

CUDAL

5.1. Location

Cudal is located in the central part of Cabonne Shire on The Escort Way between Orange and Canowindra/Eugowra. It is located ~15km from Manildra; 29km from Molong; ~36km from Canowindra; ~39km from Orange; ~42km from Eugowra. Therefore, Molong/Orange are the closest higher-level service centres.

The settlement was covered in more detail in the 2012 *Cabonne Settlement Strategy* (CSS2012) so this Strategy focusses on the growth & recommendations for key land uses only. See the *Local Profile & Issues Paper (LPIP)* for more background.

5.2. Summary

CUDAL (2020)	Total	Zone RU5 Village	Zone R5 LLR	Comment
Area	~306ha	~78.3ha	~227.3ha	Excludes Zone RE1/RE2/SP2
Lots	~416	~327	~89	Village + Large Lot Res. lots
Other Uses	Community lots~20; Business lots~12 (many vacant); Industrial Lots~14			
Dwellings	~185	~152	~33	2016 Census ~260
Pop. 2016	2016 Census (~311 people) excludes Zone R5 LLR (Est. ~397)			
Est. Pop. 2019	~419 (177 dwellings*2.37 occupancy 2016 Census)			
Pop. Growth	2006-2016 (-37 people) = -1.73%/year			
Future Growth	Pop. Min -0.3 %/year; AVERAGE +0.2%/year (LOW); Max. +0.7%/year.			
Vacant Lots	~70	~55	~15	Less constrained vacant lots
+Subdivision	~145	~55	~90	Add subdivision potential vacant
50% likely	~73	~28	~45	50% likely to be developed
Past Dwelling Demand	~1.3/ year	~0.5/year (40%)	~0.8/year (60%)	Dwelling construction/approvals 2010-2019 (aerial + inspection)
Fut. Dwelling Est. Demand	~1.9/yr (38 dw)	~0.7/year= 14 (37%)	~1.2/year= 24 (63%)	~38 dwellings 2021-2041 (20 years) may be required
Supply/ Demand		~28/14 = 39 years	~45/24 = 38 years	Zone RU5 + R5 > 20 years but held by limited owners so risk
Recommend	Council to consider Strategy (Growth Investigation) Areas if land owners do not develop infill land to full potential in next 5-10 years			

5.3. Existing Urban Area

5.3.1. Existing Planning Controls (CLEP2012)

Under CLEP2012, the existing land use zones for the urban area are:

- Zone RU5 Village (~78.3ha incl. local roads) permits a wide range of possible land uses (subject to merit assessment);
- Zone R5 Large Lot Residential (~227.3ha) is primarily for dwellings on larger lots (significant areas of zoned land are largely undeveloped);
- Zones RE1 Public & RE2 Private Recreation (Sportsground, Showground & Crown land reserves);
- Zone SP2 Classified Road (The Escort Way/Canowindra Rd);
- Zone SP2 Infrastructure (Sewage Treatment Plant/Cemetery).

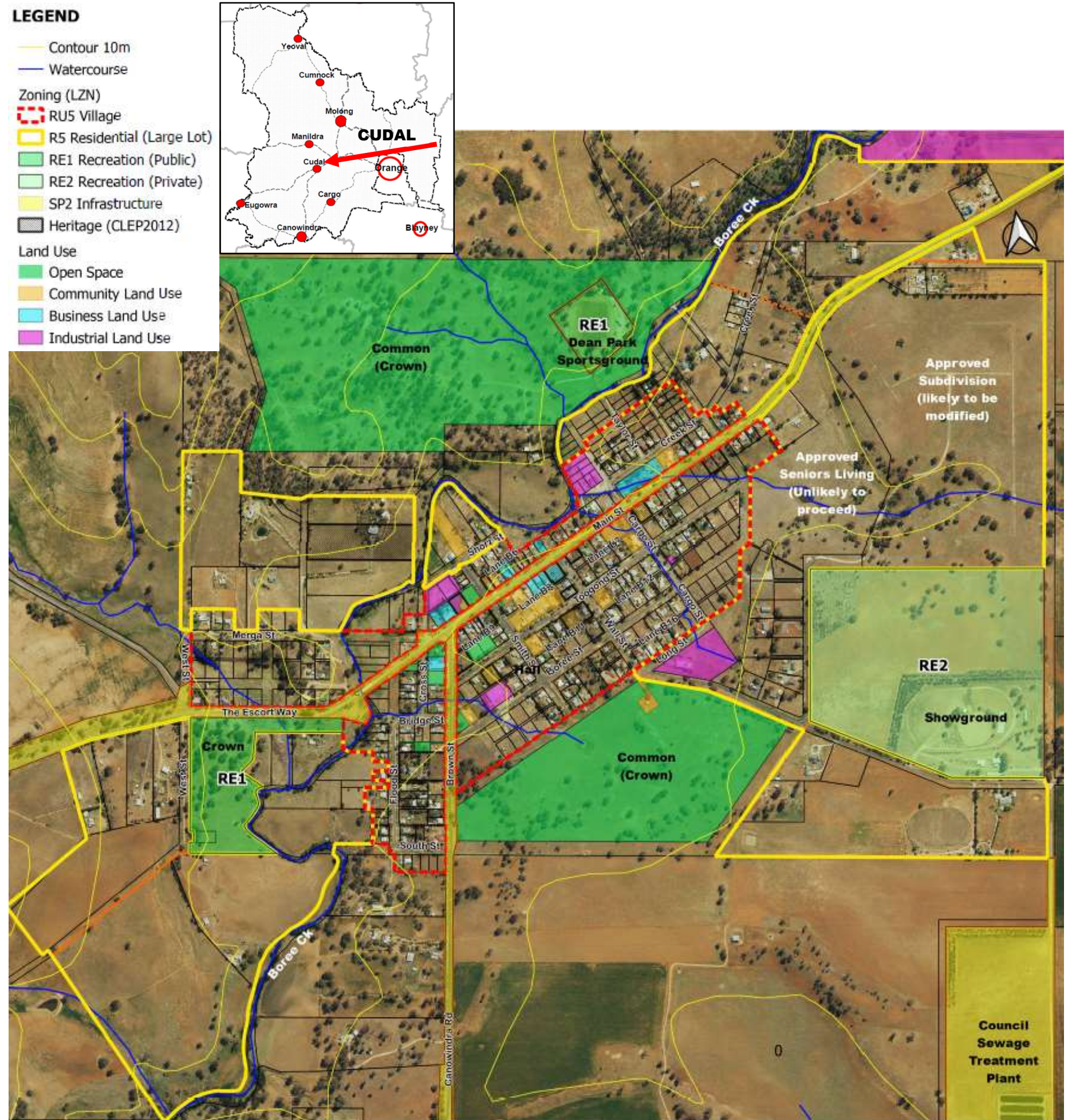
Under CLEP2012, the Minimum Lot Size (MLS) for subdivision is:

- Zone RU5 – 2,000m² but reduced to 900m² if connected to reticulated sewer (which was connected around 2012);
- Zone R5 - 4,000m² (1 acre) for east/north/north-east areas; 1ha for south-east and west areas close to village; 2ha for distant south-west and north-east areas.

5.3.2. Settlement Pattern

Cudal has a historic road, block & lot arrangement based on a modified grid pattern that adjusts to Boree Creek. Standard blocks in the central/eastern area are ~200m long and ~106m deep (with a central lane 6m wide). Therefore, standard lots are generally 40m wide by 50m deep (~1,800-2,000m²) or have been subdivided to 20m wide (~900-1,000m²). However, there are many variable lots sizes ranging from ~500m² up to 2.34ha. Street widths are usually the standard ~30m allowing for wide parking areas on each side of the two traffic lanes.

Figure 1: Settlement location, zoning, key land uses & heritage.



5.3.3. Open Space and Recreation

Cudal has a good level of open space and recreation including, but not limited to:

- a) Park (Public Reserve), Corner of Main Street and Brown Street – Area ~0.17ha (passive recreation) with toilet block;
- b) Cudal Bowling Club, Brown Street – Bowling green ~0.2ha (active recreation);
- c) Dean Park – sportsground with toilet facilities with pedestrian bridge over Boree Creek ~3.42ha (active & passive recreation);
- d) Park (pocket park on Post Office Site) (passive recreation);
- e) Park (Cabonne Council), corner of Brown and Boree Streets ~0.3ha with children play equipment (passive & active recreation);
- f) Ruby Whalan Memorial Swimming Pool ~0.27ha (active recreation);
- g) Tennis Courts, Toogong Street ~0.4ha (active recreation);
- h) Showground and horse sports area (Trustees – Cudal AP&H Society) ~36.14ha (active & passive recreation);
- i) Commons (north of Cudal) ~66.75ha (passive recreation);
- j) Commons (south of Cudal) ~27.9ha (passive recreation).

There has recently been a number of grants to upgrade recreational facilities that will benefit the local and surrounding community. No significant change to the existing recreation areas or controls is needed to facilitate reasonable growth at this time.

5.3.4. Community/Business Uses and Employment

The main commercial street is The Escort Way / Main St. Current businesses include, but are not limited to the Platypus Accommodation & Café; bowling club; and Cudal Caravan Park. The former hotel is soon to be replaced by a new business.

Community uses are located along both Main St and Toogong St including, but not limited to: Cabonne Food Wine & Cultural Centre; Cabonne Council technical services offices; Cudal Public (Primary) School; Cudal Health Service; Cudal Children's Centre; Police; RFS; and a number of churches.

