Municipal Housing Capacity Assessment

For the City of Ballarat

Tract

Final Report

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Quality Assurance

Municipal Housing Capacity Assessment
For the City of Ballarat
Final Report

Prepared for
City of Ballarat

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Revisions

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00	26 September 2021	Draft Report	MN	MN	MN
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02	14 April 2022	Final Report	MN	MN	MN

Contents

1 Introduction

1.1 Overview

This report provides for an assessment of potential housing capacity across the City of Ballarat. It focuses on planning zones that support housing within the established areas of Ballarat.

Housing capacity within the growth areas and capacity for sites over 1ha within the established areas of Ballarat has been assessed separately by the State Government through the Urban Development Program (UDP). Both studies should be read in conjunction to understand the total housing capacity across Ballarat.

The capacity assessment has been developed to inform the Ballarat Housing Strategy which will set out a long-term plan to address housing outcomes across Ballarat for the next 20 years.

Assessing the potential housing capacity across the municipality allows Council to understand how much housing could potentially be delivered under the existing planning controls and whether additional housing capacity is need to support the projected population growth.

The assessment provides an estimate of the total potential housing capacity across Ballarat based on a point in time. It does not assess the likelihood of land being developed or potential demand for housing and a time period for housing supply.

1.2 Scope

Table 1 outlines the planning zones that have been considered in this assessment and the total land area of each zone. Figure 1 shows where these included zones apply across Ballarat.

The inclusion of these zones has been informed by Planning Practice Note 90 - Planning for Housing which outlines suitable residential zones for housing. However, additional zones have been included in this assessment as they form a key part of Ballarat's housing supply.

These include the Rural Living Zone, Commercial 1 Zone and a small area of land within the Special Use Zone that has been identified for lower density housing.

As noted, land within the Urban Growth Zone has been assessed through the UDP. The UDP assessment also included land over 1ha within the RGZ1, GRZ1, NRZ1, NRZ2 and MUZ. Land meeting the criteria above has therefore been excluded from this capacity assessment.

Planning Zone	Total Area (Ha)
Residential Growth Zone - Schedule 1*	37.5
General Residential Zone - Schedule 1*	4,473.4
Neighbourhood Residential Zone - Schedule 1*	332.8
Neighbourhood Residential Zone - Schedule 2*	237.5
Low Density Residential Zone	315.3
Township Zone	211.7
Mixed Use Zone*	158.6
Rural Living Zone	5532.1
Commercial 1 Zone	192.2
Special Use Zone - Schedule 14 (small part allows for residential uses)	442.5

* Lots with an area over 1ha within these zones were excluded from the assessment as they were assessed as part of the Urban Development Program

Table 1. Included Planning Zones and Area

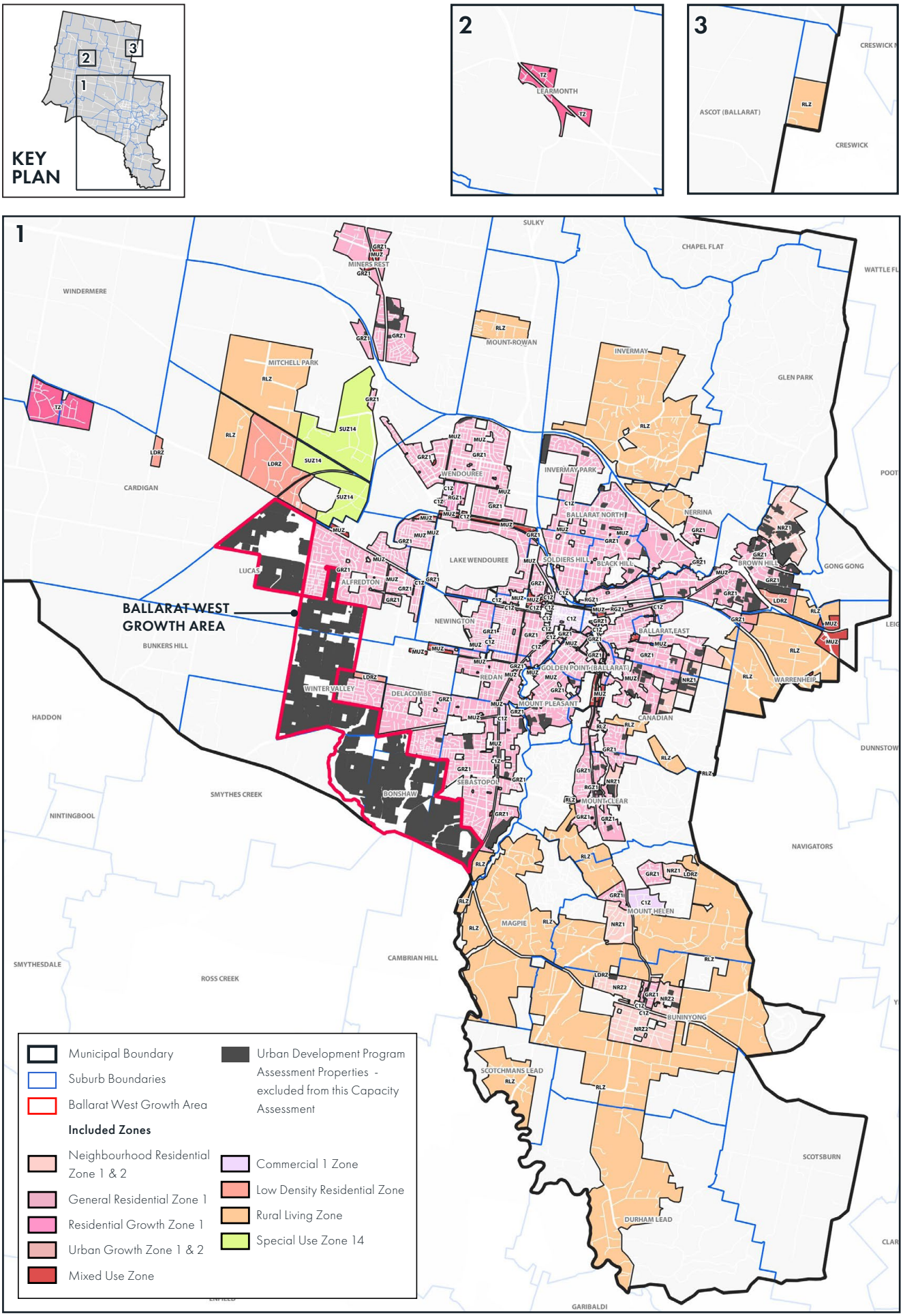


Figure 1. Map of Study Area and Included Zones

1.3 Methodology

Housing capacity has been assessed for the established areas of Ballarat based on the current planning zone controls. A summary of the methodology is outlined in Figure 2.

The first step in undertaking the capacity assessment was to identify available land within the applicable zones outlined in Table 1.

This was undertaken by removing constrained land across the Ballarat based on the assumptions outlined in Chapter 2. This included removing the following lots:

- Lots that are used for public land uses (identified through Council's rates database) - See section 2.2
- Lots that are strata titled and other medium and higher density residential uses (identified through Council's rates database) - See section 2.3
- Individually significant heritage sites (identified through Council's heritage classification database) - See section 2.4
- Recently developed properties (identified through Council's build year database) - See section 2.5
- Lots affected by the existing and proposed Floodway Overlay and Land Subject to Inundation Overlay (identified through State Government Planning Data and Council supplied data for proposed overlays). Only the affected part of lot was removed from the available land. See Section 2.6
- Lots with trees greater than 5m in height (identified through PSMA Geoscape data). Only the affected part of lot was removed from the available land. See section 2.7
- Small lots unable to provide a net increase in dwellings when future dwelling density applied (assessed through lot size analysis) - See Section 2.8

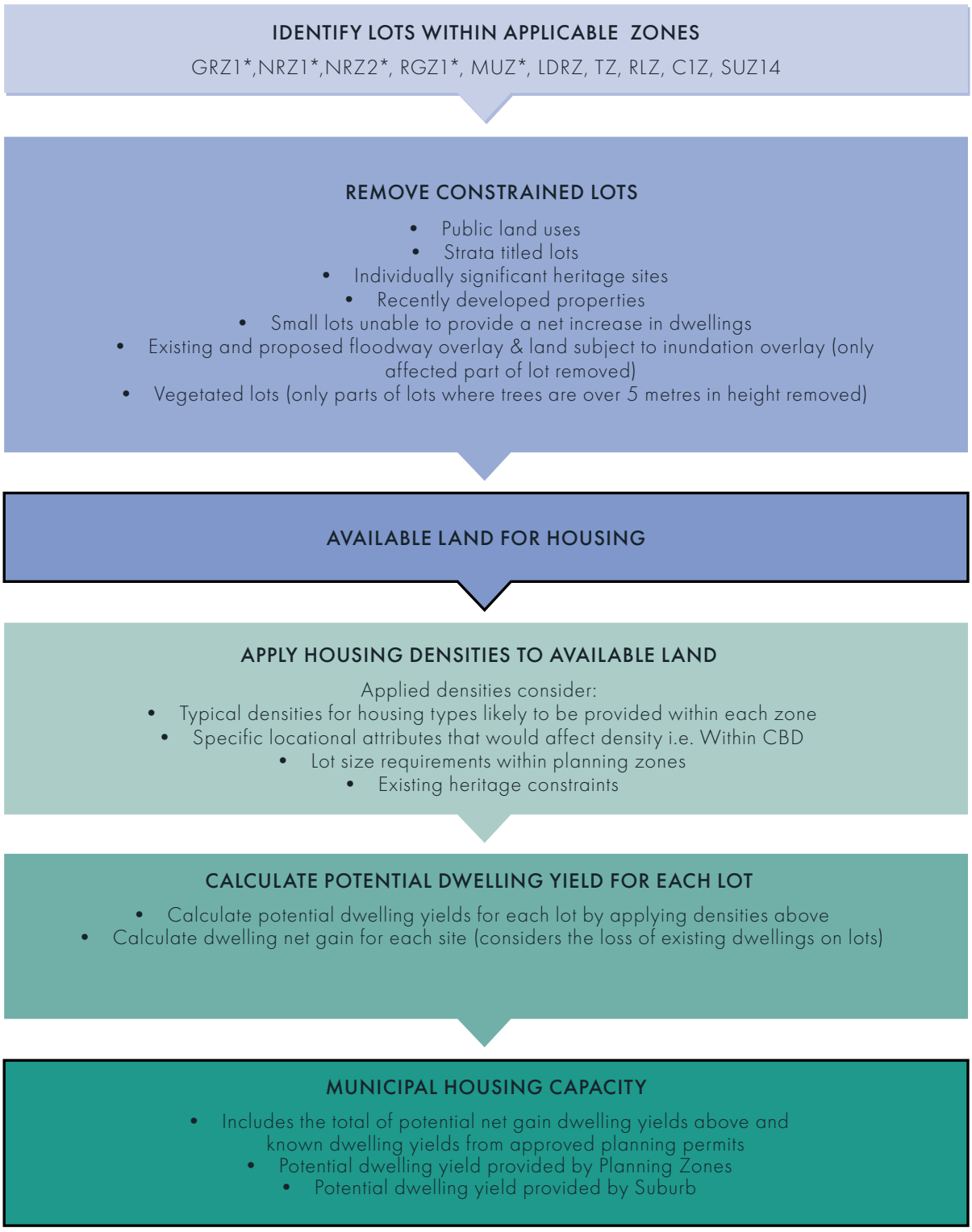
The next step was to assess the potential dwelling yield for each available lot. This was undertaken by applying a dwelling density to each lot.

The dwelling densities were identified through a range of factors including typical densities for dwelling types (i.e. townhouses, low scale apartments etc.) that are currently being delivered or are likely to be delivered within each planning zone, existing planning controls that would affect dwelling density (i,e, minimum lot sizes), and locational characteristics that could influence the density of development (i.e. Commercial properties located within the CBD). The applied dwelling densities are outlined in Section 3.2.

A net gain in dwellings was then calculated for each available lot. This takes into account whether there is an existing dwelling on the lot which will be lost if the site is redeveloped. This is subtracted from the potential yield for each site to identify the net gain.

The final step in the assessment was to calculate the total potential net gain in dwellings across the municipality. The total also included the dwelling yields from known developments with planning permits.

It is important to note that the capacity assessment does not consider the economic or technical feasibility for redevelopment, or the land owner willingness to redevelop. It provides a theoretical capacity to provide housing across Ballarat at a fixed point in time.



* Lots over 1ha in area within these zones were excluded from the assessment as they were assessed as part of the Urban Development Program

Figure 2. Summary of Methodology

1.4 Data Sources

A number of datasets have been relied on to undertake the assessment. These datasets are outlined in Table 2.

Data Source	Overview
Property Rates Data - Supplied by City of Ballarat	This dataset provided the basis of the assessment for infill areas. It included the property boundaries, land use description, site valuation and capital improved valuation.
Planning Zones - Victorian Government	The planning zones were utilised to identify the land zoning for each property.
Planning Overlays - Victorian Government	The Floodway Overlay (FO) and Land Subject to Inundation Overlay (LSIO) was used to identified land constrained by flooding.
Proposed Floodway Overlay and Land Subject to Inundation Overlay - City of Ballarat	The proposed FO and LSIO were utilised to identify land constrained by flooding. This dataset was combined with existing FO and LSIO.
Heritage Classification - City of Ballarat	This dataset was utilised to identify properties affected by a heritage overlay along with their classification.
Property Build Year - City of Ballarat	This dataset contains the build year for each property in the municipality up until 2005.
Sewer Infrastructure - City of Ballarat & Central Highlands Water	This dataset contained information on existing sewer infrastructure. It was used to assess which properties within the Low Density Residential Zone (LDRZ) that are currently serviced by sewer infrastructure.
Geoscape Vegetation Data - PSMA	This dataset provides vegetation data. Trees over 5m were identified for the GRZ and NRZ properties.
Council Planning Permit Data	An assessment of approved planning permits was undertaken by Council along with number of dwellings.

Table 2. Datasets utilised for the Capacity Assessment

2 Assessment of available land within the established areas of Ballarat - RGZ, GRZ, NRZ, MUZ, TZ, LDRZ, RLZ, C1Z & SUZ14

2.1 Overview

The available land within the City of Ballarat is identified as land that is able to accommodate additional housing. If redeveloped, these properties will provide for a net increase in dwellings. This takes into consideration the loss of an existing dwelling that may exist on the property.

It should be noted that not all available lots will be developed for additional housing because of a range of factors such as whether the owner is willing to redevelop or whether it is technically or economically feasible to redevelop.

However it needs to be considered in understanding the underlying housing capacity within the City of Ballarat.

To arrive at available land in Ballarat, a number of development assumptions have been applied at the lot level to remove lots that are not able to provide additional housing. A summary of how these assumptions have been applied is outlined in Table 3 and detailed in this chapter.

