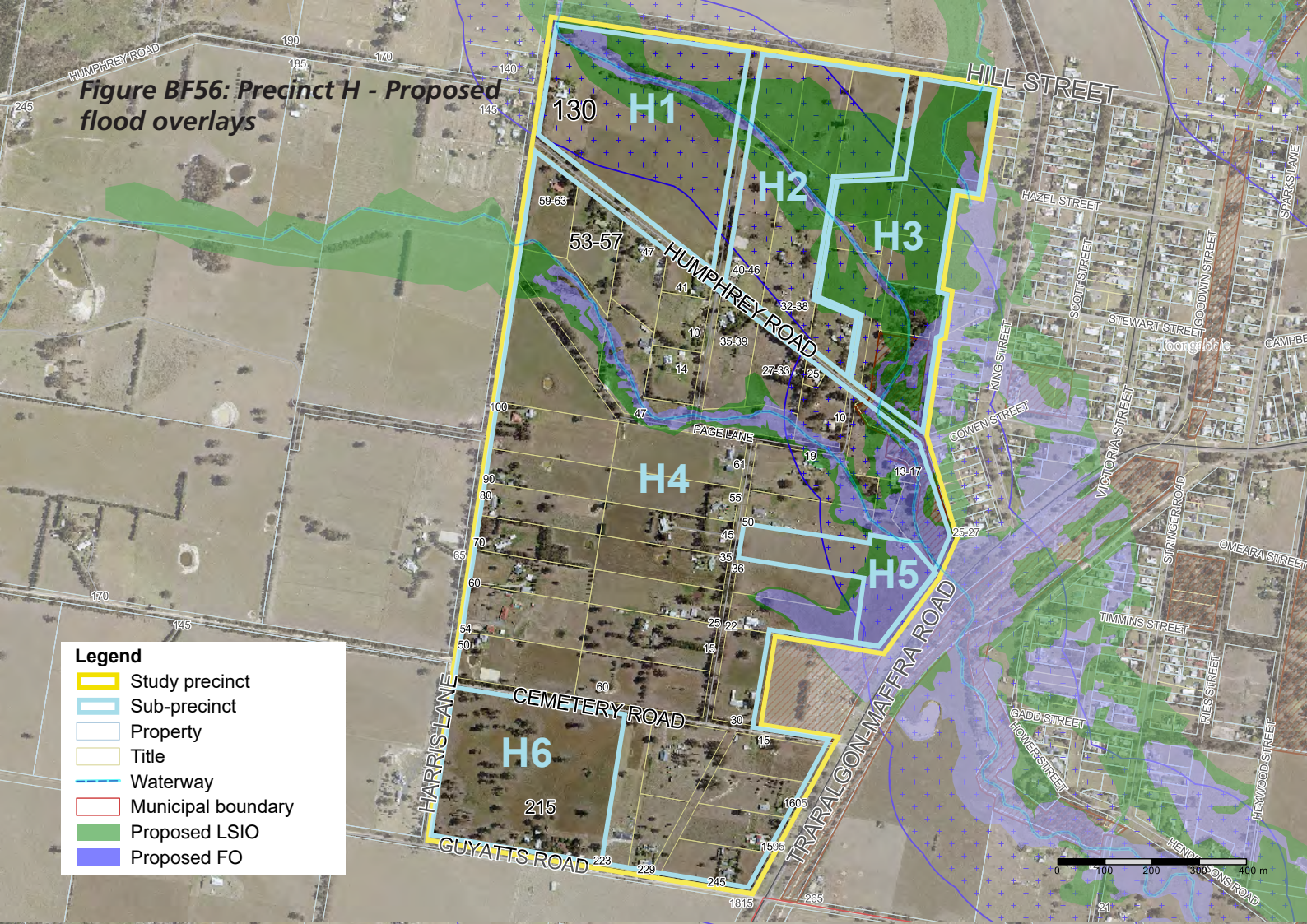
within the Floodway Overlay and West Gippsland Catchment Management Authority has indicated that the flood depth exceeds 1.2m on the part of the property that is next to Traralgon-Maffra Road. As such, development would be prohibited on this part of the property.

Cultural Sensitivity

A Cultural Heritage Management Plan (CHMP) would be triggered 130 Humphrey Road. A CHMP will identify any places or artefacts that have aboriginal cultural heritage. A CHMP is triggered for 3 or more lots.