However, in recent years there has been an increase in vacancy of commercial buildings and/or conversion to dwellings that is impacting on the level of local services, employment and streetscape presentation/activity.

There are no significant industries other than Cabonne depot, rural supplies/fuel station, bus depot, and some smaller vehicle repair businesses.

The largest local employers are Council and the school, so there is limited local employment opportunity (outside of agriculture).

5.3.5. Utilities/Infrastructure

Sewer

Since 2009, Cudal has had a Sewage Treatment Plan (STP) constructed to the south-east of the village and a reticulated sewerage system connected to each of the existing dwellings. This is a low-pressure system that requires individual macerators/pumps at each dwelling.

Replacement of the on-site effluent systems reduces environmental issues and allows connected lots to subdivide down to 900m² per lot instead of 2,000m² that can facilitate growth. However, the new system is expensive (with significant ongoing maintenance costs) so the Council charges may affect viability of new development.

The design loading for Cudal STP is 494-550 Equivalent Persons ('EP') (Source: Letter from Council to Dept. of Water & Energy dated 23/24 October 2007). The projected population for Cudal would need to exceed 1%/year from 2021-2041 (see *Population & Growth* Section below) which is unlikely so it is not a growth constraint.

Water

Cudal is connected to the Central Tablelands Water (CTW) network via Canowindra to the Cudal Reservoir and pump stations. There is also an additional bore as a stand-by resource. It is assumed there is sufficient capacity within this network to allow for moderate population growth.

Electricity/Gas

Low voltage electricity is available in most formed streets and can be extended to allow for growth. There are no high-voltage electricity lines to promote renewable

energy generation in the area. There is also no gas line present near Cudal to facilitate energy-intensive uses such as industry.

Telecommunications

The NBN maps in 2020 suggest that all of Cudal and surrounds has potential to connect to the fixed-wireless network for telecommunications/internet.

Waste

Cudal does not have a local waste depot with the closest facility at Manildra.

5.4. Summary of Growth Potential

Some of the key demographic information is reviewed in the *Local Profile & Issues Paper* to this Strategy. Only key information is repeated here.

The key **POSITIVE** influences that may assist growth include:

- a) **Population:** A population in 2016 of ~397 remains in the 350-430 range over the last 40-years suggesting resilience. It is high enough to support a range of local services and facilities if escape expenditure to Orange is managed.
- b) **Growth:** In the last few years dwelling growth, particularly in large lot residential areas (Rodda St) should grow the population. There are new land owners taking over land that has not been redeveloped with new ideas. The former hotel/pub that burned down is due to be replaced with a new business. There is significant interest in new development.
- c) **Services:** The proximity of Cudal to Orange and Molong and its location on a key regional road (The Escort Way) does provide some limited opportunities for economic growth driven by the larger centres, regional tourism attractions, and possibly increased opportunities for remote work.
- d) **Manildra Industry:** Cudal is located close to Manildra and Parkes and may benefit from increased industrial/business activity at Manildra or associated with Inland Rail/Parkes Special Activation Precinct in the next 10 years.
- e) **Education:** Access to a reasonably large local primary school with secondary schools at Molong and Orange may make it attractive for families.
- f) **Employment:** Outside of agriculture, Council offices, the school/pre-school, and health service provides some stable employment along with some local hospitality/transport industries. There are mining, agriculture and viticulture operations in the surrounding high-quality agricultural lands. This correlates with moderate rates of unemployment (9.8% in 2016), high rates of part time employment (22.8%), and a median personal income (2016) just less than that of Molong and closer to the Cabonne average than most of the settlements.
- g) **Tourism & Character:** Potential for increased tourism due to its location on The Escort Way, the bushranger and art trails, the village's character and heritage, and the camping/accommodation options.
- h) **Affordability:** Compared to other nearby regional cities and larger Cabonne settlements, Cudal offers affordable land and housing with low levels of rental/mortgage stress. It also has significant supplies of vacant land and subdivision potential (particularly large lot residential) that is relatively easy to develop.
- i) **Aged Care:** There is some limited aged care housing in Cudal to enable ageing-in-place in the community and retain older citizens.
- j) **Constraints:** Most of the village is not affected by any significant environmental constraints (see following section for details).
- k) **Sewer:** Centralised sewerage now allows subdivision to smaller lot sizes.
- l) **Water:** CTW provides a relatively secure water supply to support limited growth (compared to some other Cabonne settlements).
- m) **Telecommunications:** A reasonably good level of internet and mobile connectivity in and around Cudal enables businesses and remote work.
- n) **Recreation:** Access to a good range of recreation and sporting facilities.
- o) **Community Spirit:** Good community associations foster community spirit and local solutions to community needs. In 2019 Cudal Central Incorporated restarted the community progress association.

The potential **NEGATIVE** influences on growth include:

- a) **Historic Population:** Cudal continues to have fairly significant rises and falls in population making it more difficult to invest and cater for growth. Drought and other agricultural issues appear to have significant flow-on effects for Cudal.
- b) **Proximity to Regional Centres:** Cudal is outside the 'commuter zone' (30 minutes' drive) of Orange & Parkes where most significant growth and demand is occurring and there are increased employment opportunities. Limited access to local employment and services in Cudal and distances to key regional centres may inhibit growth.
- c) **Services:** Proximity to Orange is likely resulting in 'escape expenditure' where people buy most of their goods outside Cudal. The loss of local retail/cafes/services in Cudal over the last 10-20 years has been significant and affects access to local services and the main street presentation.
- d) **Public Transport:** Limited public transport restricts access to services / facilities / employment in regional centres for those without access to private vehicles.
- e) **Ageing:** In 2016, the median age in Cudal was 44 years – higher than the Australian and Cabonne average but lower than other Cabonne villages with 18.3% of the population over the age of 65 years. With an ageing population there is a real risk of population decline unless local health services and aged care housing (both limited) allows citizens to remain in Cudal. An ageing population may also affect families to support the local schools.
- f) **Health:** The loss of the hospital and conversion to health service may make it more difficult to retain older citizens in Cudal.
- g) **Employment:** In 2016, the unemployment rate in Cudal was 9.6% (3rd highest settlement after Cumnock and Yeoval) with significant part-time employment (22.8%). Limited existing local employment or nearby major employers to create a sustainable economic environment and attract working age people. Loss of one or two key employers could have substantial flow-on effects to the population/growth.
- h) **Dwelling Types:** Like most Cabonne settlements, the existing dwelling types are 100% detached houses, generally larger and on larger lots that the household composition would suggest is needed, i.e., dwelling types may poorly match the diversity of housing types needed at affordable prices.
- i) **Dwelling Availability:** In 2016, Cudal had the lowest level of unoccupied dwellings of all of the larger settlements, suggesting there may be some pressure on availability/prices of houses for purchase and rent.
- j) **Sewerage:** The cost of new connections to the reticulated sewerage scheme is a significant development cost and may restrict further subdivision and growth.
- k) **Energy:** Cudal is not located near any high voltage power lines or gas lines that can promote renewable energy generation or energy-intensive industrial activity.
- l) **Flooding:** The village has a number of intermittent and significant watercourses that create potential drainage, inundation and overland flow issues during heavy rainfall events that affect significant portions of the Village Zone and may constrain further development in these areas.
- m) **Tourism:** Limited items of tourist interest to act as major destination & generate longer stays compared to some other larger settlements in Cabonne.

5.5. Population & Dwelling Demand

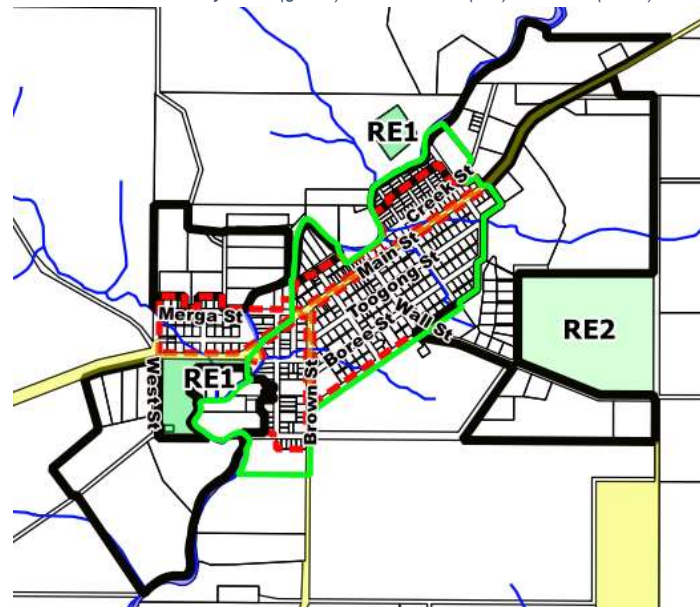
5.5.1. Census Boundaries

The Figure below shows how the 2016 ABS Census Urban Centre boundary (green) for Cudal compares to urban zone boundaries - Zone RU5 Village (red) & Zone R5 LLR (black). The Census boundary includes most of Zone RU5 Village but excludes the village land to the north-west (Merga St). It includes very little of the Zone R5 LLR areas to the west and east of the Village Zone.

A similar Census boundary was used in 2011 so the Census populations in 2011 & 2016 need to be supplemented with the additional 'mesh block' data, particularly as a significant part of the growth is occurring outside the Village Zone in the Large Lot Residential Areas (see below).