	Public uses / Land uses unlikely to redevelop	Strata Housing removed	Individually Significant Heritage Buildings	Unswered Lots	Dwelling built after 1991 and site coverage greater than 20%	Existing & Proposed LSIO or FO - Affected portion removed from developable area	Trees over 5m in height - Affected portion removed from developable area	Minimum Developable Area exclusions (Sq.m) for vacant sites	Minimum Developable Area exclusions (Sq.m) for sites with an existing dwelling
Residential Growth Zone 1 (RGZ1) adjacent to CBD	x	x	x			x			
Residential Growth Zone 1 (RGZ1) elsewhere	x	x	x			x		< 200	< 400
General Residential Zone 1 (GRZ1)	x	x	x		x	x	x	<333	<666
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	x	x	x		x	x	x	<500	<1000
Neighourhood Residential Zone 1 (NRZ1)	x	x	x		x	x	x	< 800[1]	< 1600[1]
Neighourhood Residential Zone 2 (NRZ2)	x	x	x		x	x	x	< 800[1]	< 1600[1]
Neighourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites					x	x	x	< 800[1]	< 1600[1]
Mixed Use Zone (MUZ)	x	x	x					< 200	< 400
Mixed Use Zone (MUZ) - Contributory Heritage Sites	x	x	x					< 200	< 400
Township Zone (TZ)	x	x	x	x	x	x		< 750[2]	< 1500[2]
Low Density Residential Zone (LDRZ) - Sewered	x	x	x			x		< 2000[3]	< 4000[3]
Low Density Residential Zone (LDRZ) - Unsewered	x	x	x			x		< 4000[3]	< 8000[3]
Rural Living Zone (RLZ) - Larger Lots	x	x	x			x		< 40000[4]	< 80000[4]
Rural Living Zone (RLZ)	x	x	x			x		< 20000[4]	< 40000[4]
Commercial 1 Zone (C1Z) - CBD	x	x	x						
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	x	x	x						
Commercial 1 Zone (C1Z) - Outside of CBD	x	x	x						
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	x	x	x						
Special Use Zone 14 (SUZ14)	x	x	x			x			

[1] 800sq.m future minimum lot size specified in the Zone Schedules
[2] 750sqm future minimum lot size determined by Council Officers
[3] 2,000sq.m lot size specified through the Zone for sewered lots and 4,000sq.m for unsewered lots
[4] Lot sizes assigned to specific locations through the Zone Schedule

Table 3. Summary of available land assumptions

2.2 Public Land Uses

The land use for each property within Ballarat was included in the rates database provided by Council.

From this database, lots that were used for a public purpose and unlikely to redevelop were removed from the available land. This included land uses within the following general categories:

- Emergency services facilities
- Parks and recreational facilities
- Conservation reserves
- Schools and Universities
- Civic and Community facilities
- Childcare and Kindergartens
- Places of worship
- Infrastructure

Sites that are unlikely to be redeveloped for residential or mixed use purposes because of an established retail or commercial use were also identified and removed from the available land. This include the following sites:

- Ballarat Technology Park, Mt Helen
- Stockland Wendouree Shopping Centre, Wendouree

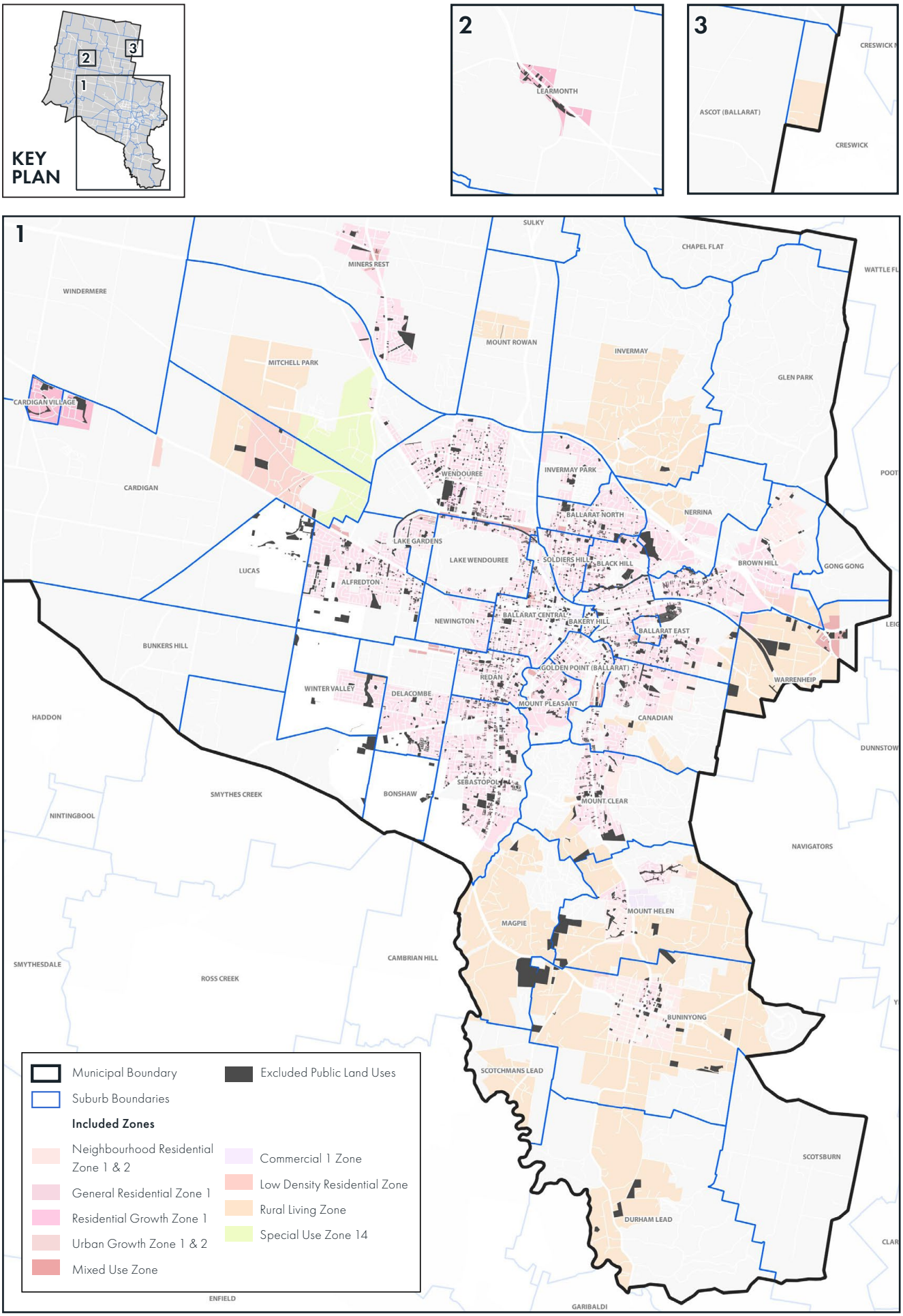


Figure 3. Map of Excluded Public Land Uses

2.3 Strata and other residential uses

Residential lots that are strata titled and other medium and higher density residential uses were removed from the available land. These lots were identified through Council's rates database.

Strata titled properties are unlikely to redevelop because of challenges in getting multiple land owners to redevelop together. In addition, these strata titled developments generally provide for multiple residential dwellings so redevelopment is unlikely to increase dwelling capacity.

Other residential uses that are unlikely to redevelop were also excluded from the available land. This included uses such as aged care complexes, retirement villages and accommodation, which are unlikely to provide for an increase in dwellings if redeveloped.

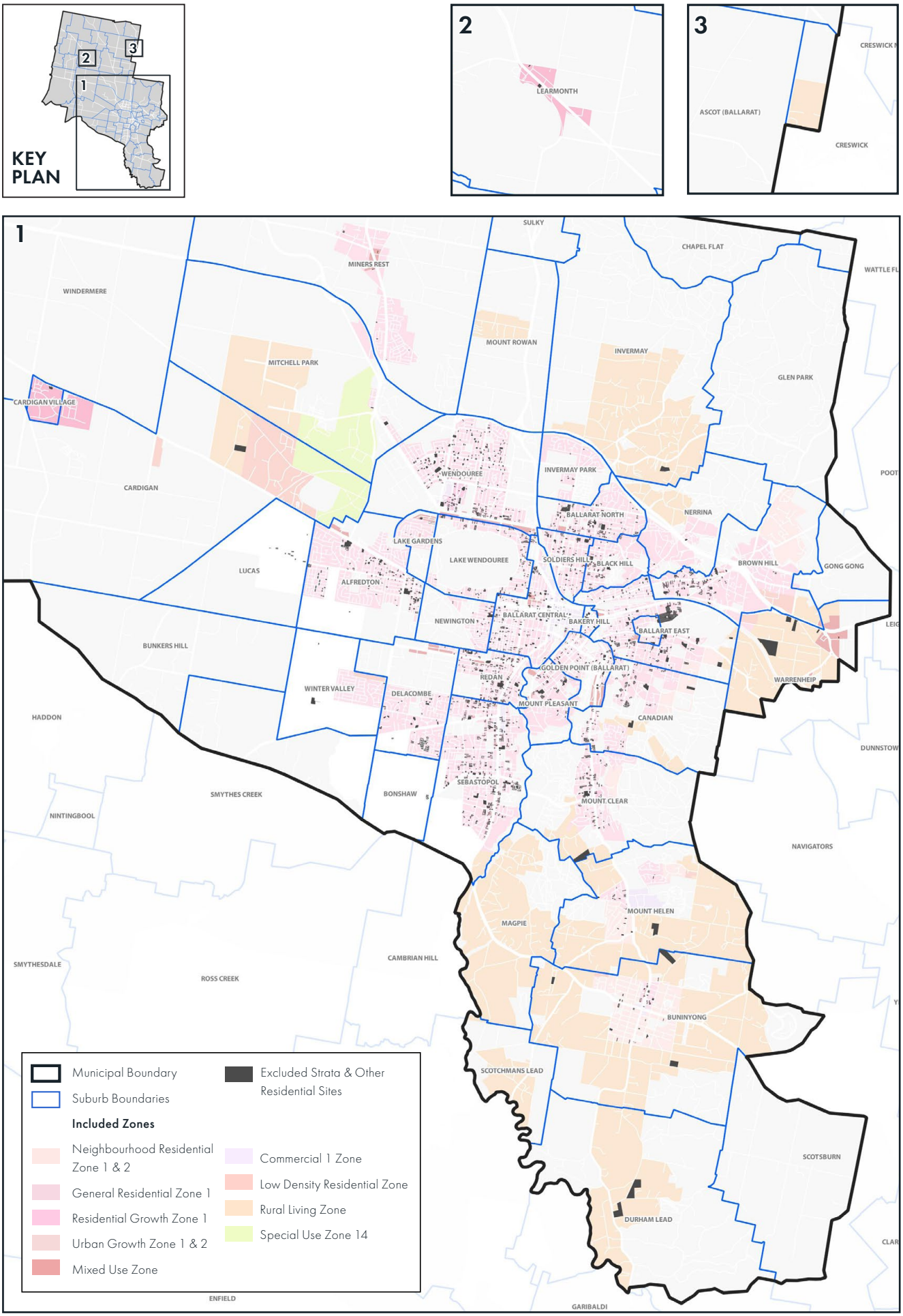


Figure 4. Map of strata and other residential uses

2.4 Heritage Sites

Heritage is a key consideration when assessing available land in the City of Ballarat. The CBD and residential areas surrounding the CBD have a rich heritage character.

The Ballarat Heritage Precincts Statements Of Significance 2006 (revised 2014) identified individually significant, contributory and non-contributory buildings within the heritage precincts of Ballarat. This classification was supplied as a GIS layer identifying the relevant properties.

Individually significant heritage sites and Victorian Heritage Register Sites were excluded from available land. These sites are less likely to redevelop because of heritage constraints.

Contributory heritage buildings were retained as available land however a lower redevelopment density was applied. For residential areas it was assumed that the original dwelling would be retained, which would mean that lots would have to be larger to provide an additional dwelling. Within C1Z areas it was assumed that new development would need to be at a lower scale to integrate with the heritage context.

Refer to Chapter 3 for details on the applied densities.

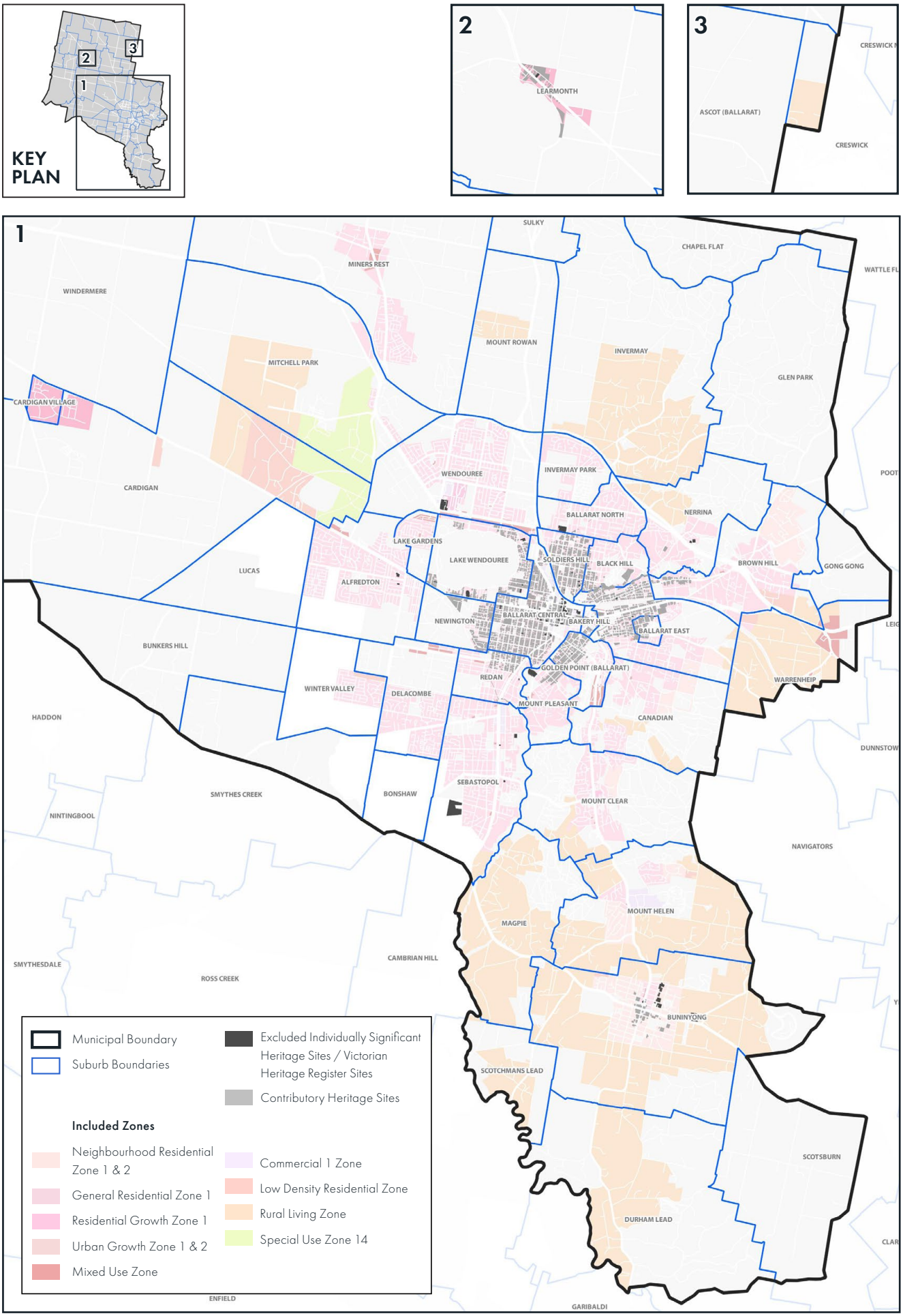


Figure 5. Map of Heritage Significance

2.5 Recent Development

Recently developed buildings within the NRZ, GRZ and TZ were excluded from the capacity analysis as they were unlikely to be redeveloped.

Recently developed properties were identified through Council's build year database, which included information on dwellings construction year for dwellings within the residential zones only. Dwellings with a construction year after 1991 were removed from the available land.

However dwellings that were developed after 1991 with low building site coverage (less than 20%) were included in the available land. It was considered that these properties could still be developed to provide additional housing whilst retaining the existing building.

Similarly recently developed properties within the LDRZ and RLZ zones were included in the available land as the larger lot sizes would allow for the existing dwelling to be retained whilst providing additional housing.

Recent development in the MUZ and C1Z was also included in the available land. It was assumed that these properties would be redeveloped for a higher density and higher yielding mixed use development even if the property was recently developed.

Figure 6 identifies the recently developed lots that have been excluded from the available land.