*Photo: Glow from Maffra.
Source: Noble, S. 2013.*





Environmental Values

Precinct H has scattered vegetation, mainly in road reserves and along Toongabbie Creek. This may potentially impact on access to properties north of Humphreys Road as a further road network would need to be established. There is a potential critically endangered patch of vegetation at the rear of 53-57 Humphreys Road where further development is discouraged.

There is scattered tree cover identified along Toongabbie Creek, along the roadside of Page Lane, Cemetery Road, Hill Street road reserve and the southern portion of Harris Lane between Cemetery and Guyatts Roads.

There are patches of Plains Grassy Woodland identified along the Hill Street road reserve, Page Lane, in the cemetery and along Toongabbie Creek. Patches of Swampy Scrub are found along Toongabbie Creek and the Hill Street extension at the intersection with the Harris Lane road reserve. Box Ironbark Forest is found along Cemetery Road and Harris Lane to the south. The cemetery also has an identified patch of critically endangered Gippsland Red Gum Grassy Woodland and Associated Grasslands; there is also a possible patch at 53-57 Humphrey Road. The Plains Grassy Woodland and Swampy Scrub are shown to be endangered; the Box Ironbark Forest EVC is shown as vulnerable.

Harris Lane between Cemetery and Guyatts Roads is shown as having a medium roadside conservation value. The rest of Harris Lane, Cemetery Road and Guyatts Road are shown as having low roadside conservation value. The Gippsland Plains Rail Trail on Traralgon-Maffra Road is shown as having a medium roadside conservation value. The other roads are not identified as having a conservation value.

Servicing Capability

Electricity

Some upgrades and new transformers may be required to service further development at 215 Guyatts Road. There would need to be underground cables due to the bushfire risk.

Water

The dead ends along Harris Lane are prone to low pressures in peak summer demands and would consider main extensions and interconnections to eliminate the dead end mains on Harris Lane when growth occurs.

Septic Tanks

The *Latrobe City Domestic Wastewater Management Plan 2018* shows Precinct H varying from a low to high risk. One lot is considered non-compliant as it is smaller than 4000 square metres.

A high risk classification can mitigate the risk through design standards and does not necessarily limit the development potential. It is likely these lots will require a land capability assessment.

For the non-compliant lot the DWMP states that for a lot under 2000 square metres such as the property at 25 Humphrey Road:

Partial or full off-site wastewater management is the preferred strategy for these properties (e.g. reticulated sewerage, cluster system or centrally /authority managed on-site systems). Where owner managed on-site systems are the only available option, specialist design will be required along with increased oversight in order to achieve containment.

The DWMP assesses the risk by property not by title, as 67 King Street has a house that

is connected to reticulated services it is not shown as having a risk classification. However, if the separate titles were sold, any potential dwellings would need to have a septic tank. A land capability assessment would need to be carried out to ensure that the effluent disposal envelope could be wholly contained within the title boundaries.

Access

No issues with this precinct.