We note that Cudal is likely to have a rural catchment that utilises the limited services of this settlement but it is not possible to accurately estimate the influence of this wider population even though they are important to its growth.

Figure 2: ABS Census boundary 2016 (green) vs Zone RU5 (red)/Zone R5 (black).



5.5.2. Historical Population

The historic population of the settlement is set out in the Table below and has generally remained between 350-430 people over 40 years.

Note: The census boundary has changed over time (particularly pre-2011) so it is important to note that comparing figures over different census periods just using Urban Centre boundary may not always be accurate. It has been adjusted below.

Figure 3: Table of Cudal's historic population change 1976-2016 (ABS Census).

Year	Population	Change	% Change from Previous Period	Average Annual % Change
1976	373	N/A	N/A	N/A
1981	400	+27	+7.24%	+1.45%
1986	352	-48	-12.00%	-2.40%
1991	379	+27	+7.67%	+1.53%
1996	420	+41	+10.82%	+2.16%
2001	409	-11	-2.62%	-0.52%
2006	(Adjusted) 434	+25	+6.11%	+1.22%
2011	(Adjusted) 429	-5	-1.15%	-0.23%
2016	(Adjusted) 397	-32	-7.46%	-1.49%
1976 - 2016		+24	+6.43%	+0.16%
1986 - 2016		+45	12.78%	+0.43%
1996 - 2016		-23	-5.48%	-0.27%
2006 - 2016		-37	-8.63%	-1.73%

The table above shows that the Census population for Cudal (Village Zone + most of the Large Lot Residential area) has varied from a low of 352 people in 1986 (drought) to a high of 434 people in 2006 and a slight decrease to 397 people in 2016.

Based on the aerial photograph in late 2019, with ~185 estimated dwellings (minus 8 unoccupied in 2016 = 177 dwellings) times by the 2016 estimated household occupancy rate of 2.37 people/dwelling = ~419 people in 2019.

Over the long term (1976-2016) the average annual growth rate was ~+0.16% and generally the total population has stayed relatively stable between 350 and 420 people over the last 30 years and around 390-400 people for the last 10 years. This suggests a degree of resilience. With a number of new dwellings constructed since 2016, there is expected to be a population increase at the 2021 Census.

5.5.3. Population Projection

This Strategy makes an estimate of future population projection in order to be able to respond to growth or decline through appropriate land supply and planning controls. However, it is an estimate only and based upon a balancing of positive and negative growth factors at the time this Strategy is prepared. There may be future changes that affect growth that cannot be predicted at this time.

For example, the economic and health impacts of COVID-19 are still yet to be fully understood in late 2020 and the range of impacts could be large (though we have assumed that rural communities will continue to be less affected at this time).

For that reason, a range from minimum to average to maximum is provided.

Based on the analysis in this Strategy, the projected population growth average for Cudal 2021-2041 (20 years) is expected to range from:

- **Minimum: -0.3 %/year;**
- **AVERAGE: +0.2%/year (low population growth);**
- **Maximum: +0.7%/year.**

It is interesting to note that in CSS2012, the population projection expected range 2016-2036 was MINIMUM -0.3%/year; AVERAGE +0.14%/year; MAXIMUM +0.5%/year (based on 2006 population as 2011 data was not available at that time).

In reality, from 2006-2016 the population decreased at -1.7%/year. However, based on dwelling growth that occurred since, it is expected the population will have increased in 2016-2021.

The Table below projects the population based on this range and higher/lower figures to allow it to be tested at each census. It suggests that population will not vary greatly over 2021-2041 unless it has very high or low growth.

At such low historic growth rates, it would only take some minor changes in growth potential to increase or decrease this rate so it is important to ensure that a reasonable amount of vacant land is available to cater for potential growth opportunities (i.e., at the maximum growth rate).

Growth within the expected range is unlikely to place too much pressure on services but may affected dwelling demand (see below).

Figure 4: This Strategy's population projection range for Cudal 2021-2041.

Range of Potential Average Annual Pop. Growth Rates	Av. Ann. Growth Rate	Projected Population – 5Yr Census Dates						
		2016	2021	2026	2031	2036	2041	Δ pop. 2016-2041
VERY NEGATIVE GROWTH	-1.50%	397	367	340	314	291	269	-128
NEGATIVE GROWTH	-1.00%	397	377	358	340	323	307	-90
MINOR NEG. GROWTH (MINIMUM)	-0.30%	397	391	385	379	374	368	-29
LOW GROWTH (AVERAGE)	0.20%	397	401	405	409	413	417	20
LOW-MEDIUM GROWTH (MAXIMUM)	0.70%	397	411	425	440	456	472	75
HIGH GROWTH	1.00%	397	417	438	460	483	507	110
VERY HIGH GROWTH	1.50%	397	427	459	493	530	570	173

5.5.4. Estimated Dwelling Demand

Existing Dwellings

A rough count of dwellings in Cudal from the late 2019 aerial photo is ~152 dwellings in the Village Zone within the Census District (140 private dwellings in 2016 Census doesn't include all zone) plus ~33 dwellings in Zone R5 Large Lot Residential = ~185 dwellings.

Dwelling Approvals 2010-2019

A review of Development Approvals from 2010-2019 (10 years) suggests there have been ~13 new dwellings approved (~1.3 dwellings/year) including:

- ~5 in Zone RU5 Village; 0.5 dwellings/year (38.5%); and
- ~8 in the LLR area; 0.8 dwellings/year (61.5% - the majority).

Dwelling Construction 2010-2019

The Vacant Land Analysis Figure(s) on the following page(s) shows that from 2010-2020 (10 years) all of the approved dwellings listed have been constructed (13 dwellings), an average dwelling growth of ~1.3 dwellings/year with the majority of this in the large lot residential area.

Note: This is a short time period during which there has been drought and other climatic/ economic events that may have hindered growth.

Projected Future Dwelling Demand

If this historical rate is an estimate of future dwelling growth, there may be need for ~26 dwellings from 2021-2041 (20 years).

However, with an ageing population and more lone person households, dwelling occupancy is expected to decrease and this will naturally increase demand for dwellings (assuming they are affordable) even with a low growth population.

Based on the maximum projected population growth in the next 20 years (to 2041) to 472 people (an extra 75 people) and assuming a household occupancy rate of 2.1 people/dwelling (2016 was 2.2-2.4) then the required amount of housing is:

- Max. total population (472)/occupancy of 2.1 = ~224 dwellings – 185 existing dwellings = ~39 new dwellings; OR
- Additional 75 people/occupancy of 2.1 = ~36 new dwellings.

Therefore, this Strategy projects an **AVERAGE future growth** of ~38 new dwellings from 2021-2041 (20 years) or ~1.9 dwellings/year (slightly higher than the historic dwelling growth of ~1.3 dwellings/year), but supported by the *Summary of Growth Potential* Section above.

Based on the projected dwelling demand and historic proportion of growth in each zone, over the next 20 years (2021-2041) dwelling demand is estimated at:

- ~14 new dwellings in Zone RU5 Village (~0.7/year); and
- ~24 new dwellings in Zone R5 Large Lot Residential (~1.2/year).

5.6. Land Supply

5.6.1. Vacant Land Supply

Based on a review of developed sites in late 2019 (see the Figure opposite – vacant sites coloured red), Cudal had ~158 lots without dwellings capable of further development:

- ~107 lots in Zone RU5 Village; and
- ~51 lots in Zone R5 Large Lot Residential.

The sites marked with black hatching are generally constrained from further development by drainage issues, trees, or significant out-buildings and there are also a number immediately adjacent to existing dwelling lots that are unlikely to be developed in the short term (purple hatching). Removing these reduces the number of 'vacant' (possibly) developable lots to ~70 lots including:

- ~55 lots in Zone RU5 Village; and
- ~15 lots in Zone R5 Large Lot Residential.

We note that there are larger parcels in Zone R5 capable of further subdivision that could provide additional development potential (assuming viable) for up to a total of ~90 lots (depending what development occurs on the eastern lot).

It is important to note that many people who seek to live in a rural settlement do so with the expectation of having a larger holding/backyard and will often own the adjacent lot(s) just for a shed, storing equipment, or extended garden. It would be incompatible with the character of these settlements to assume that each and every vacant lot, particularly in the Village Zone, will be developed or subdivided to its minimum lot size.

Even assuming that 50% of the unconstrained vacant land were to be developed (assuming market demand and suitable land price), this may produce:

- ~28 lots in the Village Zone; and
- ~45 lots in the LLR Zone.

5.6.2. Residential Supply & Demand

Comparing the vacant land supply to projected demand for the next 20 years:

- Village Zone: ~28 lot supply; ~0.7 dwellings/year demand = ~39 years supply;
- LLR Zone: ~45 lot supply; ~1.2 dwellings/year demand = ~38 years supply.

Therefore, there is sufficient supply at projected growth rates in both the Village Zone and the Large Lot Residential area.

However, as is detailed in the Section(s) below, a significant percentage of the large lot residential (LLR) land is held by limited owners – so if they do not proceed with subdivision and sale of lots then Cudal's large lot residential supply is at risk of not meeting demand.

Therefore, additional large lot residential land should be investigated if supply is not meeting demand. See the Section on *Strategy (Growth Investigation) Areas* below for more details. Council should track the population and dwelling demand rates every 5-years and test against this Strategy to determine if the projections are correct.