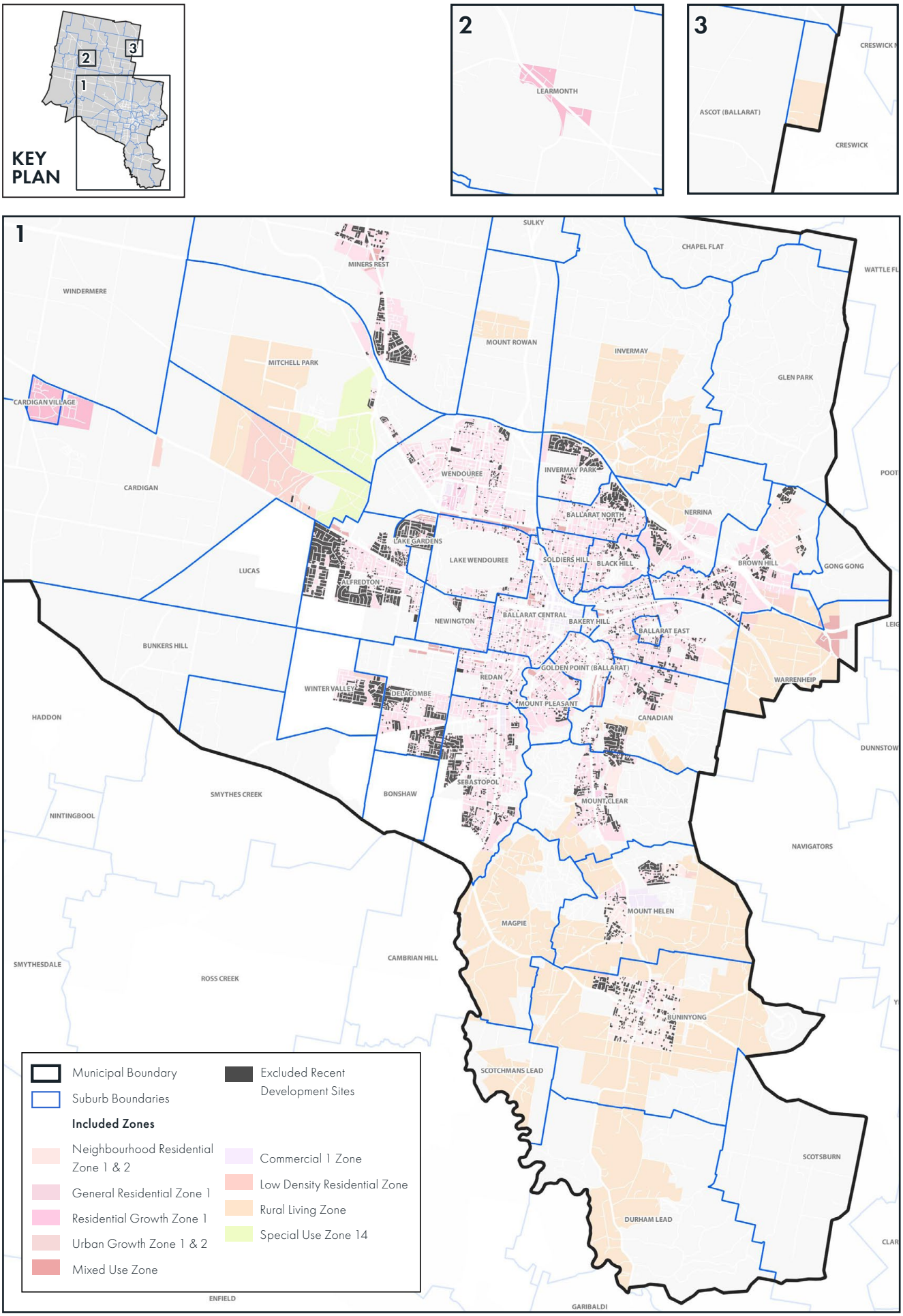


Figure 6. Map of excluded recently developed properties

2.6 Existing and Proposed Flooding Overlays

The existing flooding controls within Ballarat Planning Scheme are limited and apply only to towns in the north western parts of the Shire. The flooding controls are currently being updated and will be extended across the central residential areas of Ballarat. Refer to Figure 7.

For the purpose of assessing the impacts of flooding on housing capacity both the existing and the proposed Floodway Overlays (FO) and Land Subject to Inundation Overlays (LSIO) were utilised.

These Overlays were intersected with lots across the municipality to identify parts of lots that are affected by flooding constraints.

Rather than excluding the entire lot from the available land (shown as light grey in Figure 8) only the area affected by the overlays was removed from available land (shown as dark grey in Figure 8).

Flooding constraints were not applied to C1Z and MUZ properties. Residential development on these properties is likely to be above the ground floor and therefore would not be affected by flood events.

Properties affected by the Special Building Overlay were not considered to constrained for development. This overlay has fewer development requirements than the other flood related overlays and poses less of a constraint to development.

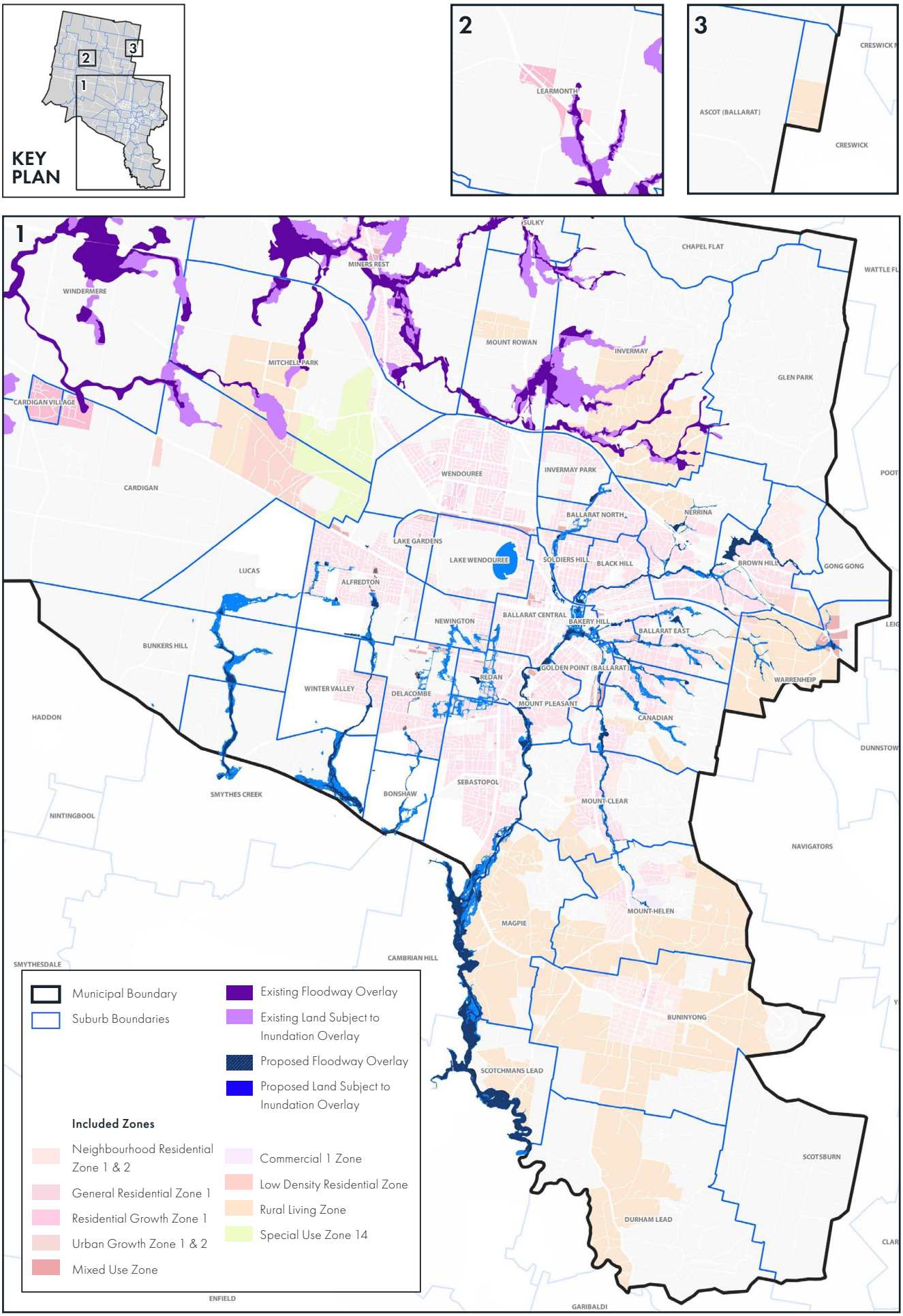


Figure 7. Map of existing and proposed Floodway Overlay and Land Subject to Inundation Overlay

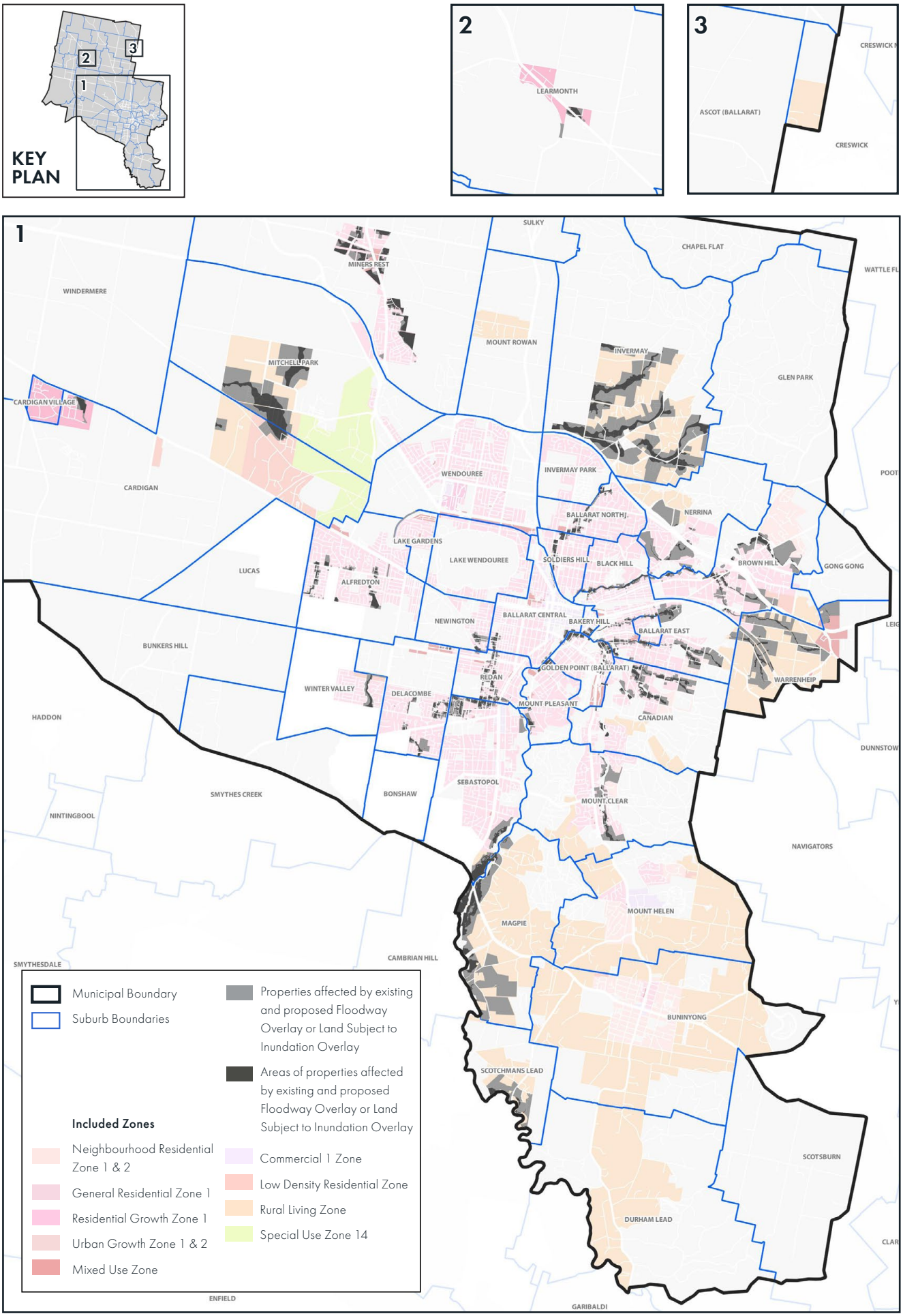


Figure 8. Map of lots and areas affected by existing and proposed Floodway Overlay and Land Subject to Inundation Overlay

2.7 Existing Vegetation

Existing vegetation was identified through the PSMA Geoscape dataset, which contains information on tree canopy cover and tree height. Tree cover data was collected for the NRZ and GRZ areas only.

Trees that were greater than 5m in height were removed the developable area of lots within the GRZ and NRZ areas.

Trees of 5m or greater were considered to be of a height where the tree canopy would protrude above the general single storey roofline. Retaining trees of this height would ensure that the treed character of some locations is maintained.

The arboricultural or ecological significance of the vegetation has not been considered as part of the Capacity Assessment

Tree cover data for TZ, LDRZ, RLZ and SUZ14 was not utilised in this assessment. Lots within these zones are larger and could more easily accommodate a dwelling without impacting on large trees.

For C1Z, MUZ and RGZ1 areas, trees were not considered to be a significant constraint for development. Land within these zones is less likely to include large trees and the more intensive development outcomes supported through the zones would generally require the removal of existing vegetation.

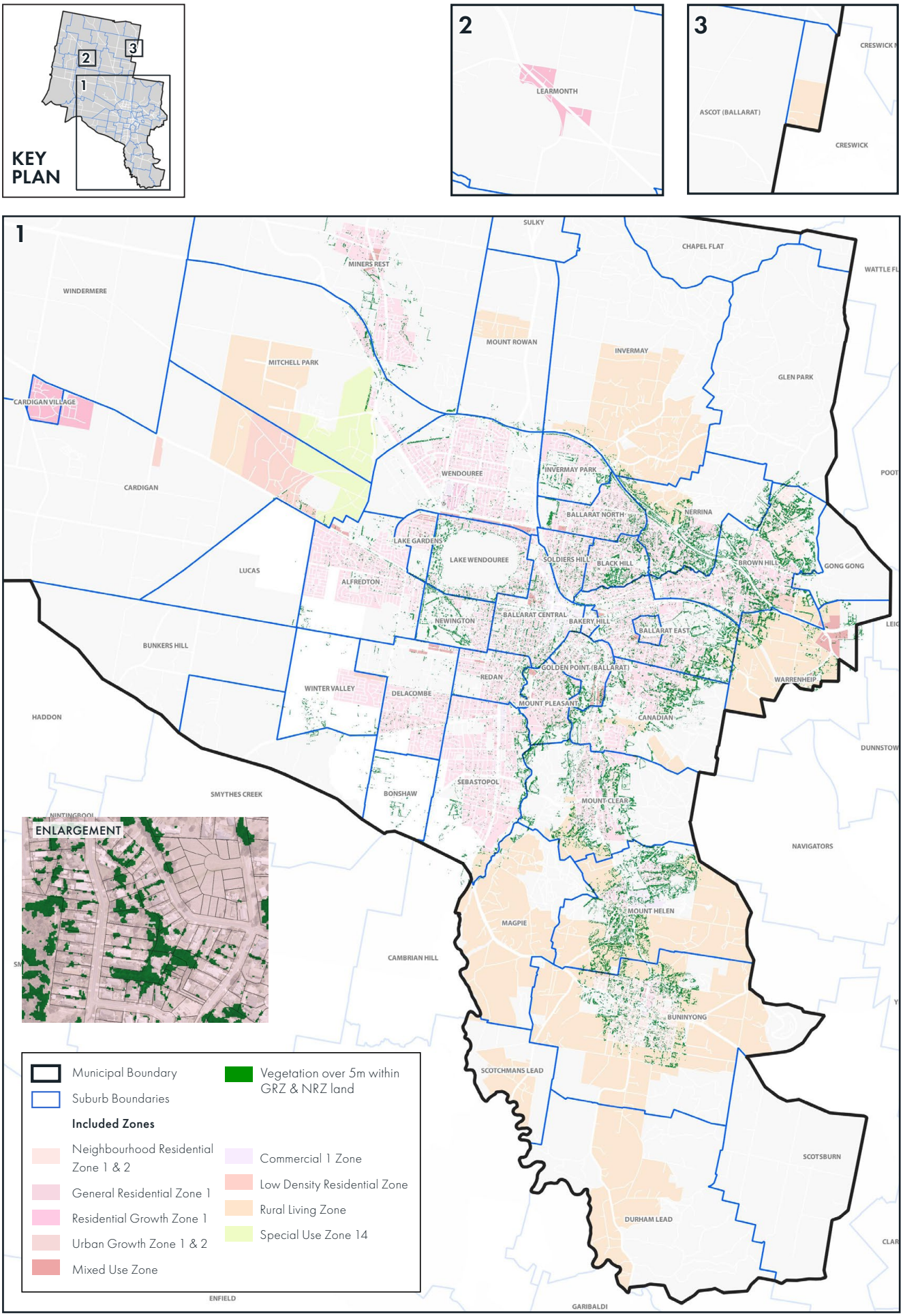


Figure 9. Map of trees over 5m within the GRZ and NRZ

2.8 Small Lots

A number of properties were removed from the available land because the lot size would be too small to provide for a net increase in dwellings.