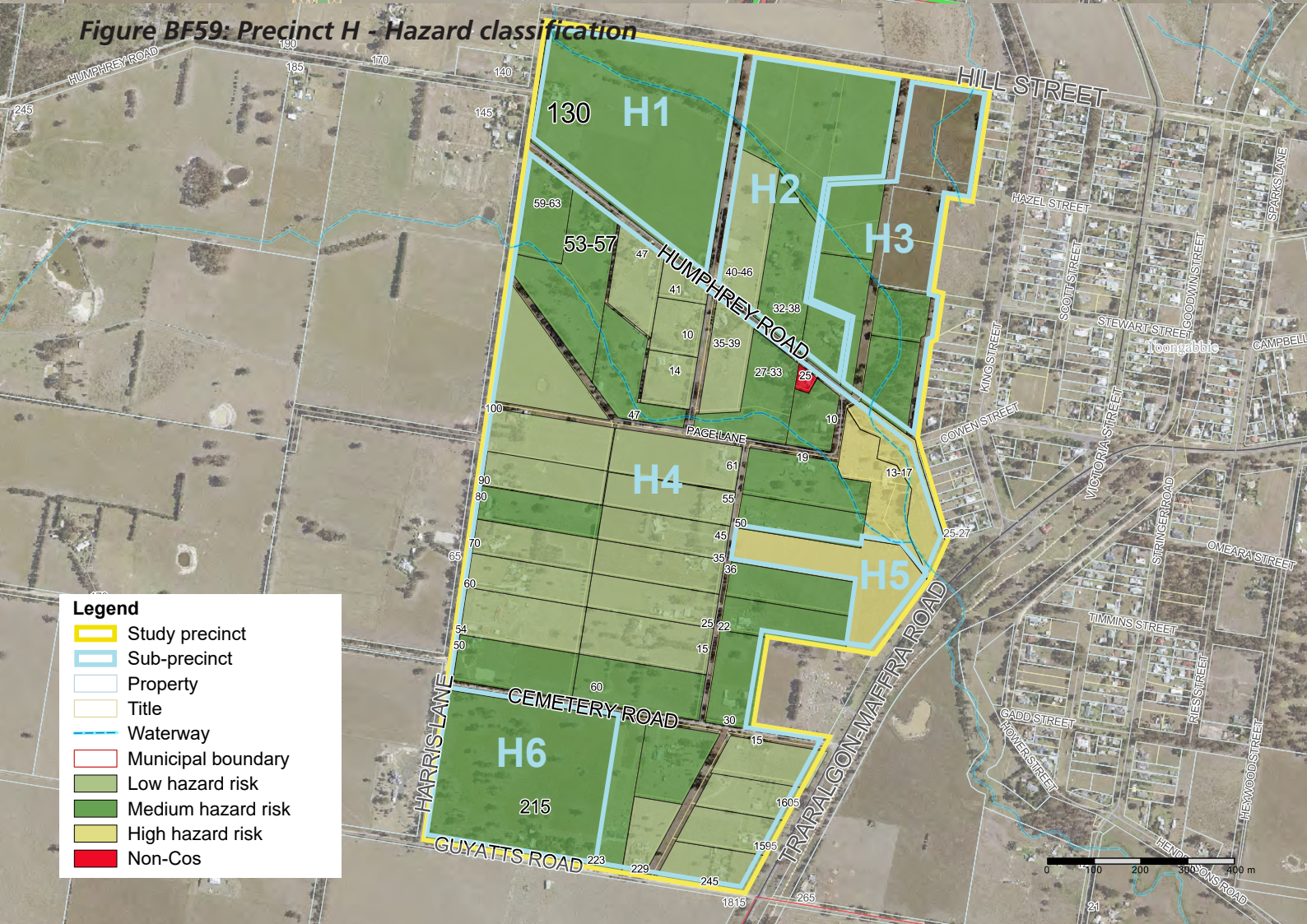
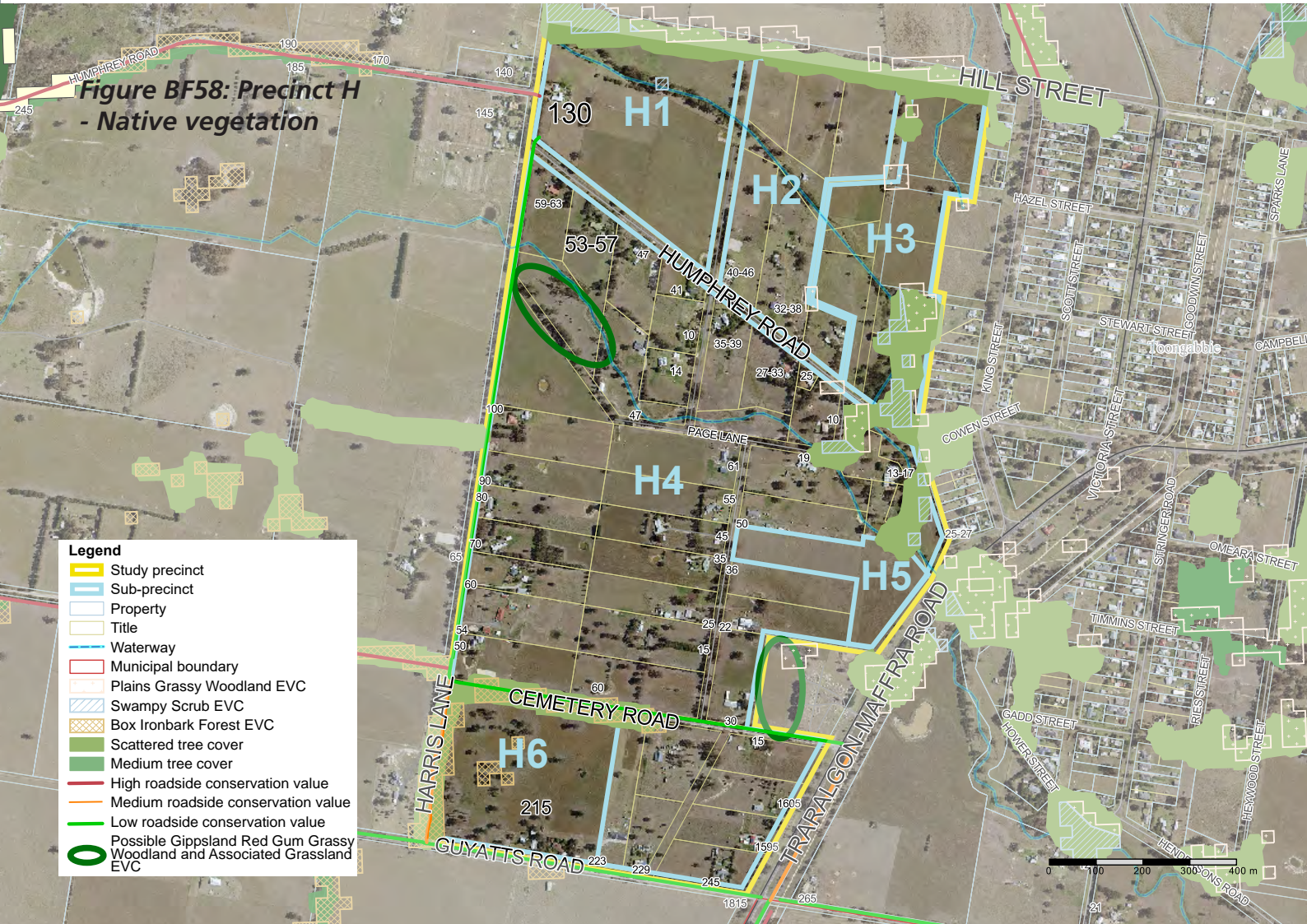
Recommendation: Partially rezone to Rural Living Zone - Schedule 1. H1, H3 and H6 to remain as Farming Zone Schedule 1. H1 is on a timber haulage route and is not supported by the CFA, H3 is unlikely to be developed due to the flood risk and H6 is not supported by the CFA. H5 to be rezoned to Rural Living Zone - Schedule 2 due to the flooding risk.