5.6.3. Non-Residential Uses

As the urban area of Cudal is currently within Zone RU5 Village under CLEP2012, a wide variety of commercial, industrial, and community land uses are permissible with consent across the settlement, subject to merit assessment of impacts.

There is also a number of existing vacant commercial properties to enable some expansion of community or business uses, assuming that demand increases. Since CSS2012 there have been limited applications for new community or business uses (though anecdotally it is difficult to purchase a vacant shop in the main street).

Light industry has generally remained on existing lots with some significant additional investment (e.g., rural supplies/fuel lot and bus depot lot) with one large industrial lot (Snooze Ezy) currently for sale. Demand appears low at this time and Cudal may not have the same attraction for larger industry as other settlements in Cabonne or adjacent local government areas (particularly Manildra). However, if a larger operation needed land it could investigate vacant land along Boree St and Brown St or look at land to the north near the airport that already has a quasi-industrial use.

Figure 5: Vacant land analysis for settlement (Cudal Village Zone).

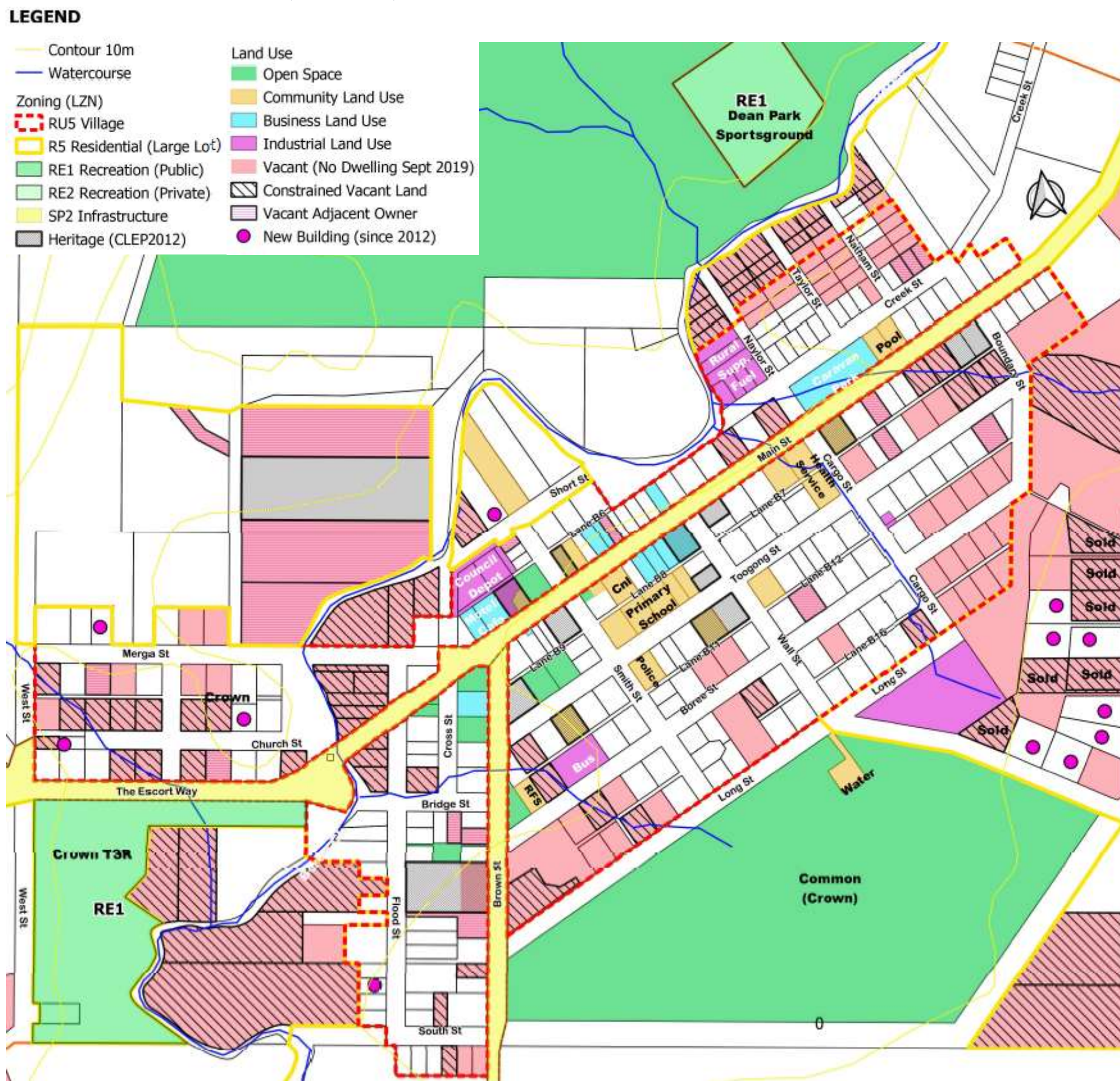
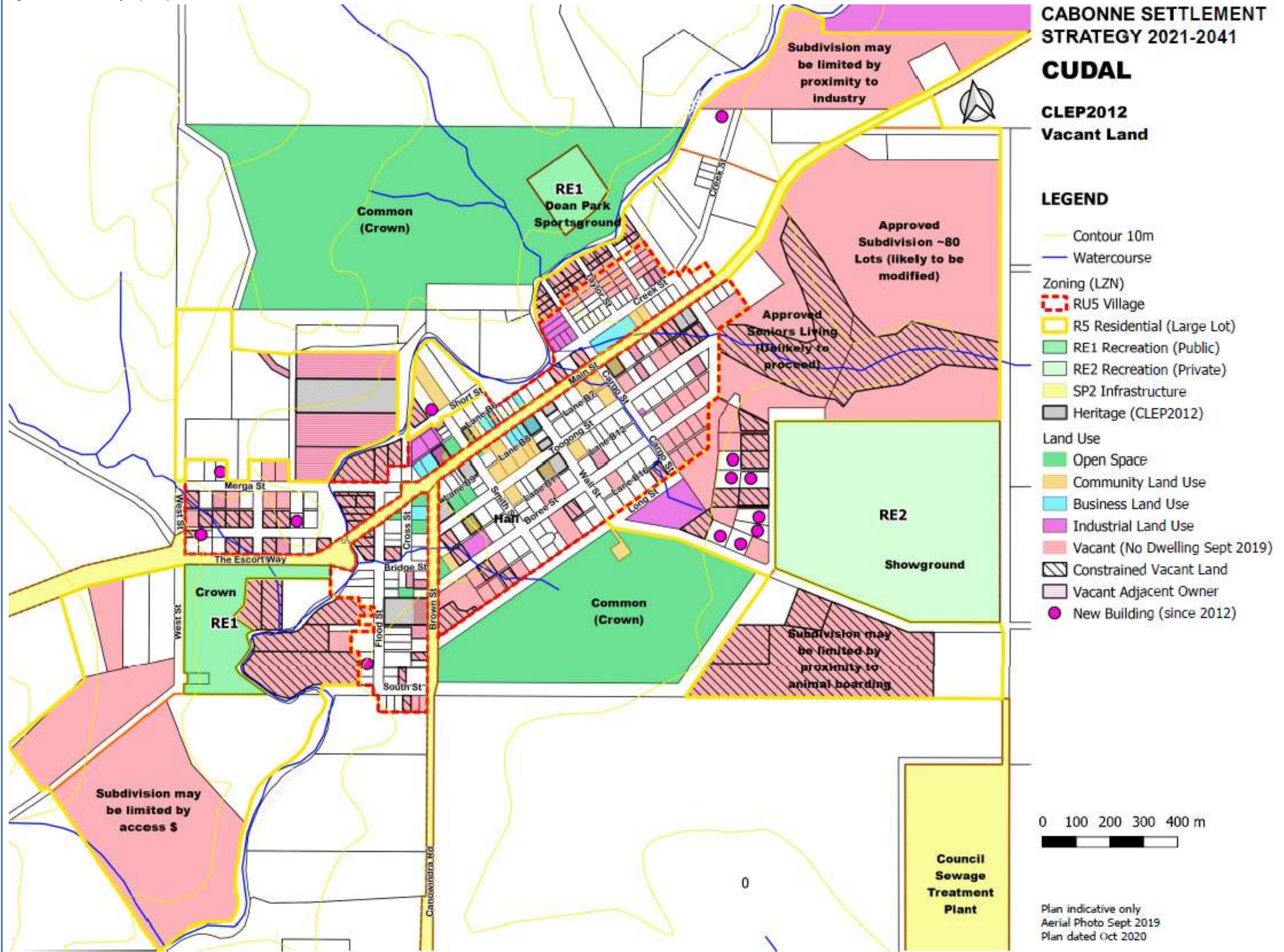


Figure 6: Vacant land analysis (Cudal).



5.7. Opportunities and Constraints

5.7.1. Natural Environment & Hazards

Cudal is relatively unconstrained by environmental hazards or environmentally sensitive areas except for lands in close proximity to Boree Creek or the drainage lines running to the creek.

Topography & Drainage

Cudal has flat to slightly undulating land with no steep slopes, reducing the cost of development and cut/fill of land. It rises to the north and south, draining towards Boree Creek. As a result, the land is generally well drained except flatter lands near the watercourses and drainage lines.