This took into consideration the applied dwelling densities which are outlined in Table 6 in Chapter 3. It also considered whether the land was vacant or had an existing dwelling. Refer to Table 4 for a summary of minimum lot size exclusions and Figure 9 which shows the lots excluded based on lot size.

Vacant land that was able support one or more dwellings based on the applied dwelling densities was retained as available land as it would result in a net gain in dwellings.

Lots with existing dwellings that were not able to support two or more dwellings were removed from the available land. These lots would not result in a net gain in dwellings.

A minimum lot size was not applied to C1Z, MUZ and RGZ1 sites surrounding the CBD. It was assumed that these sites would be developed for apartment buildings with dwellings on multiple levels, which can be provided on smaller sites.

Planning Zone and Condition	Minimum lot size exclusions for sites with an existing dwelling (sq.m)	Minimum lot size exclusions for vacant sites (sq.m)
Residential Growth Zone 1 (RGZ1) outside of CBD	< 400	< 200
General Residential Zone 1 (GRZ1)	< 666	< 333
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	< 1000	< 500
Neighourhood Residential Zone 1 (NRZ1)	< 1600	< 800
Neighourhood Residential Zone 2 (NRZ2)	< 1600	< 800
Township Zone (TZ)	< 1500	< 750
Low Density Residential Zone (LDRZ) - Sewered	< 4000	< 2000
Low Density Residential Zone (LDRZ) - Unsewered	< 8000	< 4000
Rural Living Zone (RLZ) - Larger Lots	< 80000	< 40000

Table 4. Minimum lot size exclusions for relevant planning zones and conditions

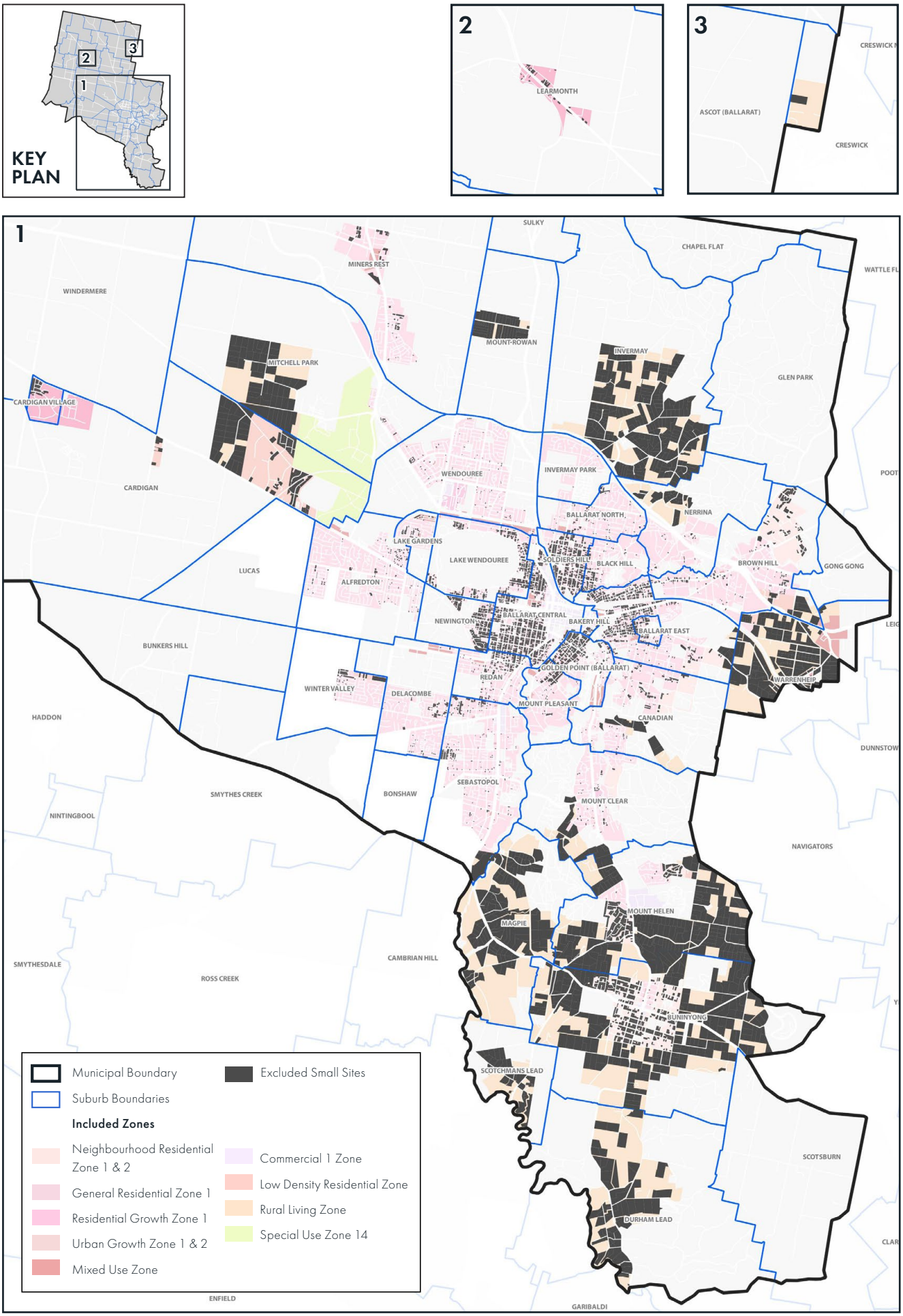


Figure 10. Map of excluded small lots

2.9 Known Developments

Sites that have existing planning permits for residential development have been identified through data provided by Council. These sites are mapped along with a dwelling yield in Figure 10. It should be noted that this excludes large redevelopment sites of 1ha or greater that have separately been identified through the State Government's Urban Development Program.

The known developments have been identified separately from other available land in Ballarat. These sites have more certainty of the lot yield as a planning permit has been issued and therefore do not need to have a future dwelling density applied.

These sites have been itemised separately in the capacity assessment in Chapter 3.

2.10 Capital Improved Value Ratio

Capacity assessments often adopt a benchmark ratio of Capital Improved Value (CIV) to Site Value (SV) to identify sites that are unlikely to redevelop. This is known as Capital Improved Value Ratio (CIVR).

Properties with high value capital improvements relative to the site value are typically less likely to be redeveloped because of the capital investment in the site. Properties with lower value capital investments relative to the site value are more likely to be redeveloped as the loss of the capital investment is likely to be exceeded by the financial return from the redevelopment.

Analysis of CIVR across Ballarat was undertaken to assess whether it can reliably be used as an measure for identifying sites that re unlikely to redevelop. Refer to Infill Feasibility Consideration Memo in Appendix A.

The analysis found that it was not a reliable indicator and that many sites with a relatively high CIVR (based on typical benchmarks) were still considered feasible to be redeveloped. Conversely, there were a number of sites with a relatively low CIVR that were not considered feasible for redevelopment.

On this basis, CIVR has not been used as a measure to exclude sites from the available land.

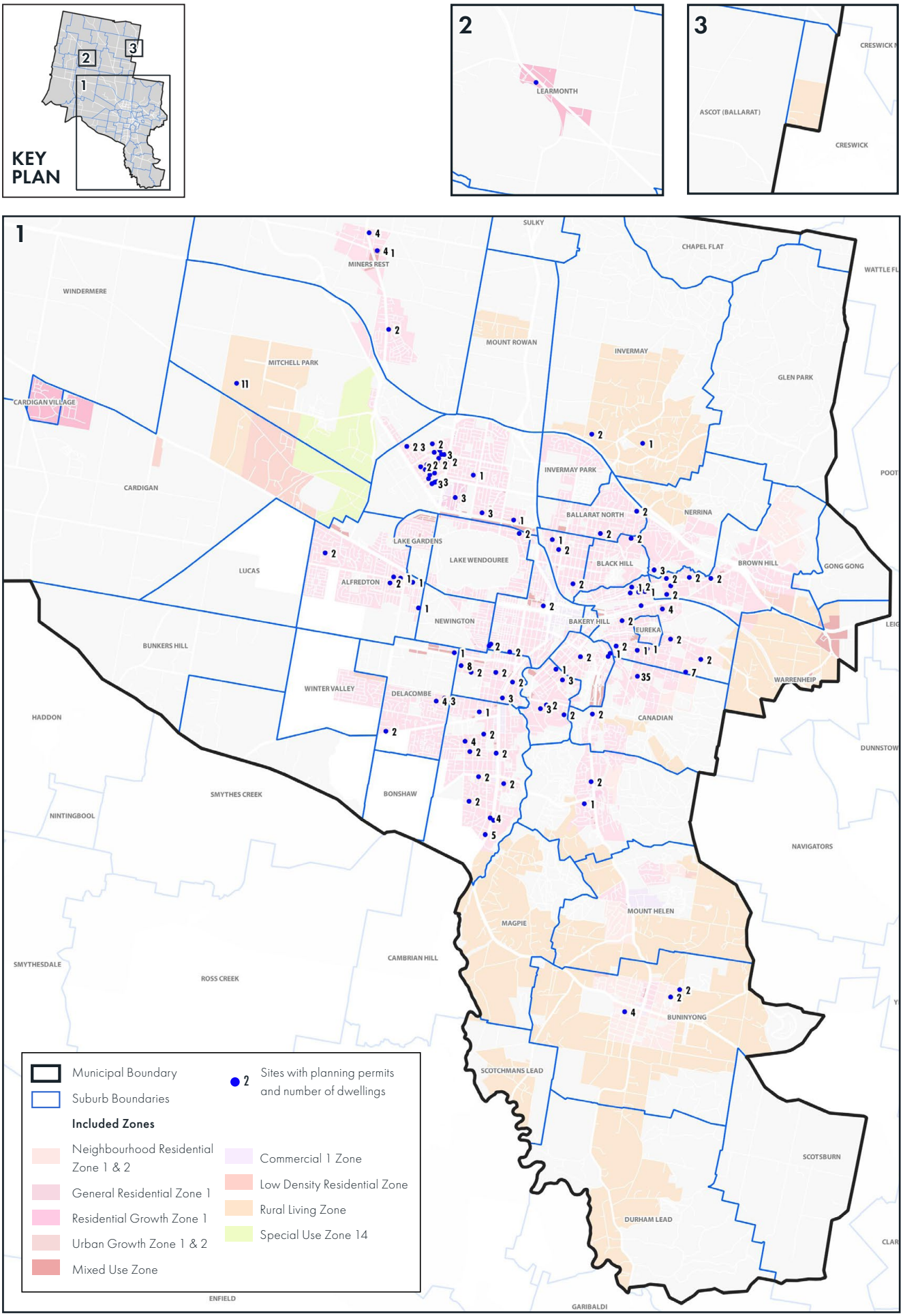


Figure 11. Map of approved planning permits

2.11 Available Land

The available land within the RGZ, GRZ, NRZ, MUZ, LDRZ, RLZ, C1Z & SUZ14 is outlined Table 5 below and shown in Figure 11 opposite. This takes into account all of the development constraints outlined in this chapter.

Planning Zone and Condition	Lot Count	Total area of available land (Ha)
Residential Growth Zone 1 (RGZ1) adjacent to CBD	155	11.9
Residential Growth Zone 1 (RGZ1) elsewhere	32	2.7
General Residential Zone 1 (GRZ1)	8072	864.4
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	456	58.7
Neighourhood Residential Zone 1 (NRZ1)	144	70.0
Neighourhood Residential Zone 2 (NRZ2)	108	28.4
Neighourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites	8	3.6
Mixed Use Zone (MUZ)	382	76.6
Mixed Use Zone (MUZ) - Contributory Heritage Sites	75	7.8
Township Zone (TZ)	73	26.4
Low Density Residential Zone (LDRZ) - Sewered	75	130.9
Low Density Residential Zone (LDRZ) - Unsewered	23	42.7
Rural Living Zone (RLZ) - Larger Lots	23	145.3
Rural Living Zone (RLZ)	112	1181.5
Commercial 1 Zone (C1Z) - CBD	184	18.0
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	330	15.4
Commercial 1 Zone (C1Z) - Outside of CBD	264	32.2
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	161	9.4
Special Use Zone 14 (SUZ14)	1	23.5

Table 5. Available land

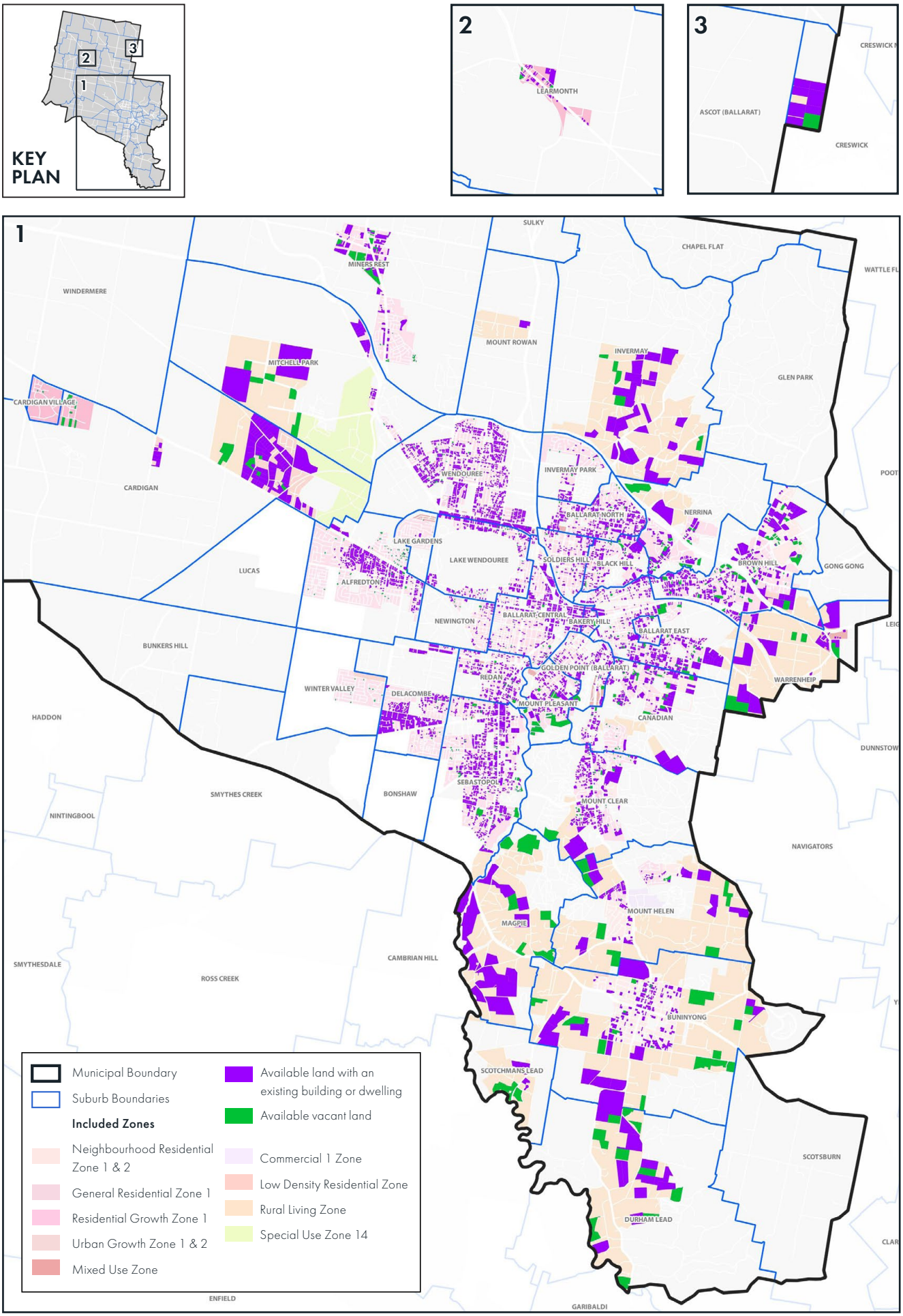


Figure 12. Map of available land

3 Capacity Assessment

3.1 Overview

In order to understand housing capacity a potential dwelling yield has been calculated for each available lot identified in Chapter 2.