The rezoning recognises the development that has occurred. Any rezoning must also have with a Design and Development Overlay applied to the land. The reason for this is that the primary concern is the bushfire risk as the area is already developed as a rural residential precinct. Development will occur on vacant lots whether it is zoned RLZ or not, the DDO ensures that the bushfire risk is considered. As the DDO places an additional permit trigger on the property, the rezoning to RLZ will trade off the need for a use permit with the need for a development permit rather than adding an additional cost burden to the landowner.

Revised lot yield: 0 lots

*Photo: 2007 Bushfire burning near Toongabbie.
Source: King, M., 2007.*





6.4 Recommendations

Table BF9: Rural residential recommendations

Precinct	Recommendation	Additional Measures	Exclusions
A	No rezoning	Apply Bushfire Management Overlay to 35 Old Walhalla Road	N/A
B	Partially retain as FZ1	Designate as 'future low density residential zone' on Toongabbie Structure Plan Apply Design and Development Overlay or Development Plan Overlay at the time of rezoning.	29 Hill Street
C	Partially rezone to RLZ1	Apply Development Plan Overlay that includes: <ul style="list-style-type: none"> • Design standards for roofs, windows, eaves etc.; • BAL-29 building standards; and • Separation distances. 	Properties included in precinct B.
D	Rezone to RLZ1	Apply Development Plan Overlay that includes: <ul style="list-style-type: none"> • Design standards for roofs, windows, eaves etc.; • BAL-29 building standards; and • Separation distances. 	
E	Retain as FZ1 until required for future rural living then rezone to RLZ1	Designate as 'future rural living zone' on Toongabbie Structure Plan. Apply Development Plan Overlay at the time of rezoning that includes: <ul style="list-style-type: none"> • Design standards for roofs, windows, eaves etc.; • BAL-29 building standards; and • Separation distances. 	
F	Retain as FZ1 until required for future rural living then rezone to RLZ1	Designate as 'future rural living zone' on Toongabbie Structure Plan. Apply Development Plan Overlay at the time of rezoning.	
G	No rezoning	None	N/A
H	Partial rezoning to RLZ1	Apply Design and Development Overlay that includes: <ul style="list-style-type: none"> • Design standards for roofs, windows, eaves etc.; • BAL-29 building standards; and • Separation distances. 	Sub precinct H1, H3 and H6. Nicholsons Road (Propnum: 32892) to go to RLZ2.
J	Retain as FZ1	Designate as 'future direction of growth' on Toongabbie Structure Plan Apply Design and Development Overlay at the time of rezoning.	



7

Mitigation Measures



7.1 Conclusion

Prioritising the protection of human life is to be ensured above all other planning considerations.

Precinct A presents too high of a risk due to it being within 700 metres of the Great Dividing Ranges and no further development should occur. All other precincts generally meet or can meet this criteria.

The best options for growth are to the east and south east as they have the lowest bushfire risk and they are separated from the fire hazard through fuel breaks. The Rural Living Zone - Schedule 1 provides an option where the properties will be 2 hectares.

Precinct H provides an opportunity to ensure that the risk is mitigated to a higher standard, as it is already a largely developed rural residential precinct. While it presents a greater risk out of the proposed precincts due to ember attack, planning controls can ensure that it meets the BAL12.5 separation distances specified in Clause 53.02, that perimeter roads are maintained and that dwellings have an appropriate design response. Ad hoc development occurs at the moment within the precinct and that will continue to occur if no preventative measures are taken. It will also ensure that the net risk is reduced for the township by providing greater resilience to properties between the hazard and the township.

As the west precinct presents the greater risk of all the precincts that are proposed to proceed, it should be one of the first precincts to be rezoned to ensure that mitigations measures are put in place immediately. This may be managed through a DDO schedule to ensure a permit trigger exists for the development.

Precinct C and D should also be rezoned in the

short term (up to 10 years) with a Development Plan Overlay (DPO) to ensure the development of an appropriate road network over the northern most property and the properties east of Rosedale Creek. This should occur prior to the south east precincts as it has less constraints to the properties than precinct E and F, is already considerably fragmented, and requires less infrastructure. It is more likely to meet the demand for rural living in the short term.

Precincts E and F could be released in the medium term (10-20 years). Precinct G should not be considered for Rural Living due to the low lot yield and the flooding constraints.

The Precinct B could be considered in the longer term as adequate residential land is currently available (see land supply for further details in the *Toongabbie Structure Plan - Background Reports - Context Report 2020*) this would be in conjunction with a DPO as the road reserves will likely need to be developed for adequate access to potential lots.

Should Toongabbie need future long-term residential areas Precinct J could be released after Precinct B with a DDO applied to the land.

7.2 General Mitigation Measures

When drafting the Toongabbie Structure Plan, it should:

- Represent the fire risk, which could include:
 - Showing the BMO on the structure plan
 - Showing the edge of the fire threat
 - Arrows showing the direction of the fire threat
- Development Plan Overlays should be applied where egress routes have not been established or where a road reserve does not exist to allow for an east-west evacuation route.

Any application to subdivide land should be in accordance with the structure plan and the housing framework plan by:

- Stating the design response to the identified bushfire risk, including in the landscaping plans, road network, street plantings and lot size and orientation.
- Providing a subdivision layout to ensure that all future dwellings can achieve a maximum Bushfire Attack Level of BAL12.5.
- Responding to all classifiable vegetation in accordance with AS3959-2009 and the Planning Scheme.