Watercourses

Boree Creek is a sensitive (riparian) watercourse that flows south-west into the Mandagery Creek then into the Lachlan River near Eugowra. Most of the other drainage lines are intermittent only and have no riparian functions.

Flooding

Cudal does not have an adopted Flood Study or mapped Flood Planning Level (usually 1% Annual Exceedance Probability + 500mm freeboard). It is recommended that when grant funding is available that this is completed, though it may be a lower priority than other villages that have more affected urban zoned lands.

This Strategy shows an indicative area with flood potential (based only on contours with no detailed historical or hydrological analysis) and should NOT be relied upon. It is used only as a tool for determining growth potential for the settlement until a Flood Study is prepared.

Mainstream flood impacts along Boree Creek are likely to be largely outside the existing Village Zone (due to amendments in CSS2012/CLEP2012) and only affect some large lot residential and recreational lands.

Overland flow during peak rainfall events in drainage lines through Cudal to Boree Creek are more likely to result in intermittent flood issues, resulting in a number of vacant lots or under-utilised land that has less development potential.

Groundwater

Most of the urban area of Cudal (to the east of West St) is within an area of moderately high to high groundwater vulnerability. As the Zone RU5 Village area is generally serviced with reticulated water & sewer this is less of an issue. The Zone R5 Large Lot Residential areas are unlikely to have reticulated water/sewer so conflicts with bores should be avoided through appropriate on-site effluent management. Due to water security issues, there may be a number of bores and care should be taken not to deplete groundwater or risk its contamination.

Vegetation & Biodiversity

Sensitive biodiversity usually aligns with significant vegetation, mostly along Boree Creek and in the Crown lands/commons/travelling stock reserves. With appropriate buffers/lot sizes it is not a major constraint to development, though there could be improvement of riparian vegetation along Boree Creek.

Bushfire

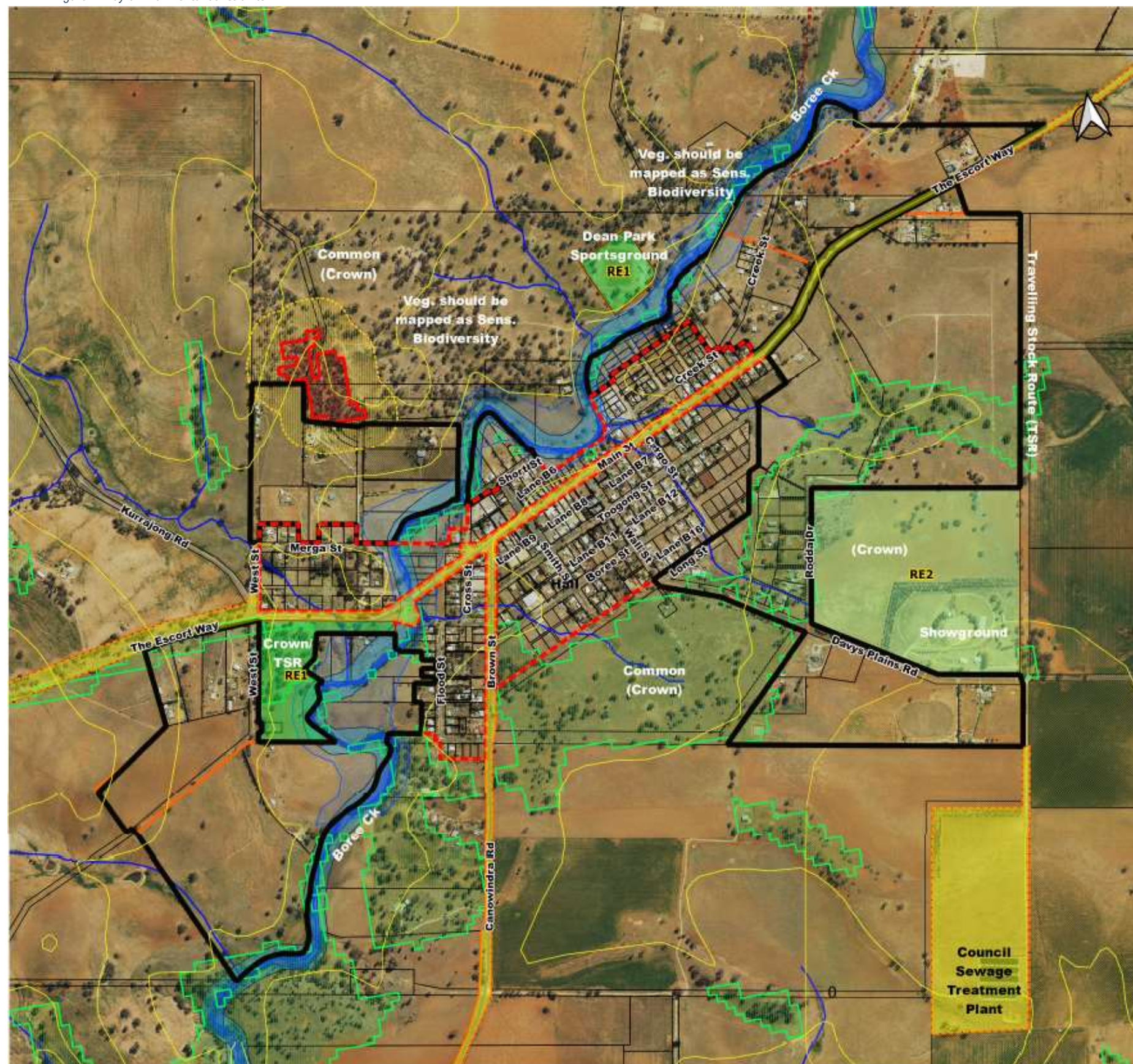
Cudal only has one pocket of mapped bushfire prone land (RFS 2003) in the Common to the north with the buffer overlapping the Zone R5 Large Lot Residential area but unlikely to significant impact on future development potential. However, bushfire prone land may increase if it includes grasslands.

The denser vegetation areas are generally in the Commons/recreation grounds but are unlikely to significantly increase risk to urban areas compared to some other settlements in Cabonne.

Geology

Geology does not appear to be a significant constraint for Cudal. Karst (limestone) mapping shows it extending slightly into the north-eastern Zone R5 area but there are also rocky outcrops along ridges throughout some of the lands that might affect lot size and servicing. Naturally occurring asbestos is not mapped in the area.

Figure 7: Key environmental constraints.



LEGEND			
	Watercourse		Zoning (CLEP2012)
	Heritage (CLEP2012)		RU5 Village
	STP/Waste Depot Buffer (400m)		R5 Residential (Large Lot)
			RE1 Recreation (Public)
			RE2 Recreation (Private)
			SP2 Infrastructure
	Env. Constraints		Bushfire Prone Land (2003)
	Flood Estimate (No Flood Study)		Veg. Cat. 1
	Sens. Biodiversity (CLEP2012)		Veg. Cat. 2
	Sensitive Water (CLEP2012)		Buffer
	Riparian Watercourse		

5.7.2. 2008 Subregional Strategy

Whilst the 2008 Subregional Strategy did not make recommendations for individual settlements, it did provide constraint analysis for the entire Shire that is unlikely to have changed significantly in 2020.

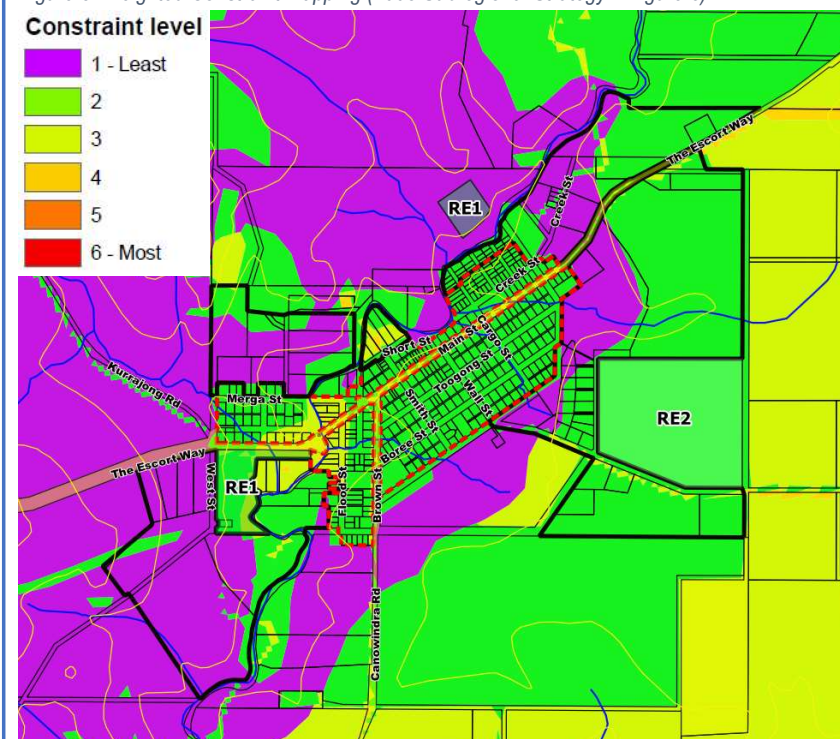
The Soft Constraints Analysis provided a weighting to various constraints and represented them as levels from 1 (least) to 6 (most) constrained. However, we suggest that this mapping did not factor in all of the constraints and requires site specific testing.