The first step in calculating potential dwelling yields is identifying an appropriate dwelling density for the site. This takes a number of factors into consideration including land zoning, planning controls and location. Table 6 outlines a range of dwelling densities that have been applied to the available across Ballarat.

After applying the dwelling density to the site, the potential housing yield is calculated.

The next step is calculating the net capacity for the site. This takes into account whether there is an existing dwelling on the site. If the site has an existing dwelling, then it is assumed that this dwelling is lost through redevelopment, so it needs to be subtracted from the potential yield to calculate the net capacity.

3.2 Dwelling Densities

A range of dwelling densities have been applied to available land based on the existing land zoning and other conditions. Table 6 outlines the dwelling densities that have been applied along with a rationale of why the density has been applied.

For established areas, a site density calculation has been used. Site density assumes that the entire site is available for residential development i.e. no land is required for public roads, open space or other land uses. However land for driveways and other internal access arrangements would need to be provided.

3.3 Known Developments

Council has identified a number of sites across Ballarat with approved and lodged planning permits. For these sites, no dwelling density has been applied as the future dwelling yield is already known.

Planning Zone and Condition	Proposed Site / Net Density (Dwellings / Ha)	Land per dwelling (sq.m)	Rationale for Density
Residential Growth Zone 1 (RGZ1) adjacent to CBD	140	N/A	Reflects density associated with low-scale apartment development (3-4 storeys)
Residential Growth Zone 1 (RGZ1) elsewhere	50	200	Reflects density associated with 2-3 storey townhouse development.
General Residential Zone 1 (GRZ1)	30	333	Reflects historical densities for unit and townhouse development across Ballarat
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	20	500	A lower density than GRZ areas to accommodate retention of existing dwelling
Neighourhood Residential Zone 1 (NRZ1)	12.5	800	Reflects the zone schedule minimum lot size
Neighourhood Residential Zone 2 (NRZ2)	12.5	800	Reflects the zone schedule minimum lot size
Neighourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites	12.5	800	Reflects the zone schedule minimum lot size
Mixed Use Zone (MUZ)	50	200	Reflects density associated with 2-3 storey townhouse development.
Mixed Use Zone (MUZ) - Contributory Heritage Sites	50	200	Reflects density associated with 2-3 storey townhouse development.
Township Zone (TZ)	13.3	750	Reflects desired future lot sizes for TZ areas
Low Density Residential Zone (LDRZ) - Sewered	5	2000	Reflects zone schedule minimum lot size for sewered properties
Low Density Residential Zone (LDRZ) - Unsewered	2.5	4000	Reflects zone schedule minimum lot size for unsewered properties
Rural Living Zone (RLZ) - Larger Lots	0.25	40000	Reflects zone schedule minimum lot sizes
Rural Living Zone (RLZ)	0.5	20000	Reflects zone schedule minimum lot sizes
Commercial 1 Zone (C1Z) - CBD	150	N/A	Reflects low-scale mixed use apartment development of 4-6 storeys
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	100	N/A	Assumes a lower density than non-heritage sites due to heritage constraints
Commercial 1 Zone (C1Z) - Outside of CBD	80	N/A	Reflects a low-scale apartment development of 2-3 storeys appropriate to areas outside of the CBD
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	65	N/A	Assumes a lower density than non-heritage sites due to heritage constraints
Special Use Zone 14 (SUZ14)	4*	2000	Reflects future lot sizes identified in Schedule 10 to the Development Plan Overlay.

* Assumes 20% of available land is required for roads to service low density development

Table 6. Dwelling Density Assumptions

3.4 Potential Dwelling Yield for Established Areas

Table 7 and 8 details the potential dwelling capacity for the established areas of Ballarat by zone and suburb. The potential dwelling yield for each site is also mapped in Figure 12 and Appendix B.

The capacity assessment identifies potential for an additional 30,261 dwellings within the established areas of Ballarat.

Table 7 shows that the General Residential Zone 1 (GRZ1) has the potential to provide for the greatest increase in housing in infill areas with 55.4% of total capacity.

The Commercial 1 Zone (C1Z) has second greatest amount of capacity with 22.8% and the Mixed Use Zone (MUZ) has the third greatest amount of capacity with 13.0%.

In terms of suburbs (Table 9), Ballarat Central has the greatest amount of capacity (16.1%) which is due to the C1Z land and small amounts of surrounding residential and mixed use land. Sebastapol has the second greatest housing capacity with 10.1%. This is due to a large amount of unconstrained GRZ1 land and substantial amount of C1Z land.

Planning Zone & Condition	Potential Net Dwellings	Net Dwellings from Approvals	Total	%
Residential Growth Zone 1 (RGZ1)	374	2	376	1.2%
Residential Growth Zone 1 (RGZ1) - CBD Surrounds	289	2	291	1.0%
General Residential Zone 1 (GRZ1)	15979	173	16152	53.4%
General Residential Zone 1 (GRZ1) - Contributory Heritage Sites	599	14	613	2.0%
Neighourhood Residential Zone 1 (NRZ1)	693	7	700	2.3%
Neighourhood Residential Zone 2 (NRZ2)	198	6	204	0.7%
Neighourhood Residential Zone 2 (NRZ2) - Contributory Heritage Sites	32		32	0.1%
Mixed Use Zone (MUZ)	3578	4	3582	11.8%
Mixed Use Zone (MUZ) - Contributory Heritage Sites	340		340	1.1%
Township Zone (TZ)	289		289	1.0%
Low Density Residential Zone (LDRZ) - Unsewered	238		238	0.8%
Low Density Residential Zone (LDRZ) - Sewered	182		182	0.6%
Rural Living Zone (RLZ)	48		48	0.2%
Rural Living Zone (RLZ) - Large Lots	222	11	233	0.8%
Commercial 1 Zone (C1Z) - CBD	2600		2600	8.6%
Commercial 1 Zone (C1Z) - CBD - Contributory Heritage Sites	1379		1379	4.6%
Commercial 1 Zone (C1Z) - Outside of CBD	2389		2389	7.9%
Commercial 1 Zone (C1Z) - Outside of CBD - Contributory Heritage Sites	519		519	1.7%
Special Use Zone 14 (SUZ14)	94		94	0.3%
			30261	

Table 7. Net Dwelling Capacity by Zone

SUBURB	RGZ1	GRZ1	NRZ1	NRZ2	MUZ	TZ	LDRZ	RLZ	C1Z	SUZ14	Total Net Capacity	%
ALFREDTON		871			215				89		1175	3.9%
BAKERY HILL	93	3			7				777		880	2.9%
BALLARAT CENTRAL	172	178			187				4324		4861	16.1%
BALLARAT EAST	26	967	146		278				222		1639	5.4%
BALLARAT NORTH		787			33				16		836	2.8%
BLACK HILL		550									550	1.8%
BROWN HILL		1756	317		19		34				2126	7.0%
BUNINYONG		117		236	31			53	155		592	2.0%
CANADIAN		913	104		5			5			1027	3.4%
CARDIGAN						100	375	3		94	572	1.9%
CARDIGAN VILLAGE						11					11	0.0%
CRESWICK								13			13	0.0%
DELACOMBE		1076			373						1449	4.8%
DURHAM LEAD								31			31	0.1%
EUREKA		73									73	0.2%
GOLDEN POINT		359			149						508	1.7%
INVERMAY								52			52	0.2%
INVERMAY PARK		189									189	0.6%
LAKE GARDENS		12			24						36	0.1%
LAKE WENDOUREE		448			30						478	1.6%
LEARMONTH						178					178	0.6%
MAGPIE								46			46	0.2%
MINERS REST		933			277						1210	4.0%
MITCHELL PARK		474						28			502	1.7%
MOUNT CLEAR	33	777	96		6			5	100		1017	3.4%
MOUNT HELEN		166	37		4		6	16			229	0.8%
MOUNT PLEASANT		995			40						1035	3.4%
MOUNT ROWAN								1			1	0.0%
NERRINA		579						4			583	1.9%
NEWINGTON		73			1						74	0.2%
REDAN		502			87						589	1.9%
SCOTCHMANS LEAD								6			6	0.0%
SEBASTOPOL		1998			54				1003		3055	10.1%
SOLDIERS HILL		202			10						212	0.7%
WARRENHEIP		47			1346		5	18			1416	4.7%
WENDOUREE	343	1702			746				201		2992	9.9%
WINTER VALLEY		18									18	0.1%
	667	16765	700	236	3922	289	420	281	6887	94	30261	

Table 8. Net Dwelling Capacity by Suburb

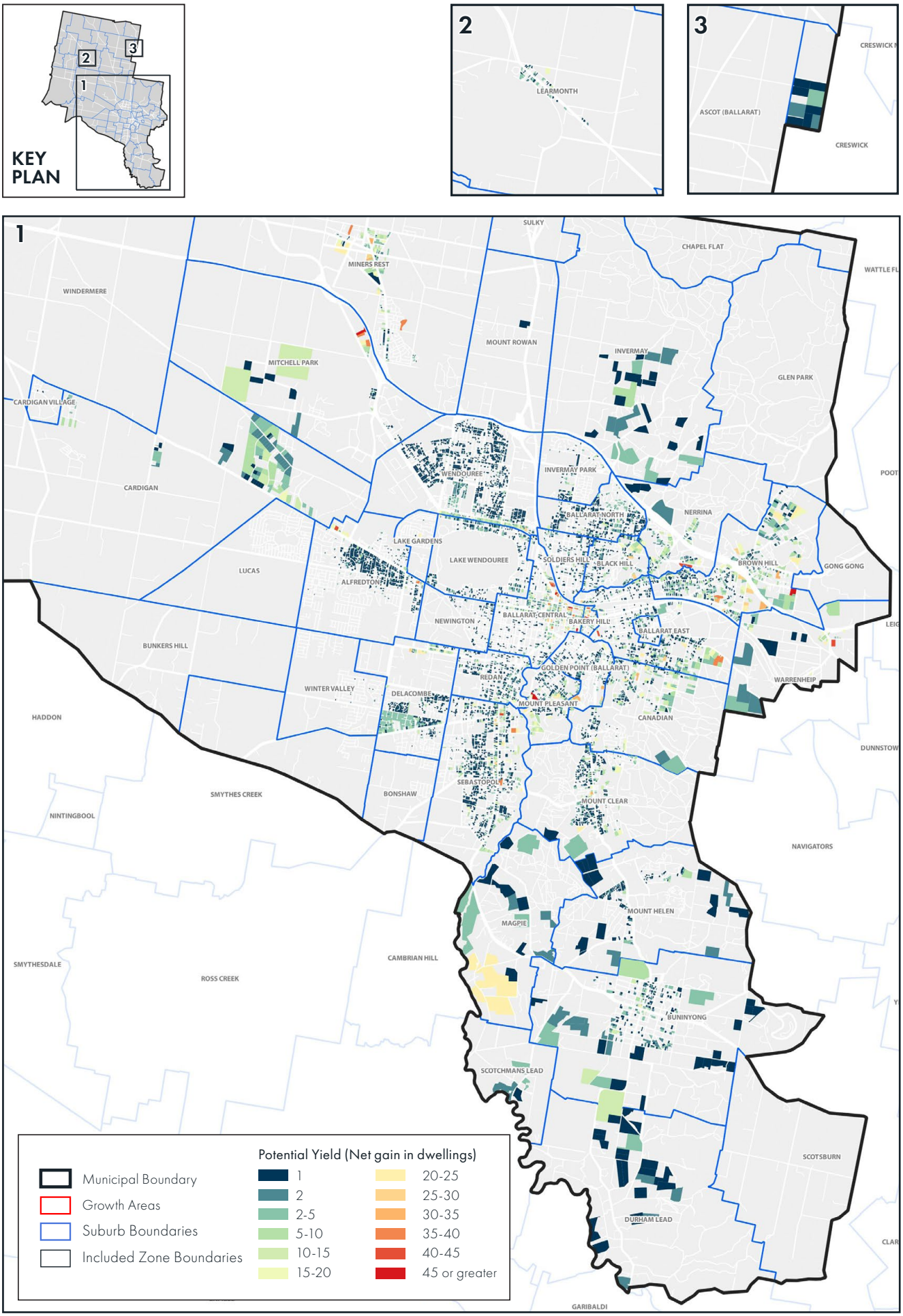


Figure 13. Map of Potential yields (net gain in dwellings)

Appendix A Infill Feasibility Considerations Memo - Urban Enterprise

MEMO (DRAFT)

Project	Ballarat Housing Capacity Assessment
Client	Tract
Date	6 July 2021
Subject	Infill Feasibility Considerations

OVERVIEW

Tract is preparing a housing capacity assessment for the City of Ballarat and is seeking advice on selecting a suitable benchmark for identifying properties that are likely / unlikely to be redeveloped for medium density housing in established parts of the Ballarat urban area.

The following general comments are relevant:

- In general terms, the profitability of redeveloping a property (and therefore the prospect of a feasible development) usually increases if a site has lower value improvements compared with higher value improvements. That is, profitability increases when land value (Site Value – SV) comprises a higher proportion of total property value (Capital Improved Value – CIV).
- Capacity assessments often adopt a benchmark ratio of CIV to SV (known as CIV Ratio – CIVR, among other terms) to differentiate between properties with high value improvements that are less or more likely to be redeveloped within the planning period of a study as a way of adding 'market reality' to an assessment of potential housing capacity.
- Academic literature has found that the CIVR is significant to whether a site is redeveloped, based on an assessment of infill redevelopment sites in suburban Melbourne which generally had a CIVR of 1.25 or less. Recent initiatives of the City of Maroondah adopt a CIVR of 1.43 to identify sites in that municipality with infill redevelopment potential. Capacity assessments prepared for strategic planning purposes in Victoria generally adopt a CIVR of between 1.4 and 1.5.
- Residential capacity assessments require the use of broad assumptions to provide an indication of potential capacity of urban areas to accommodate new housing. In practice, the delivery of housing in infill areas is a particularly complex issue and feasibility will depend on a multitude of factors specific to the location, site, landowner, land developer and market conditions. A CIVR benchmark is not solely determinative of development feasibility – it is primarily a tool used to discount from a capacity estimate the theoretical capacity of a group of properties that are less likely to be redeveloped for infill housing over a particular planning period.