*Photo: Column vortex made during 2020 Gippsland fires.
Source: D. Appleton in DELWP Gippsland, 2020.*

7.3 Mitigation Measures by Precinct

Table BF10: Bushfire mitigation measures

<i>Precinct</i>	<i>Proposed Land Use</i>	<i>Bushfire Risk</i>	<i>Bushfire Mitigation Measures</i>
Precinct B	Low Density Residential with lots of 4000 square metres or 2000 square metres if connected to reticulated services.	At risk from grass fire from the north west and from ember attack. The Rosedale Creek also runs borders the precinct and represents a localised fire threat.	Subdivision of lots within 30m or that include Rosedale Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defensible space requirements. Ensure the Development Plan includes provision to establish roads in the existing road reserves along Hill Street and between Campbell and Traralgon-Maffra Road.
Precinct C	Rural Living with lots of 2 Hectares	At risk from grass fire from the north west and from ember attack. The Gippsland Plains Rail Trail runs along the north western corner and could create a localised fire threat. The Rosedale Creek also runs through the precinct and splits into two in the north western property.	Manage the Gippsland Plains Rail Trail. Ensure no dwellings are located within 50m of the Gippsland Plains Rail Trail. Subdivision of lots within 30m or that include Rosedale Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defensible space requirements. Ensure the Development Plan includes provision for the extension of Hill Street and a through road from Packett Road to Nippe Lane.



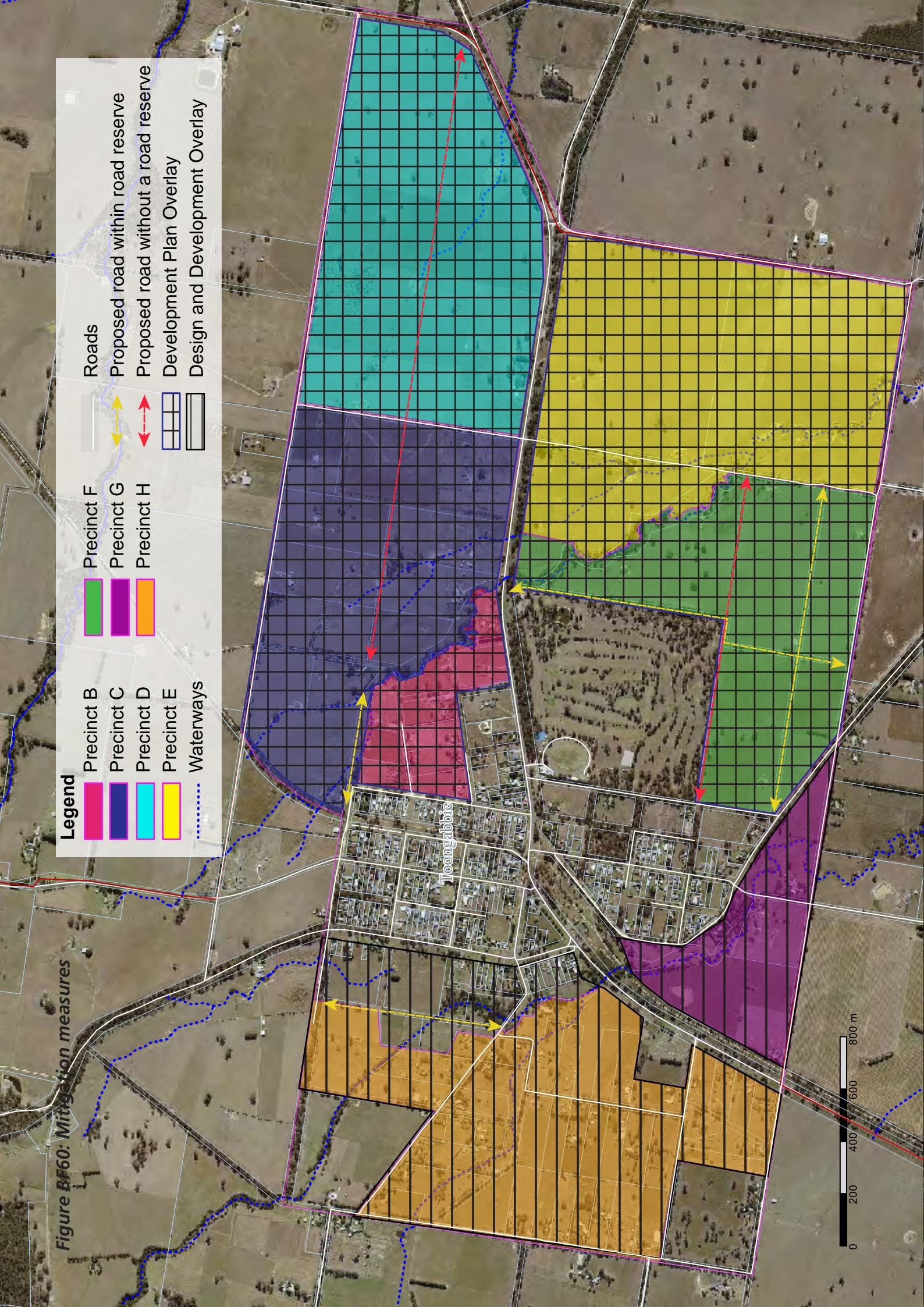
<i>Precinct</i>	<i>Proposed Land Use</i>	<i>Bushfire Risk</i>	<i>Bushfire Mitigation Measures</i>
Precinct D	Rural Living with lots of 2 Hectares	Subject to grass fire along the northern boundary of the precinct and some ember attack. It may also be subject to grass fire on site.	Maintain the perimeter road that exists along Nippe Lane, Afflecks Road and Traralgon-Maffra Road. Ensure at the application stage that the subdivision layout allows for a BAL12.5 separation distances. Continue to manage the grassland through the municipal fire prevention notices during the bushfire season.
Precinct E	Rural Living with lots of 2 Hectares	May be subject to some ember attack, it also has a slim chance of a grassfire. The vegetated creek corridor has the potential to introduce bushfire from the north due to ember attack.	Maintain Nippe Lane, Guyatts Road and Antons Lane as perimeter roads. Ensure at the application stage that the subdivision layout allows for a BAL12.5 separation distances. Subdivision of lots within 30m or that include Rosedale Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defendable space requirements.
Precinct F	Rural Living with lots of 2 Hectares	May be subject to grass fire but is the least likely to experience bushfire. There may be localised bushfire threat due to proximity to the Golf Course to the north and the Rosedale Creek to the north east both of which have patches of native vegetation.	Maintain the south of Heywood Street, Hendersons Road, Guyatts Road East and Nippe Lane as perimeter roads. Ensure the Development Plan includes provision to establish roads in the two existing road reserves as well as a new road running east-west along the southern boundary of the golf course from Heywood Street to Nippe Lane. Subdivision of lots within 30m or that include Rosedale Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defendable space requirements.