The Constraints Mapping around Cudal (see Figure below) shows the land that is less constrained according to that study (Level 1-purple) corresponds mostly with land immediately around the fringes of the existing Zone RU5 Village area extending to the north and west of Cudal.

To the east and south, the Constraint Level increases to Level 2 out to the Travelling Stock Reserve to the east and then Level 3 beyond (less desirable for development), probably due to the need to protect higher quality soils for agriculture (see below).

At this stage, additional infill development within the existing Village Zone and Large Lot Residential areas and some future investigation of conversion of some of the Crown land adjacent is broadly consistent with the 2008 Subregional Strategy.

Figure 8: Weighted Constraint Mapping (2008 Subregional Strategy – Figure.6).



5.7.3. Agriculture

Agricultural land (outside urban areas) has historically been classified according to land capability Class 1 (high quality) though to Class 6 (low quality) though this system is limited in its application and isn't accurate at the property level.

The NSW Government agricultural policy is to try to protect higher quality land from unnecessary urban encroachment or land use conflict (e.g., 'Right to Farm' policy). The mapping below suggests that land immediately surrounding Cudal's Village Zone is mostly in Class 4 to the south and Class 3 & 5 to the west (lower quality). However, the north-east and east Zone R5 areas sit in Class 2 lands which is higher quality and less common throughout Cabonne.

Cudal is identified as having Biophysical Strategic Agricultural Land (BSAL) (see Figure below) mostly to the south, east and north-east of the urban area (though this mapping is for the purpose of preventing land use conflict with extractive industries, not urban growth).

In the Central West Pilot (2012) Agricultural Study – mapping for Cabonne suggests that land around Cudal is important cropping and grazing land. It is also on the western edge of medium wool producing land. This is likely to align with future Important Agricultural Land mapping.

The recommendation of this Strategy is that future growth investigation areas are largely looking to expand urban development within the existing large lot residential areas or within the Crown lands around the fringe. There is no new extension into Class 2/BSAL lands (except for existing quasi-industrial land) so there should be limited impact on agriculture except at existing urban interfaces. Generally, larger lot residential (Zone R5) provides a partial buffer to large agricultural holdings.

Figure 9: Indicative map of Agricultural Land Capability Classes around Cudal.

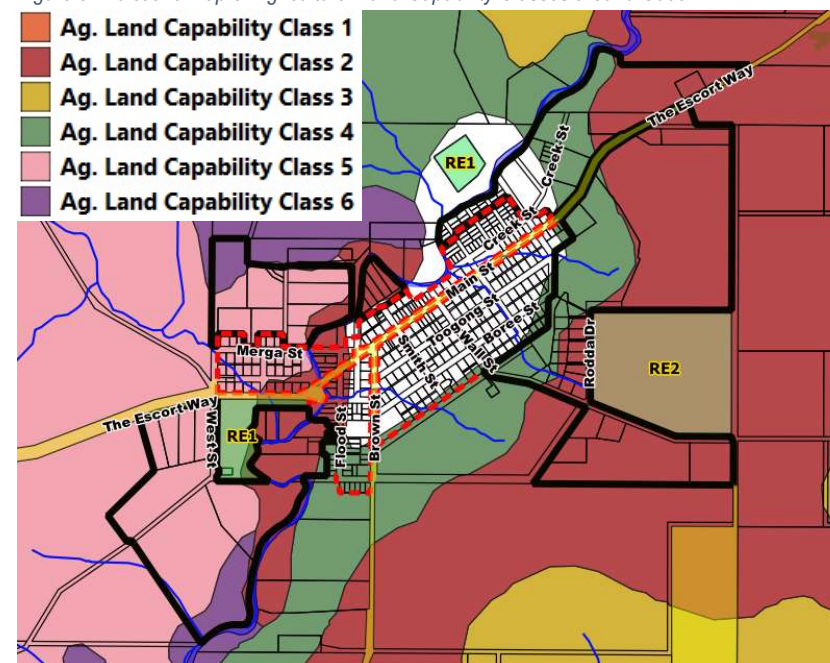
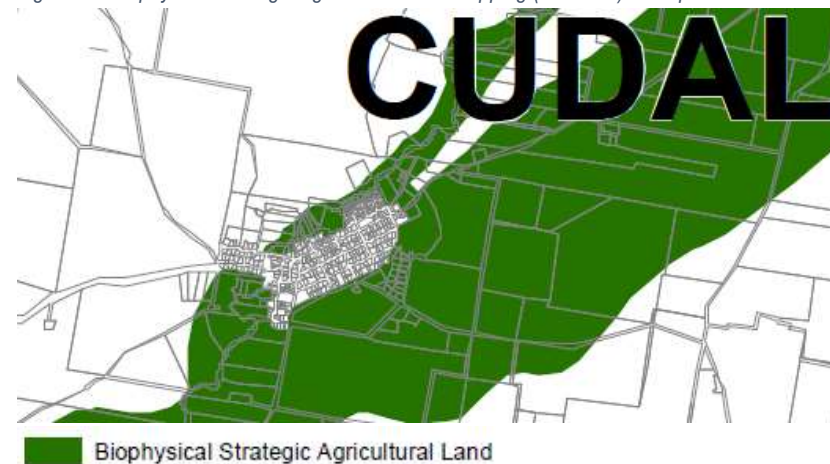


Figure 10: Biophysical Strategic Agricultural Land mapping (Sheet 23) excerpt for Cudal.

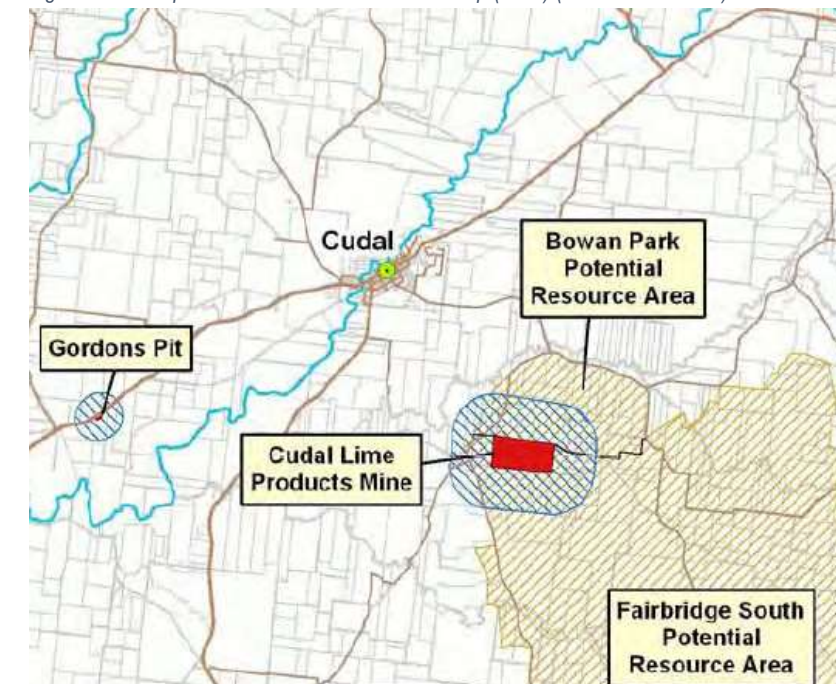


5.7.4. Mineral Resources

Generally, growth of urban and residential uses should seek to avoid or minimise impacts on known existing extractive industries or potential mineral resources.

The Figure below is an excerpt from the 2012 Mineral Resource Audit mapping for Cabonne showing that Cudal's urban area has a reasonable buffer to the Bowan Park and Fairbridge South Potential Resource Areas, including the Cudal Lime Products Mine (>3km to south-east). Therefore, any urban growth within or around the fringes of Cudal is unlikely to significantly increase land use conflict.

Figure 11: Excerpt from Mineral Resource Audit Map (2012) (NSW Government).



RESOURCE CLASSIFICATION

- Identified Resource - areas containing existing quarries, mines, and/or identified resources**
Industry & Investment NSW would generally object to any proposed zoning changes or developments that may prohibit mining or quarrying in these areas. Any proposed zoning changes or developments that may prohibit mining or quarrying in these areas should be referred to Industry & Investment NSW for comment.
- Potential Resource - areas containing potential mineral and/or extractive resources**
Development within these areas could adversely affect or be affected by future mining and/or extractive resource operations. Any proposed zoning changes or developments that may prohibit mining or quarrying in these areas should be referred to Industry & Investment NSW for comment.
- Buffer Zone**
Development within these areas could adversely affect or be affected by adjacent mining and/or extractive resource operations. Any proposed zoning changes or developments that may conflict with mining or quarrying on adjacent lands should be referred to Industry & Investment NSW for comment.

5.8. Strategy (Growth Investigation) Areas

The aim of this Strategy is to identify up to 20-years' supply of urban and large lot residential land supply for each settlement where growth is sustainable and ensure planning decisions do not constrain future growth or increase land use conflict.

This Section sets out the identified Strategy Areas in rough order of priority (subject to market feasibility & detailed site studies). See the following Figure(s): *Growth Areas*.

As there is in excess of 20 years expected growth potential within existing urban zoned lands in Cudal there is limited need to identify areas for expansion at this time. Council should continue to assess the development rates of land in Cudal every 5-10 years to ensure there is at least 10-20 years supply for all major land uses.