BALLARAT CONTEXT

Urban Enterprise has considered indicators of redevelopment feasibility in the General Residential Zone in Ballarat, focusing on townhouses as the most likely infill housing product. The following comments are made regarding the Ballarat market:

- Sale prices for newly constructed townhouses generally range from $300,000 to $550,000 per dwelling, with common prices around $400,000. This compares with the typical cost of constructing a townhouse in Victoria of approximately $300,000 – $350,000, leaving little surplus for site acquisition and developer profit.

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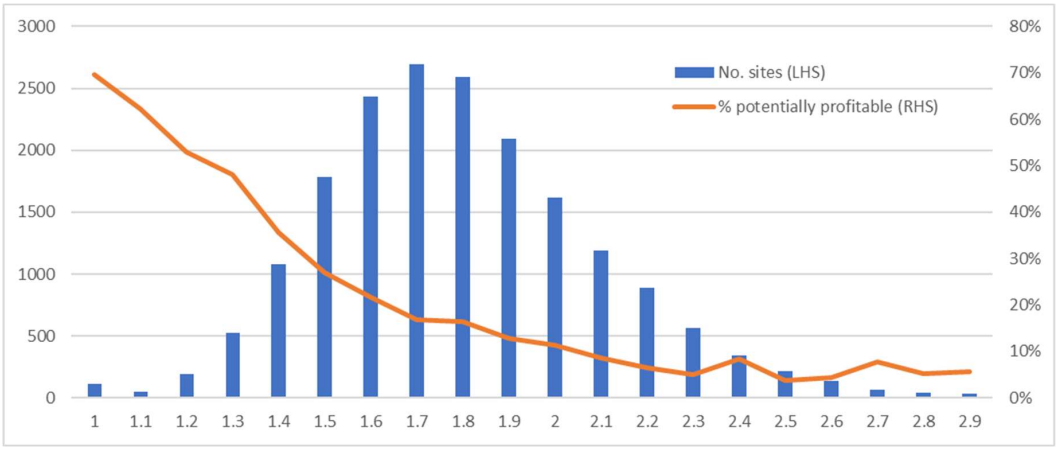
- These circumstances mean that developer-led infill redevelopment is likely to be either unviable or a marginal proposition in many parts of Ballarat at present, except in suburbs where higher sales prices can be achieved. Other infill opportunities will exist where an existing dwelling can be retained and new dwellings constructed on under-utilised land (generally backyards). These opportunities will be limited to certain properties with conducive layouts, locations and landownership.
- Each suburb and site holds different prospects of infill redevelopment being feasible. The main variables are site size (and therefore the number of units possible), CIVR and potential sale price of the resulting dwelling.
- Over time, sales prices are likely to increase at a higher rate than construction costs, meaning that more sites and suburbs will become potentially attractive to developers seeking infill projects. This is likely to take several years, however, and will depend on the continuation of strong underlying demand drivers for housing in Ballarat over the medium to long term.

An initial analysis of sites which have indicative potential to be redeveloped in the GRZ in Ballarat was undertaken to consider the existing CIVR of those sites and the proportion of sites which may be feasible to develop at each CIVR. The results are shown in Figure 1.

F1. ANALYSIS OF POTENTIALLY DEVELOPABLE SITES



Source: Urban Enterprise. Base value data from City of Ballarat rates database, 2020. Note: sites analysed limited to: GRZ between 500sqm and 2,000sqm, residential land use, unsubdivided (i.e. no strata title or retirement village, etc) and CIVR between 1 and 3. Potentially profitable based on townhouse redevelopment at 250sqm per lot, developer purchase at CIV and resulting in at least positive profitability. Note: this is a broad brush assessment of potential feasibility over the period of a planning study only.

Implications for the capacity assessment are:

- Sites in Ballarat with low a CIVR are more likely to be feasible to development than sites with high CIVR, however sites with a range of CIVR could be feasible to develop.
- Feasibility is site specific and it is difficult to model all potentially feasible development sites given the variations across Ballarat, low unit and townhouse sales prices relative to construction costs and different methods by which land can be redeveloped in established areas.
- CIVR is a blunt tool that is best used to exclude sites with high improvement values from a capacity assessment, as opposed to seeking to specifically determine the CIVR at which development is feasible. CIVR should be used alongside other indicators of development potential, including site size and constraints.
- A CIVR of 1.5 is a reasonable benchmark to delineate between higher and lower value improvements relative to land value, noting that some sites with a CIVR of more than 1.5 will be viable and many sites with a CIVR of less than 1.5 will not be viable.
- If Council wishes to understand the locations and site characteristics where infill development is likely to be viable across Ballarat, this would be a considerably more complex assessment which could build on the initial comments and analysis above.