<i>Precinct</i>	<i>Proposed Land Use</i>	<i>Bushfire Risk</i>	<i>Bushfire Mitigation Measures</i>
Precinct H	Rural Living with lots of 2 Hectares or less	At risk from a landscape fire and grass fires from the north-west, west and south-west. The north-west corner has significant patches of native vegetation and is the closest to the forested vegetation.	<p>Maintain Harris Lane as a perimeter road which is specified as a firefighting access route in the <i>Latrobe City Municipal Fire Management Plan</i> (2017), while Guyatts Road acts as perimeter road along the southern border. A DDO Schedule may need to be applied to the precinct to ensure that dwellings are built to a BAL-29 standard to withstand extreme ember attack or Building envelopes and section 173 agreements could be placed on the land at the planning permit stage.</p> <p>Ensure at the application stage that the subdivision layout allows for a BAL-12.5 separation distances through requiring a bushfire site assessment in the subdivision application requirements of a Design and Development Overlay.</p> <p>Continue to manage the grassland through the municipal fire prevention notices during the bushfire season.</p> <p>Subdivision of lots within 30m or that include Toongabbie Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defendable space requirements.</p>
Toongabbie Township (I)	Residential	The main risk to the township will be through extreme ember attack.	A DDO Schedule may need to be applied to the precinct to ensure that dwellings are built to a BAL-29 standard to withstand extreme ember attack.



<i>Precinct</i>	<i>Proposed Land Use</i>	<i>Bushfire Risk</i>	<i>Bushfire Mitigation Measures</i>
Precinct J	Low Density Residential with lots of 4000 square metres or 2000 square metres if connected to reticulated services.	May be subject to grass fire from the south west along a 6.0km run from Tyers. The western edge borders along the Gippsland Plains Rail Trail which has patches of native vegetation which may present a localised threat. Toongabbie Creek also runs along the northern border.	Maintain the perimeter roads along Guyatts Road, Hower Street and Hendersons Road. Subdivision of lots within 30m or that include Toongabbie Creek would need to consider an appropriate landscaping plan to ensure a minimum fuel environment that is consistent with defensible space requirements. Consider an additional through road to Hower Street from Guyatts Road to ensure that there good access and egress. Ensure at the application stage that the subdivision layout allows for a BAL12.5 separation distances.