Regardless, there are several other drivers that may bring into consideration some additional lands for investigation as follows:

- Growth dispersal from Orange may increase as it becomes less affordable and technology allow more people to work remotely from settlements like Cudal;
- There is limited Village Zoned vacant land without constraints and a low likelihood of significant infill development so some more urban land may be necessary to meet market demand;
- There are development approvals and/or preliminary discussion on some larger lot residential land that suggest a more urban zone may be appropriate to facilitate development;
- Some of the Crown land around Cudal is under-utilised and could be considered for redevelopment if Cudal needs to expand.

5.8.1. Infill Development in Existing Urban Zones

This Strategy encourages infill development within existing zones in preference to expansion of the urban area into agricultural lands to meet dwelling demand.

The Vacant Land analysis above suggests that there are a significant number of vacant/under-developed existing lots (usually forming part of a larger holding) as well as some additional subdivision potential in both Zone RU5 Village and Zone R5 Large Lot Residential (LLR).

Therefore, before the following Strategy (Growth) Areas are investigated and NEW land is rezoned, reasonable attempts should be made to develop this infill land.

However, it is common in Cabonne's villages for people to desire a larger holding for privacy/amenity and release of land for development is limited. As land values increase it is expected that this position may change slightly. This is covered in more detail in this Strategy in the **Local Profile Section 2.3 – Tools/ Incentives to Achieve Desired Outcomes**. Should infill areas not be put on the market within a reasonable timeframe then additional areas may need to be rezoned.

Warning: If significant areas of existing vacant/under-developed urban/LLR zoned land is not developed in the next 10 years (by 2031) then Council may rezone part or all of these areas to rural use to allow the identification of alternative areas.

In Cudal, in particular, the following land should be encouraged for additional (infill) development:

- South of Boree St & Boree to Toogong St (Village Zone);
- North of Creek St (Village Zone);
- End of Rodda Dr (LLR Zone);
- End of West St (LLR Zone); and
- End of Creek St (LLR Zone).

5.8.2. CUD1 – North East Cudal (South of The Escort Way)

Strategy Area CUD1 is located to the north-east of Cudal and south of The Escort Way. It should be investigated as an extension of the Village Zone for serviced urban residential land OR it can remain in the Large Lot Residential zone if the landowners will provide a reasonable yield with appropriate servicing.

The land consists of part of two lots: Lot 3 DP1094619 and Lot 20 DP1135607 (~30.8ha). Both of these lots have existing development approvals for substantial development. Lot 20 has an approval for an aged care facility. Lot 3 has approval for around 79-80 large lot residential lots. Neither development has proceeded to-date.

Lot 3 has recently changed hands and the new owner has discussed an interest in developing a new style of community development possibly including function centre, performance spaces, and pockets of leased housing on community title surrounded by open space.

Whilst the existing Zone R5 Large Lot Residential (LLR) does not prohibit the dwelling components or community title subdivision it may restrict some of the more urban uses such as function centres, cafes, and community facilities. Also, pockets of denser dwellings may require reticulated sewer and water that are not generally provided to LLR areas. Reticulated water already runs along The Escort Way and sewer is a short distance away at the Village Zone boundary.

Therefore, should this landowner seek to proceed with such a development, this Strategy suggests investigating an extension of Zone RU5 Village to this area supported by reticulated sewer/water. Part of the land with access from Rodda Dr should promote LLR infill development and larger lots/buffers may still be needed around the perimeter to minimise land use conflict with agriculture & The Escort Way.

It is worth noting that in CSS2012 & *Draft Cudal Village Strategy (2005)* that this land was identified for Village Zoning if the Cudal Gardens Estate did not proceed – so it is consistent with previous thinking.

Whilst Lot 20 has some more constraints that may limit urban lot sizes, urban residential lots may be suitable towards The Escort Way setback from drainage corridors and steeper/rocky land with the remainder in Zone R5 Large Lot Residential. There is limited impact on agriculture from this extension of urban zoning as it consumes existing large lot residential zoned land with a development approval.

5.8.3. CUD2 – North-East Cudal (North of The Escort Way)

Should Strategy Area CUD1 proceed and result in the extension of reticulated sewer to the north-east of Cudal this may open up additional subdivision potential and smaller urban lots along the northern edge of The Escort Way and along Creek St to create Strategy Area CUD2 (~7.6ha) (or vice-versa).

It is worth noting that in *Draft Cudal Village Strategy (2005)* this land was noted as a natural Village Zone extension so the proposal is consistent with previous thinking.

However, any land close to Boree Creek would need to be above the Flood Planning Level (supported by a flood study) to support rezoning, and would need to protect significant trees in addition to the usual studies.

5.8.4. CUDCr1 – Showground/TSR (Crown Land)

This is a single lot (Lot 7008 DP1020069) at 121 Davys Plains Rd that is Crown land. Cudal Showground takes up the south-eastern quadrant of this parcel whilst the rest is most likely leased for grazing/cultivation. It is immediately adjacent to recent large lot residential (LLR) development with a sealed road frontage along Rodda St and development approvals on land to the north.

The success of the Rodda St large lot residential development in the last 5 years combined with the potential for Strategy Areas CUD1 & CUD2 to convert some existing Zone R5 land for urban residential use suggests that there should be investigation of some new large lot residential lands that are easily developed.

This Strategy suggests investigating part of this land (~12ha) fronting Rodda St for rezoning for large lot residential purposes assuming:

- The land is surplus to Crown needs and is not needed for the Travelling Stock Reserve (TSR). The remaining Crown land can be used as a TSR if required;
- There is no conflict with any current lease over the land (it appears to be cultivated agricultural land);
- There is no Native Title claim over the area;
- There are limited trees in the Strategy Area. The existing tree planting/Landcare area to the north-west of CUDCr1 may need to be protected;
- This land would not be rezoned until land there has been a similar reduction of existing Zone R5 LLR elsewhere in Cudal, or other LLR land has reached 60% capacity of development, or is not likely to be developed (i.e., Strategy Areas CUD1 & CUD2 have been rezoned).

It is important to note that Crown land can be difficult to release for private development purposes, not just because it may be part of the TSR system, but also because it may be subject to Native Title applications and ecological issues that can

take substantial time and effort to navigate and assess and the Crown needs to put the land to a competitive auction (making it difficult to invest money in investigation beforehand). However, there are pathways to release the land on a freehold basis that need investigation. A suitable buffer to the Showground would be required but is mostly provided by the existing tree planting.

5.8.5. CUDCr2 – Temporary Common

Strategy Area CU4 (Lot 7005 DP1020077 ~27.9ha) is Crown Land noted as a 'Temporary' Common. It is located immediately to the south of the existing Village Zone. More research is needed to understand the why this was a 'temporary' common' and its significance to the community.

Its proximity to the village centre, along with natural drainage towards the village for sewer, makes this a candidate for future investigation for Village Zone/ urban residential expansion. The same issues with Crown Land noted for Strategy Area CUDCr1 above apply to this land. This is consistent with previous thinking in the *Draft Cudal Village Strategy (2005)*.

Smith St & Long St could be formed/extended and new access provided from Davys Plains Rd and Canowindra Rd. There are existing reticulated water mains through this property and it would naturally drain towards Cudal for sewerage.

There is one small drainage line and some significant trees that would require protection and there may need to be buffers to agricultural land to the south and an animal boarding establishment ~300-500m to the east.

5.8.6. CUDA – Davys Plains Road (Removal from Zone R5)

This land at 140 Davys Plains Rd consists of two lots (Lot 3 DP1163066 & Lot 157 DP750137 ~17.2ha). It is occupied in 2020 by Sunnlyodge Greyhound Education Centre. It has ~12 greyhound kennels and a racing track that takes up most of the eastern 2/3rds of these two lots with one dwelling on the eastern lot.

Under CLEP2012 this may be defined as '*animal boarding & training establishment*'. These sorts of facilities (particularly when they are commercial rather than private kennels) have potential to create land use conflicts with dwellings mostly due to dogs barking but also management of waste and training activities.

We are not aware of any complaints or issues with this business. However, it seems like significant investment has been made in this business so it should be protected from dwelling encroachment that may threaten its approved activities.

A 'rule of thumb' (see control in Blayney DCP) requires these types of facilities to have a buffer of 500m to another off-site dwelling (or site where additional dwellings are likely) and minimum 200m to a property boundary.

This land also slightly overlaps the 400m buffer from the Sewage Treatment Plant though we do not believe there is an odour study defining a minimum buffer.

If these buffers were applied to this land (measured from the kennels) then it would preclude further dwelling development on the remainder of this land (and potentially affect neighbouring land).

As a result, it is suggested that while this business is in operation, that the land could potentially be removed from Zone R5 Large Lot Residential. This may offset some other areas where large lot residential growth is possible.

5.8.7. CUD3 – The Escort Way (West)

There is an existing Large Lot Residential (LLR) zone south of The Escort Way and west of West St. Four lots fronting The Escort Way have been developed (each lot ~2ha) but land at the end of West St (see CUDB below) has not been developed.

Strategy Area CUD3 (~10.2ha) is part of Lot 52 DP1257696 (~60ha) and acts as a natural extension of the existing Zone R5 LLR area along The Escort Way. In this way it would fill in the gap and reduce the interface with agricultural land. The Applicant would need to seek agreement from TfNSW if they were to get access from The Escort Way as it is a classified road or access could be sought through the other LLR land via West St. This land should only be considered for rezoning once:

- The adjacent Zone R5 land has been developed to 60% capacity; or
- If most LLR land is rezoned as part of Strategy Areas CUD1 & CUD2; or
- Either Strategy Area CUDA Davys Plains Rd (see above) or CUDB West St (see below) is rezoned for rural land uses.