Appendix B Potential Dwelling Yield Map Enlargements

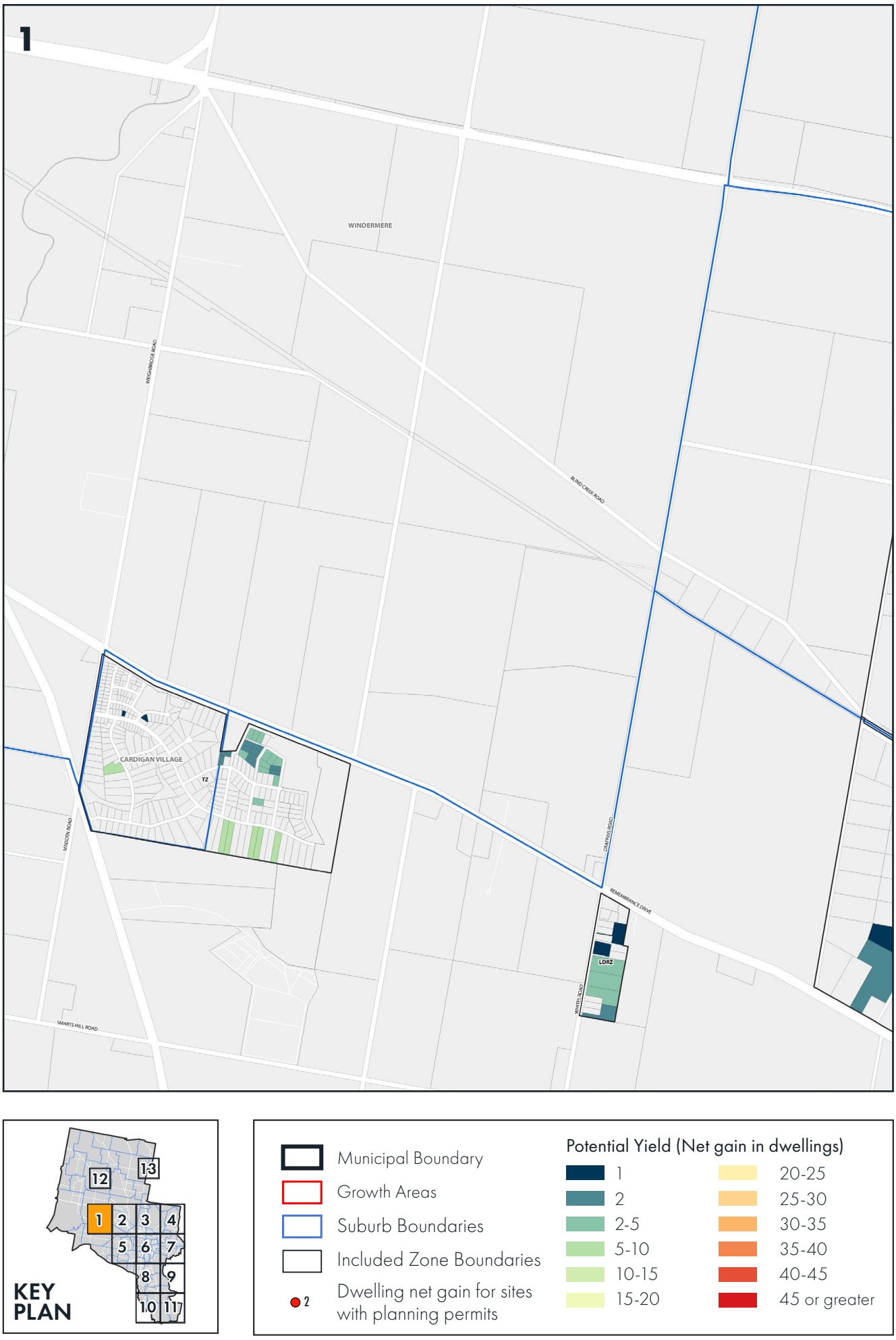


Figure 14. Potential yields (net gain in dwellings) - Map 1

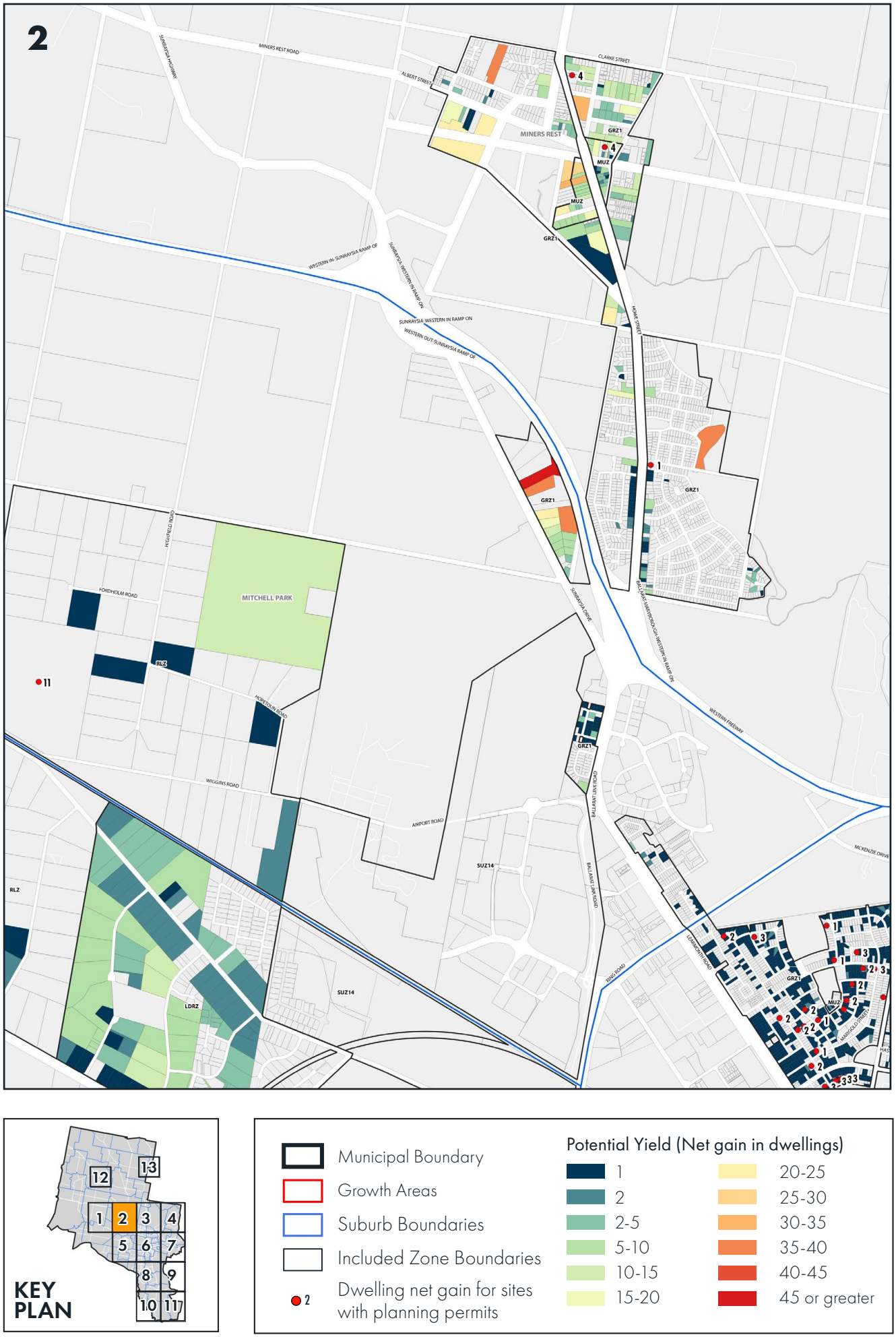


Figure 15. Potential yields (net gain in dwellings) - Map 2

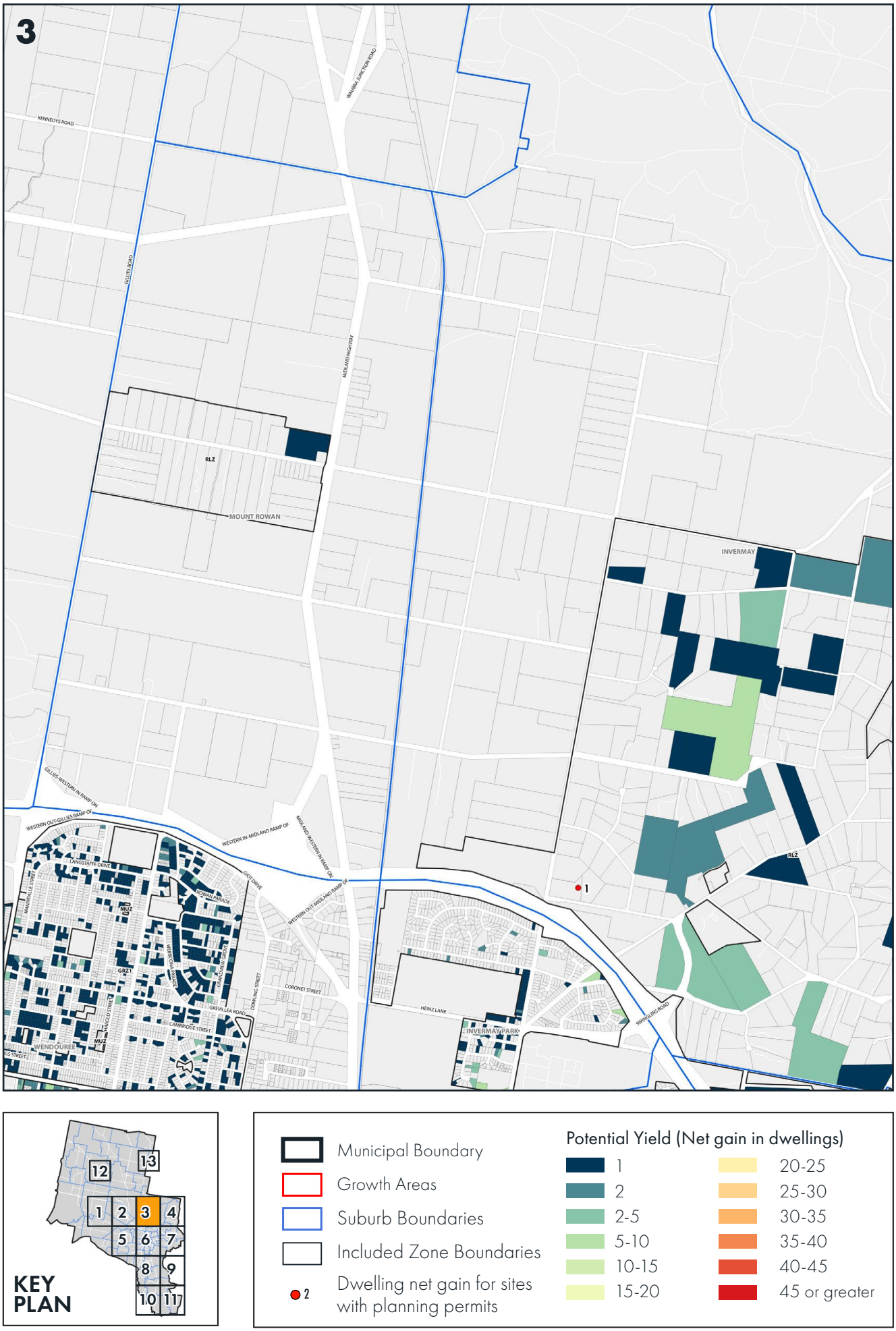


Figure 16. Potential yields (net gain in dwellings) - Map 3

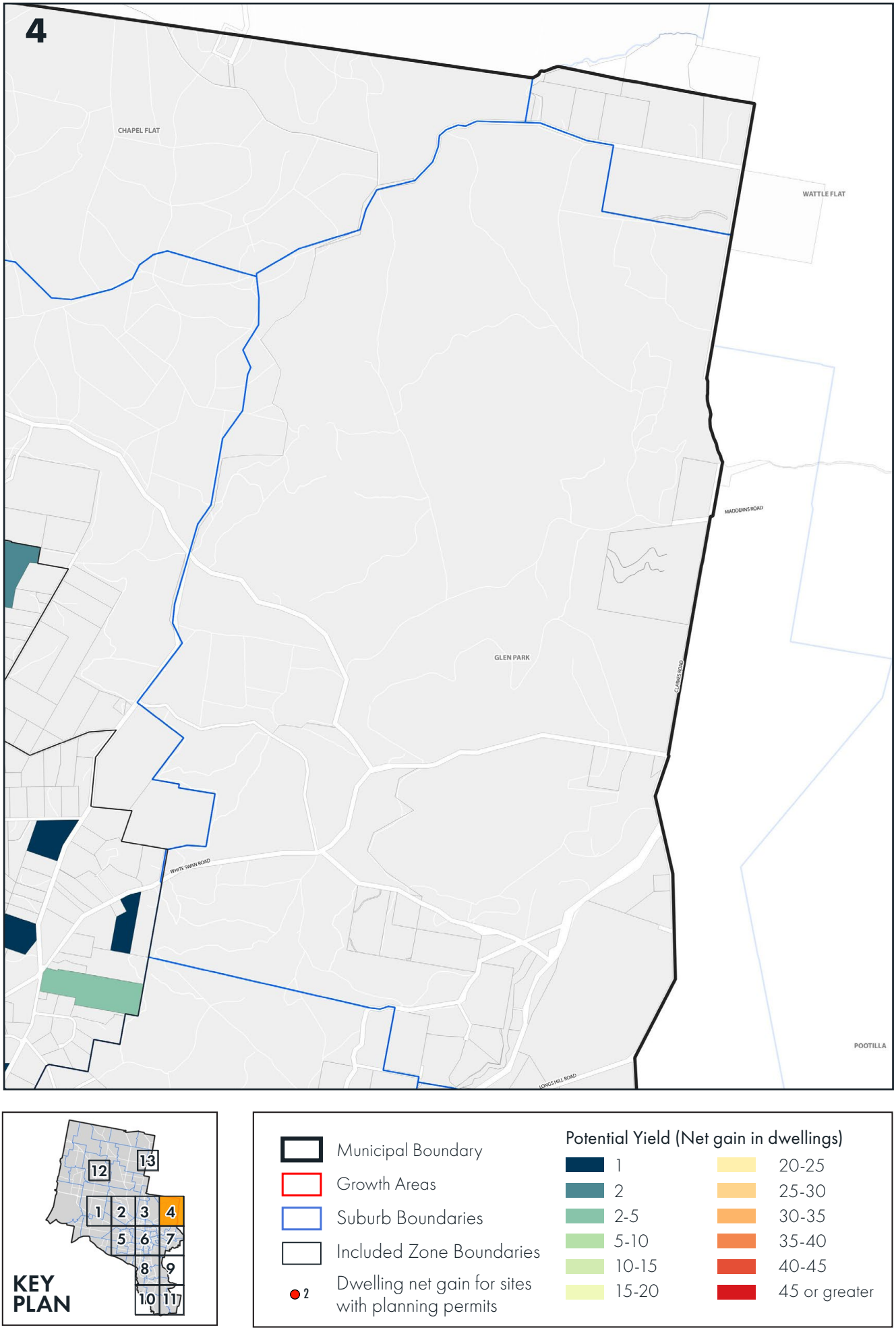


Figure 17. Potential yields (net gain in dwellings) - Map 4

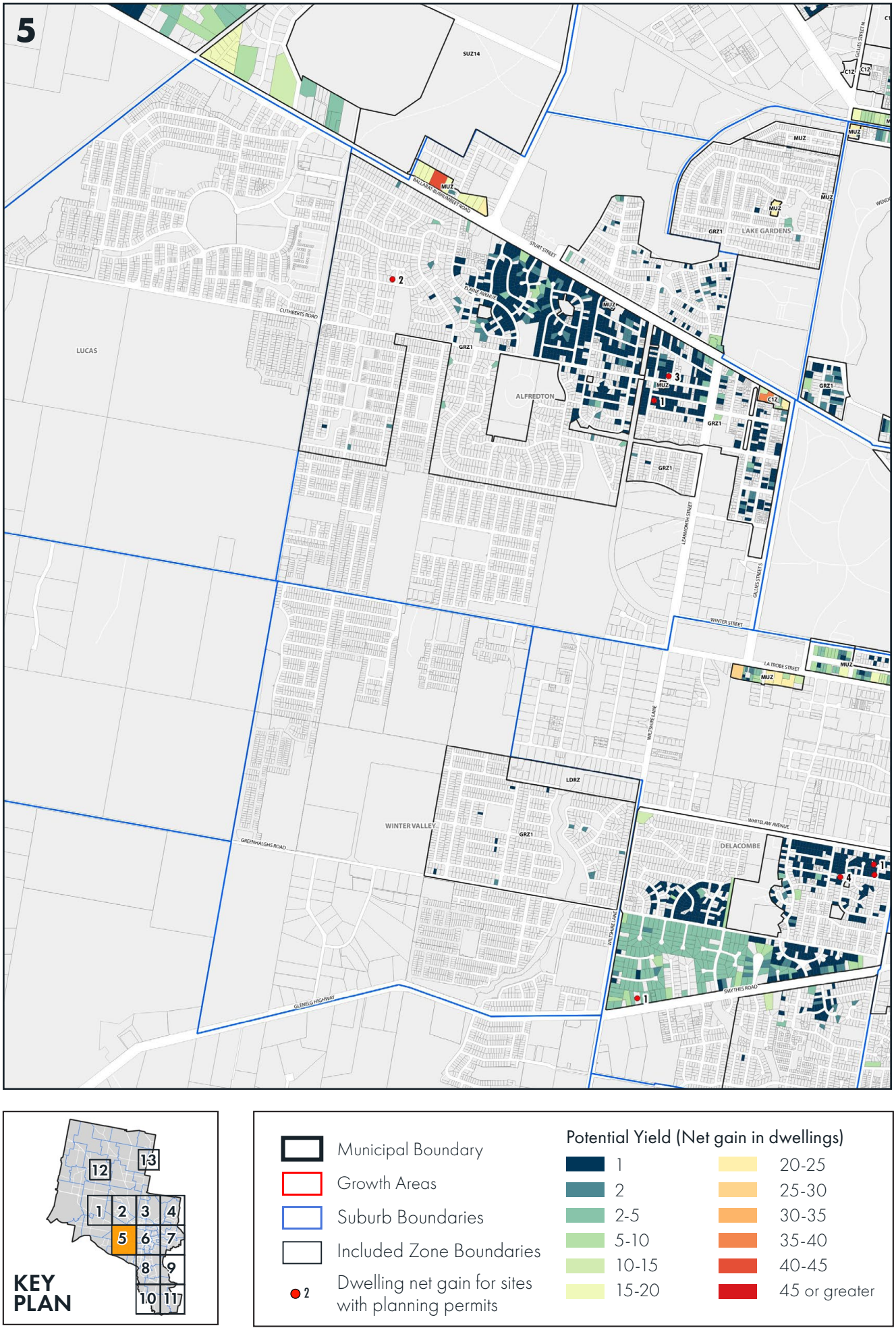
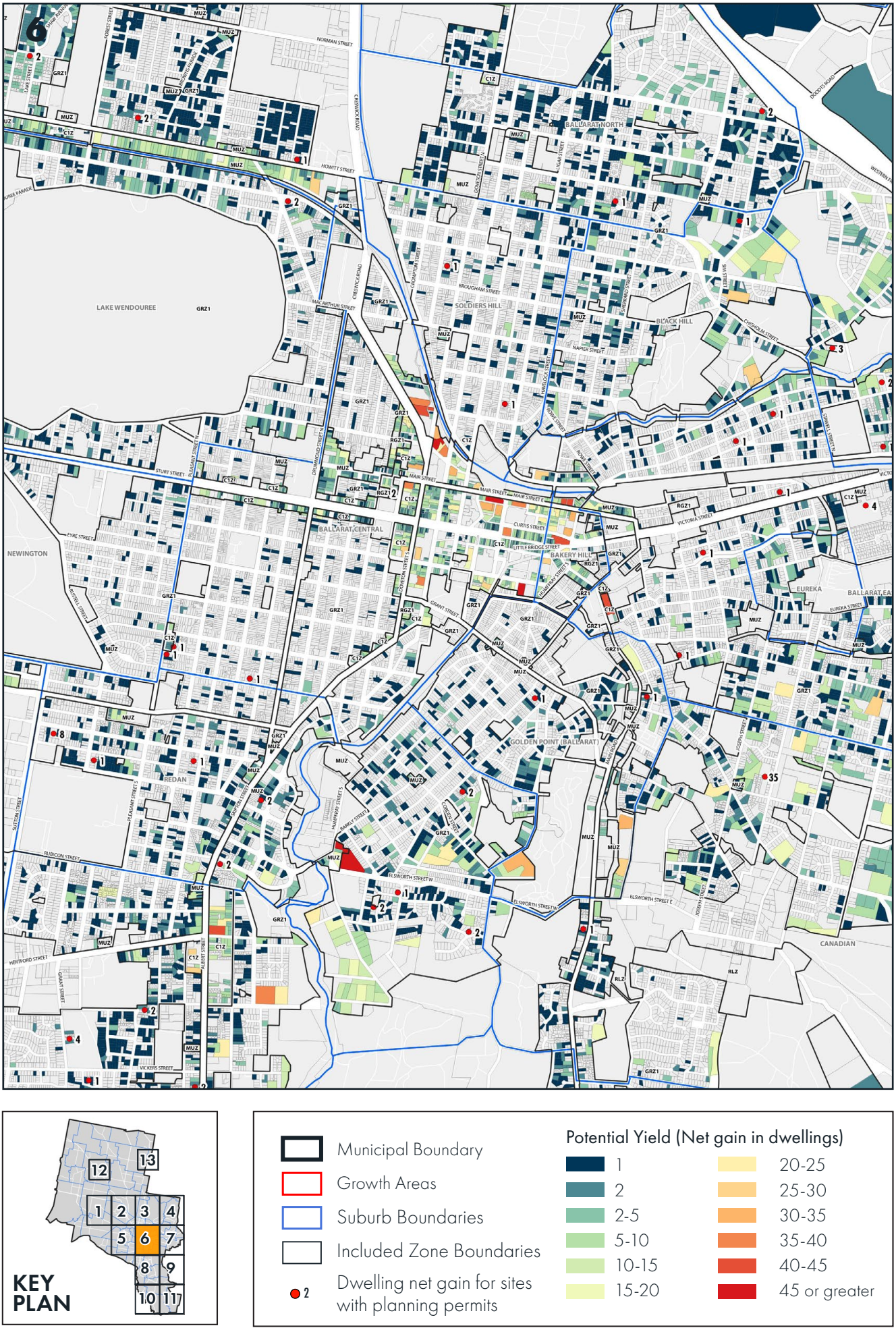


Figure 18. Potential yields (net gain in dwellings) - Map 5



Municipal Boundary

Growth Areas

Suburb Boundaries

Included Zone Boundaries

2 Dwelling net gain for sites with planning permits

Potential Yield (Net gain in dwellings)