Figure BF60: Mitigation measures



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Appendices



Appendix 1

Criteria for Determining Risk

	<i>Likelihood Category</i>	<i>Estimated Average Recurrence Interval</i>	<i>Description</i>
1	Very Rare	1001+ years	No recorded events or any indicative evidence. No recent events in comparable jurisdictions. Miniscule opportunity, reason or means to occur. Less than 1% chance of occurrence in any one year.
2	Rare	101 - 1000 years	Few recorded events or little indicative evidence. Some similar events in comparable jurisdictions. Little opportunity, reason or means to occur. 1% chance of occurrence in any one year.
3	Unlikely	11 - 100 years	Some recorded events. Some events in comparable jurisdictions. Some opportunity, reason or means to occur. 3% chance of occurrence in any one year.
4	Possible	1 - 10 years	Many recorded events. Some events in comparable jurisdictions. Great opportunity, reason or means to occur. 10% chance of occurrence in any one year.
5	Likely	1 - 10 years	Many recorded events. Some events in comparable jurisdictions. Great opportunity, reason or means to occur. 33% chance of occurrence in any one year.
6	Almost certain	More than once a year	Expected to occur in most circumstances; with strong anecdotal evidence and history of recorded incidents. Close to 100% chance of occurring annually.

Level	Indicative guide to potential consequences					
	People	Infrastructure	Public Administration	Environment	Economy	Social Setting
Catastrophic	50+ lives lost Hundreds injured 1000+ houses destroyed 2000+ people displaced 10,000 - 30,000 livestock lost.	Loss of critical infrastructure and/or services for 24-48 hours to the Melbourne metropolitan area	Significant State-wide outrage. Royal Commission or other similar inquiry leading to changes in policy and practice.	Permanent total loss of one or more ecosystems or critical habitat elements. Loss of nationally significant cultural assets.	\$1 billion or 30% of State revenue.	Severe disruption to community wellbeing over a whole area or large part of it for a period of many years.
Major	10 fatalities as a direct result of the event 300+ houses destroyed 500+ people displaced 10,000 – 30,000 livestock lost Significant loss of agricultural breeding stock.	Loss of critical infrastructure and/or services for 8-16 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for up to a week.	Significant regional and local outrage, with some occurring at state level. Parliamentary or other inquiry leading to changes in practice	Permanent partial loss of one or more ecosystems or critical habitat elements. Extinction of a species or significantly increase the likelihood of extinction to almost certain that intervention such as captive breeding programs are required. Loss of state significant cultural assets	Damage costs including legal actions and/or industry impacts (tourism, forestry, wine and grape, etc.) to the value of more than \$300 million.	Severe disruption to community wellbeing over a wide area of for more than 24 months.
Serious	5 fatalities as a direct result of the event Large number of people affected by the event 100+ houses destroyed 200+ people displaced 3,000 – 10,000 livestock lost.	Loss of critical infrastructure and/or services for 2-5 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 3-4 days.	Some outrage at local and regional level.	Long term disturbance to one or more ecosystems or critical habitat elements. National response and/or support for animal welfare. Loss of regionally significant cultural assets	Damage costs including legal actions and/or industry impacts (tourism, forestry, wine etc.) to the value of more than \$100 million.	Severe disruption to community wellbeing over a moderate to large area for a period of months.
Important	Single fatality and/or multiple serious injuries requiring hospitalisation as a direct result of the event Up to 30 houses destroyed 50+ people displaced 3,000 – 10,000 livestock lost.	Loss of critical infrastructure and/or services for 1 hour to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 1 day. Loss of services to a local community for a week.	Local outrage and concern	Temporary disturbance to one or more ecosystems or critical habitat elements. Local response and/or support for animal welfare.	Damage costs including legal actions and/or industry impacts (tourism, forestry, wine etc.) to the value of more than \$30 million.	Localised disruption to community wellbeing over a small area for a period of weeks.

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