5.8.8. CUDB – West St (Removal from Zone R5)

This land consists of Lot 24 DP555115 known as 4003-4005 The Escort Way (~23ha) that appears to be vacant. It is currently in Zone R5 Large Lot Residential (LLR) but appears to be part of a larger agricultural holding that is adjacent to Boree Creek. Whilst this land has been in Zone R5 for several decades it has not been subdivided for LLR use.

Access is via West St. West St is a dirt track ~400m long with significant vegetation and would be expensive to form into a sealed road to support any significant subdivision. Land along Boree Creek is likely to be flood prone or have drainage issues so it may significantly reduce development yield.

Whilst the Agricultural Land Capability is shown as Class 5-6, the BSAL maps cover most of these two parcels of land with the lots currently used for agriculture including cropping.

It is suggested that the likelihood of this land proceeding to large lot residential subdivision or sustaining a significant yield is low (there has not been any discussions with the current landowner). If these do not proceed to subdivision in the next five years (by 2026) then it is recommended this land is removed from Zone R5 and put back in the surrounding rural zone. An equivalent development potential can then be relocated to more suitable land (e.g., Strategy Area CUD3). It is proposed to retain the existing dwelling lot (Lot 23 DP555115) in the LLR zone so that this owner still has some development potential.

5.8.9. CUD-IN2

This land consists of two lots (Lot 27 DP750137 & Lot 1 DP1172771 ~18ha) known as 3732 The Escort Way. It sits north-west of The Escort Way at the western end of the former Cudal Airport (now TfNSW safety testing facility) and is in the rural zone (adjacent to Zone R5 Large Lot Residential).

It currently has approval to build two (2) large sheds (one of which is constructed). There is anecdotal evidence that these sheds could be capable of supporting a range of activities, some of which are not linked to agricultural use and, therefore, may be outside uses permissible in the zone. It is a relatively flat site with an existing access to The Escort Way that is not used for or likely to support viable agriculture.

The land owner is keen to continue to construct a number of sheds for a variety of business and industrial purposes. They have a concrete batching plant and the skills to do this cost-effectively. However, if this were to occur then it is unlikely that most future uses would be approved as 'rural industry' and the current rural zone may be too restrictive.

One way to resolve this and facilitate additional businesses may be to rezone this land for Light Industrial uses (e.g., Zone IN2 Light Industrial). This would facilitate some economic growth for the town separated/well-buffered from the urban residential area.

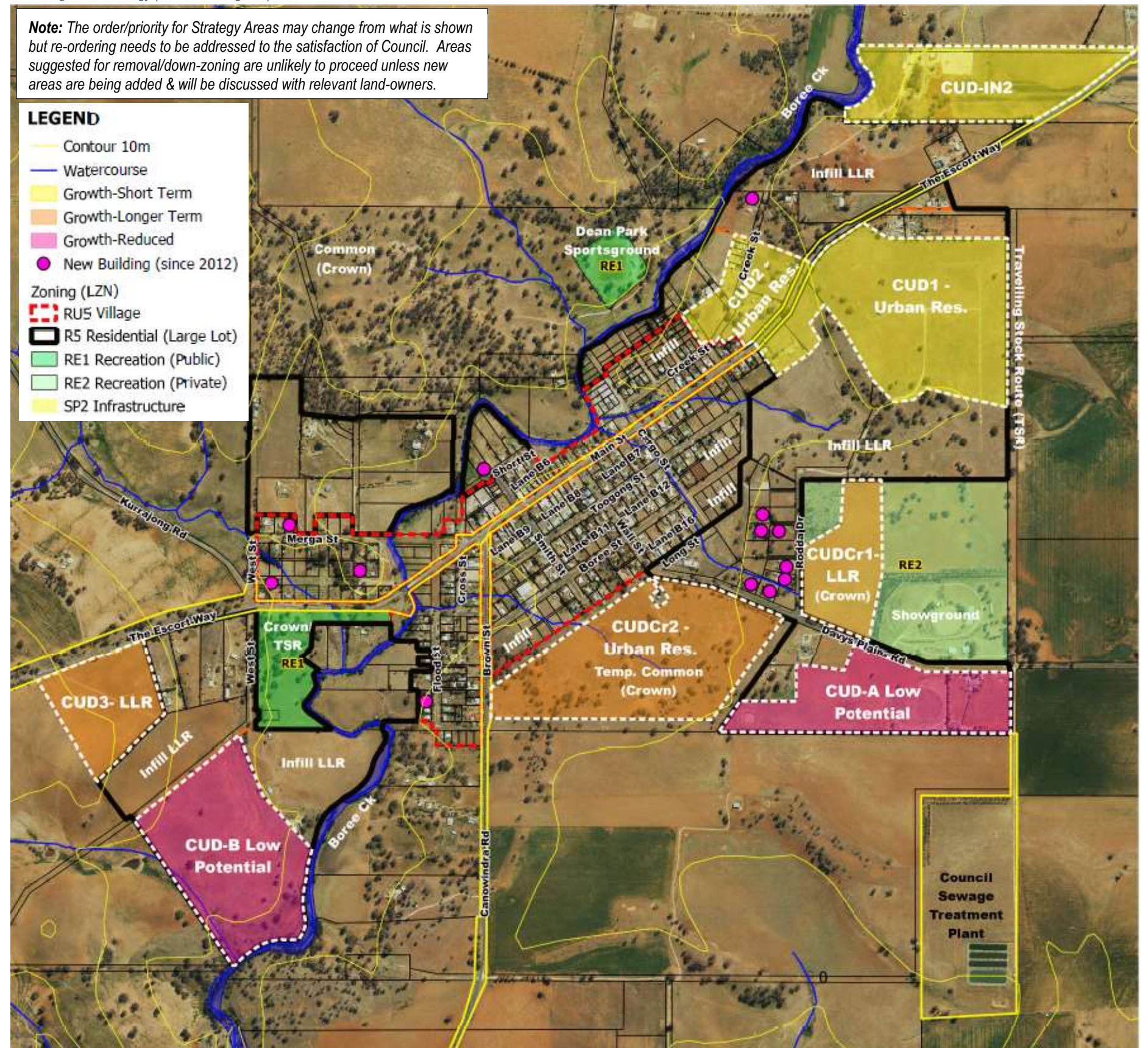
It is interesting to note that in *Draft Cudal Village Strategy (2005)* land on the opposite side of The Escort Way (to the south of and adjacent to the former airport) was identified for industrial growth. This is roughly consistent with previous thinking. Whilst the 2020 Subregional Strategy does not identify industrial land opportunities for Cudal this is a minor amendment over existing quasi-industrial land.

5.8.10. Cabonne Settlement Strategy 2012 (CSS2012)

The CSS2012 recommendations were predominantly aligned with realigning the zone boundaries with lot boundaries and reducing what was (at the time) an over-supply of large lot residential land. The 2021 Strategy (Growth Investigation) Areas are similar in that Strategy Areas CUD-A & B reduce large lot residential where it is unlikely to grow. The 2021 Strategy (Growth Investigation) Areas depart slightly as follows:

- CUD1 & 2 / CUDCr2 areas for urban residential expansion are similar to those proposed in CSS2012 & the 2005 Strategy but more specific;
- CUD3 / CUDCR1 areas are logical expansion for large lot residential to replace removed land with sites more likely to be suitable to the market;
- CUD-IN2 – Reinforces existing quasi-industrial land opposite the former airport (2005 Strategy placed this south of the airport).

Figure 12: Strategy (Growth Investigation) Areas – CUDAL



5.9. Minimum Lot Size for Subdivision (CLEP2012)

It is not recommended to change the Minimum Lot Size (MLS) for subdivision. In Zone RU5 Village if the lot has connection to reticulated sewer then it can be subdivided to 900m² and there is little current pressure to subdivide below this size. Generally, landowners and the community appear to want larger lot sizes for dwellings so there is little pressure to subdivide below 900m² (which is a relatively common dwelling lot size).

In Zone R5 Large Lot Residential, a range of MLS from 4,000m² to 1ha to 2ha was applied in CLEP2012 in accordance with CSS2012 (the previous strategy). It is not proposed to change this at this time.

However, any new large lot residential areas may seek to apply for an MLS of no greater than 1ha to minimise consumption of land (assuming that the land can support on-site effluent systems/bores and the NSW Government agrees).

5.10. Planning Control Recommendations

Rezoning recommendations are in accordance with the Strategy Area recommendations above. Minimum Lot Size (MLS) is reviewed in *Section 5.8* above.

There is currently no comprehensive DCP for Cudal though there are DCPs for general LLR areas (DCP6) and relocatable homes (DCP15) – mostly out-of-date.

A new comprehensive DCP covering all major forms of urban and large lot residential should be prepared. In addition, for any Strategy (Growth) Areas, there should ideally be DCP site-specific controls, potentially including a structure plan guiding access & connections & responses to site constraints to deliver the best outcomes.

5.11. Additional Studies

It is important to note that this Strategy is NOT a comprehensive investigation of the suitability of any Strategy (Growth) Areas for future development. The land owners or Applicants will need to prepare a Planning (Rezoning) Proposal, potentially supported by a number of environmental & other studies to justify any rezoning and/or development.