1	20-25
2	25-30
2-5	30-35
5-10	35-40
10-15	40-45
15-20	45 or greater

Figure 19. Potential yields (net gain in dwellings) - Map 6

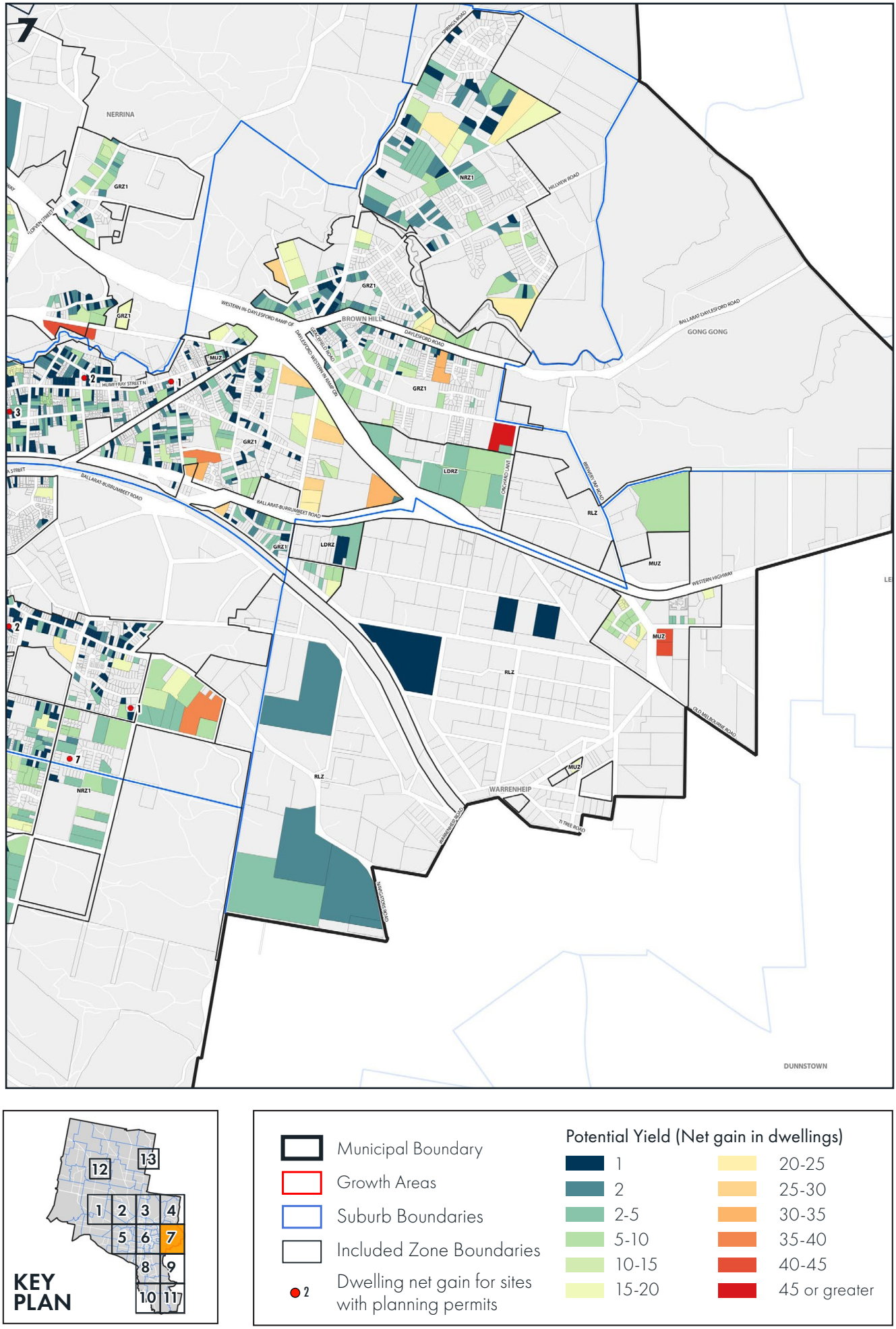


Figure 20. Potential yields (net gain in dwellings) - Map 7

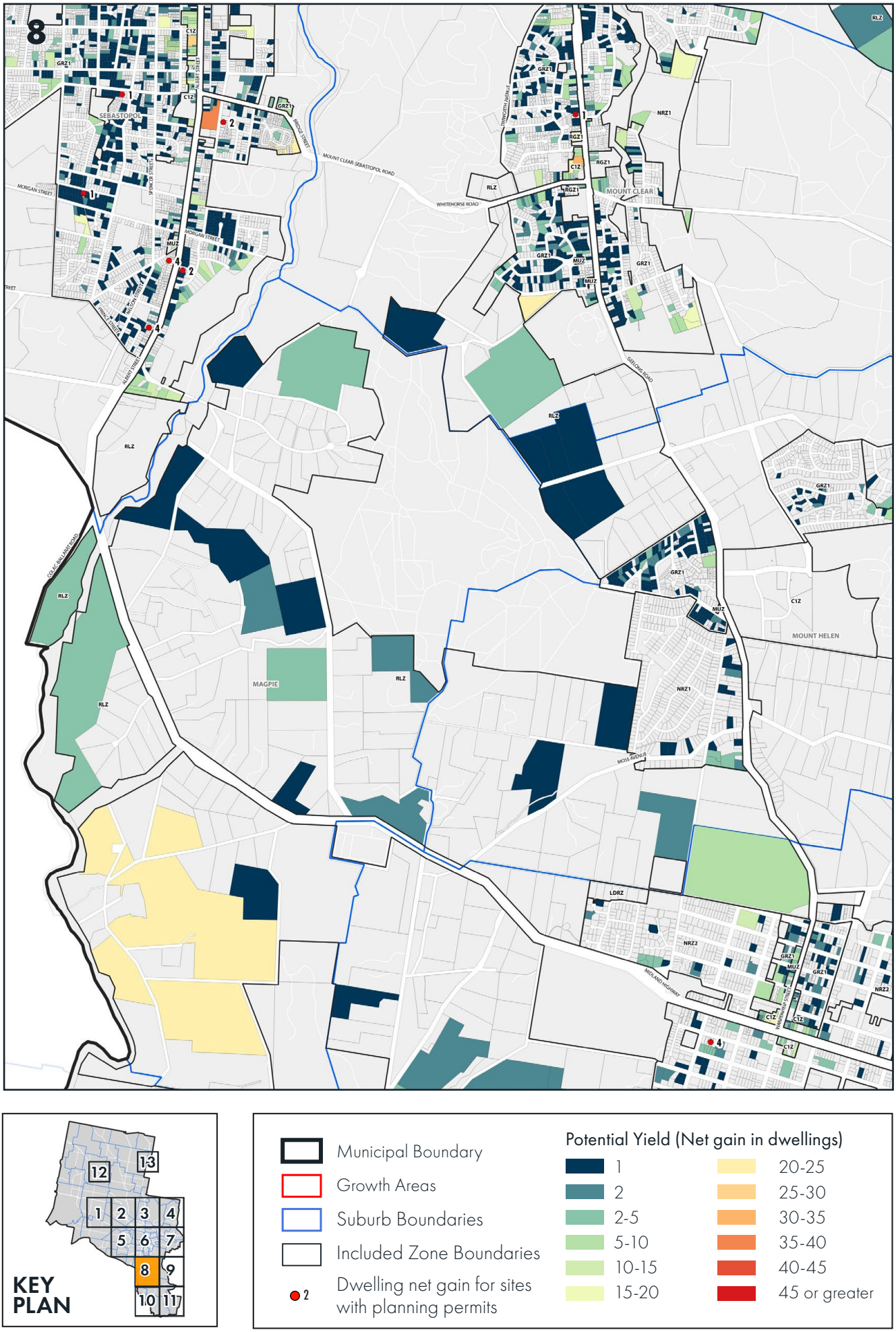


Figure 21. Potential yields (net gain in dwellings) - Map 8

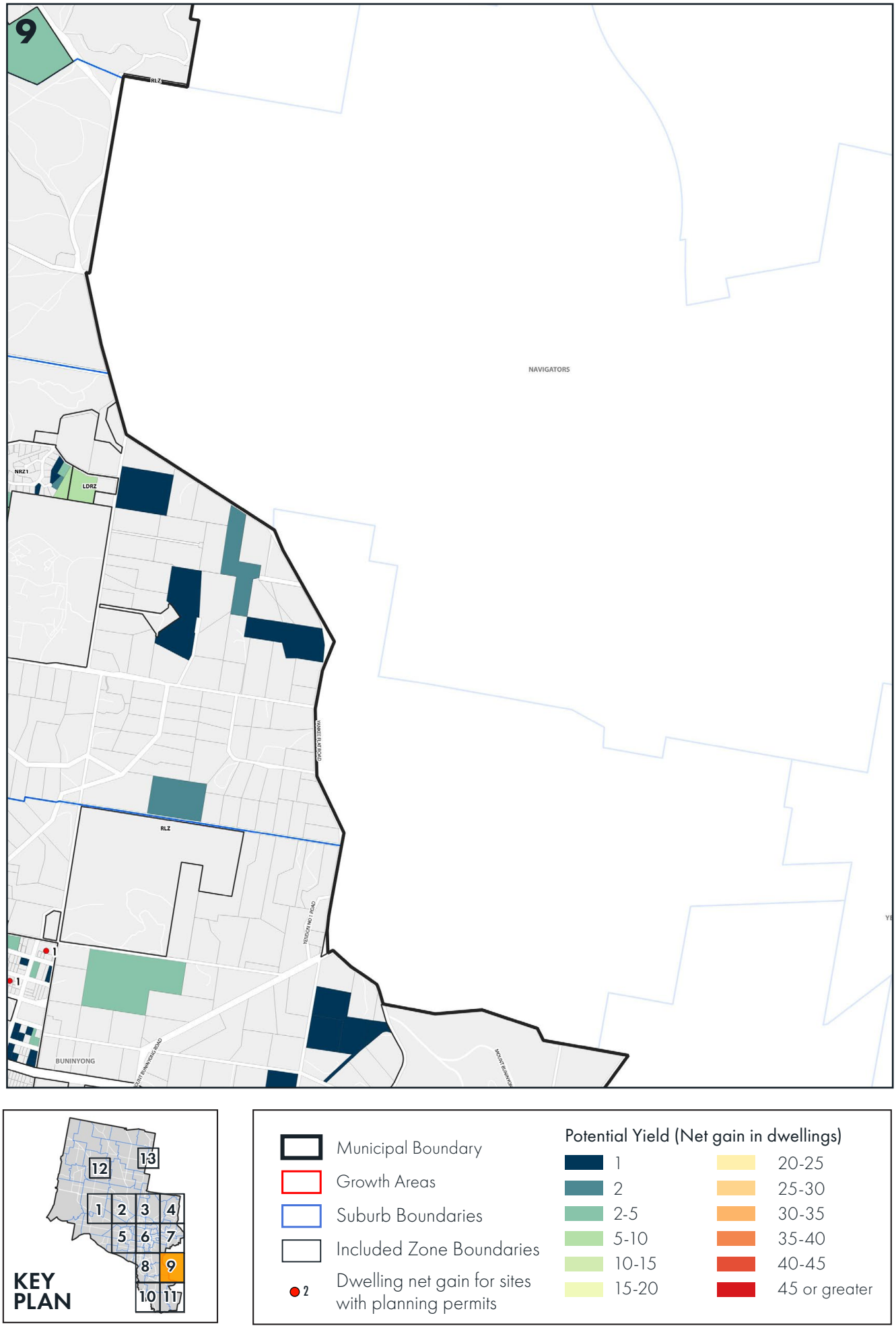


Figure 22. Potential yields (net gain in dwellings) - Map 9

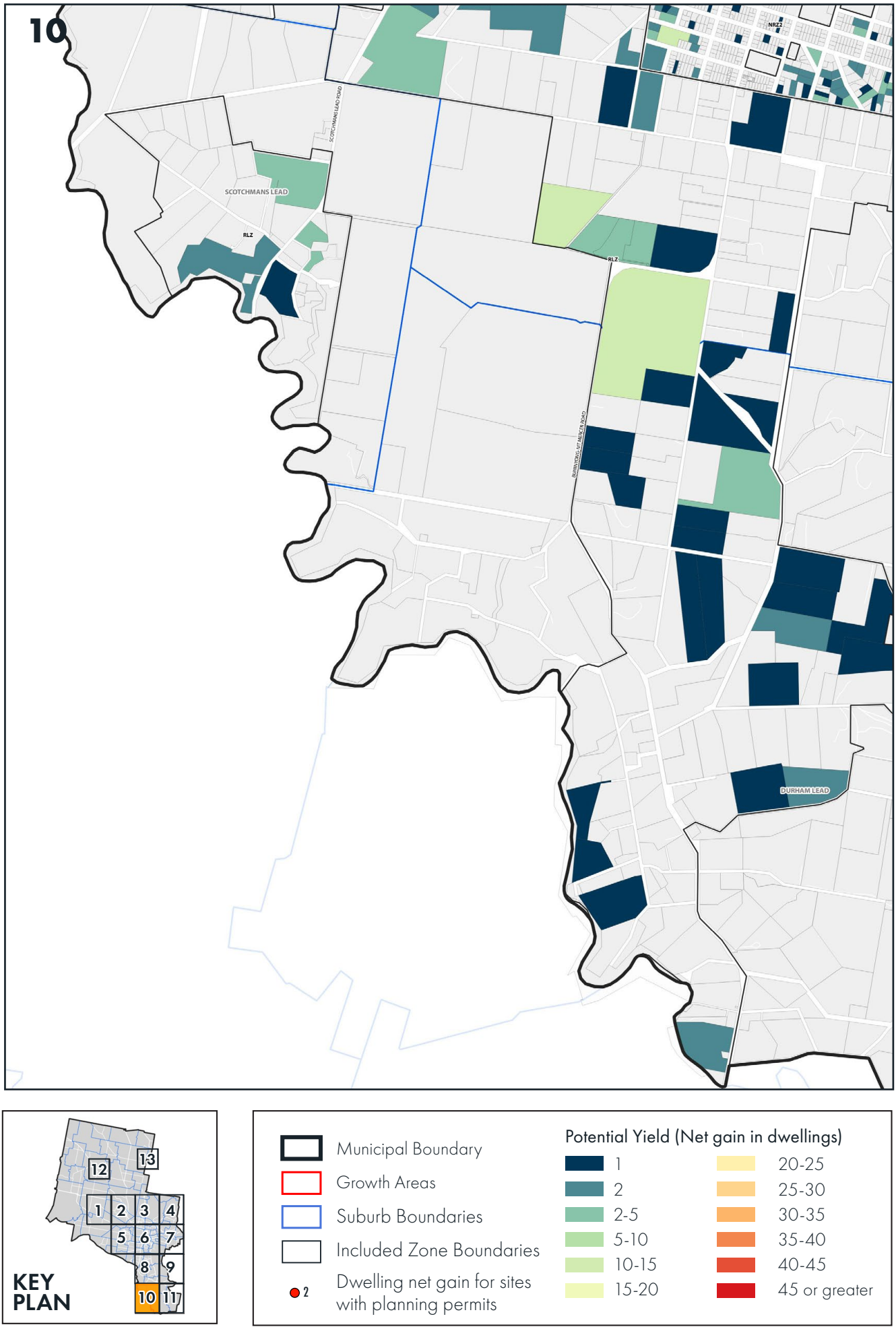


Figure 23. Potential yields (net gain in dwellings) - Map 10

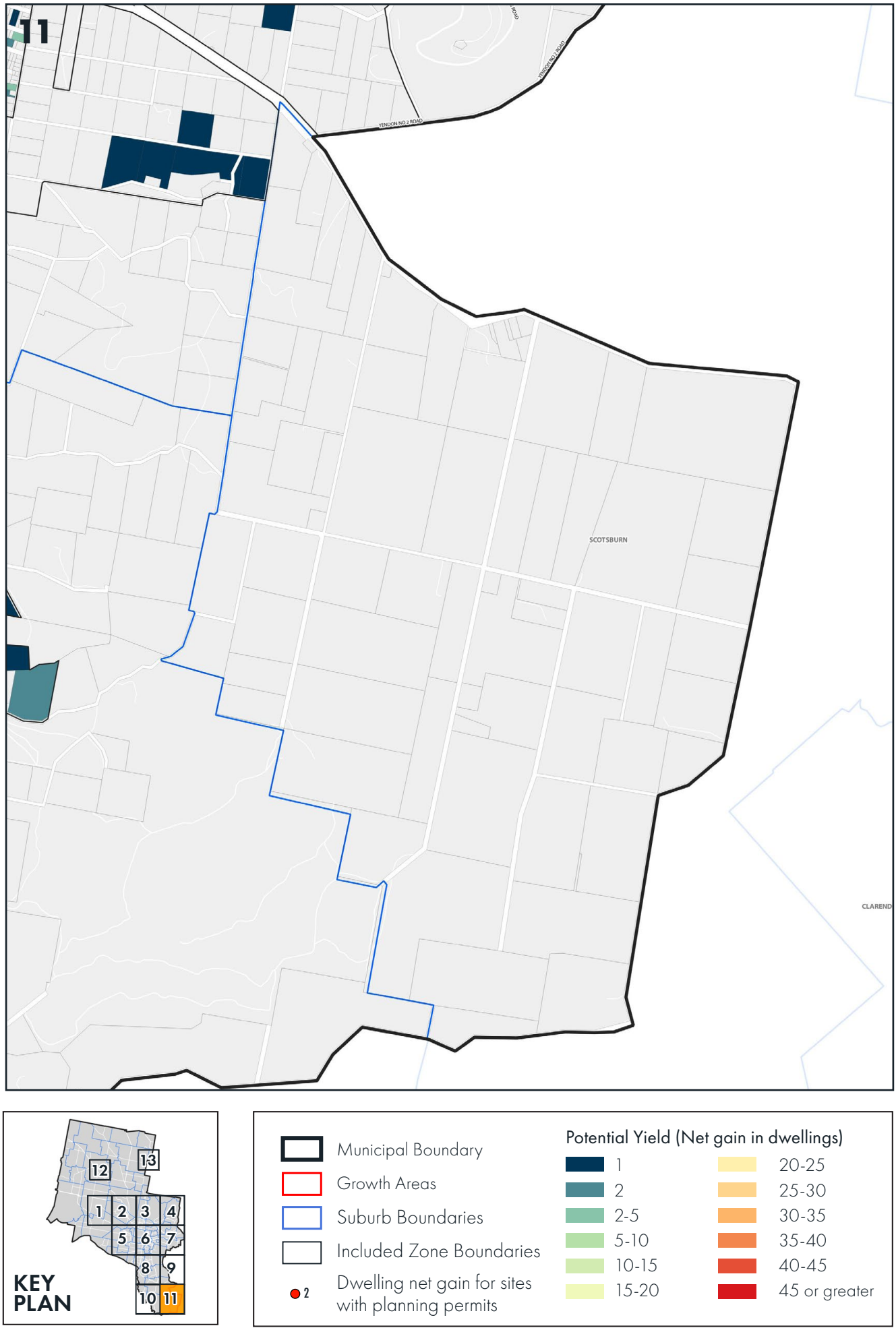


Figure 24. Potential yields (net gain in dwellings) - Map 11

Figure 25. Potential yields (net gain in dwellings) - Map 12 & 13

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