



# PLANNING PROPOSAL



for the rezoning of

**Part of Lot 33 DP1100718  
Bruton Street, Tocumwal 2714**



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## 1. PRELIMINARY

### 1.1 **Context**

This planning proposal has been drafted in accordance with Section 55 of the Environmental Planning and Assessment Act, 1979 and the Department of Planning “A guide to preparing planning proposals” and “A guide to preparing local environmental plans.”

### 1.2 **Subject Land**

This planning proposal applies to part of Lot 33 in DP1100718 Bruton Street, Tocumwal as indicated in the locality sketch (**Figure 1** – Page 4), satellite image (**Figure 2** – Page 5) and photographs (**Plates 1 & 2** – page 6)

### 1.3 **Current Zoning and Landuse**

The subject land, part of Lot 33 in DP 1100718, is located in the 1(c) – Rural Small Holdings Zone under Berrigan LEP 1992 and has an area of approximately 7ha (**Figure 3** – Page 7)

The land adjoins the 2(v) – Village or Urban Zone to the south and adjoins a rural residential subdivision to the north.

### 1.4 **Council Resolution**

The draft planning proposal was considered by Council at its general meeting on 16 December 2009 where it was resolved to seek a gateway determination of the proposal (see **appendix A**)

# Figure 1 Locality sketch

N

 Area for rezoning

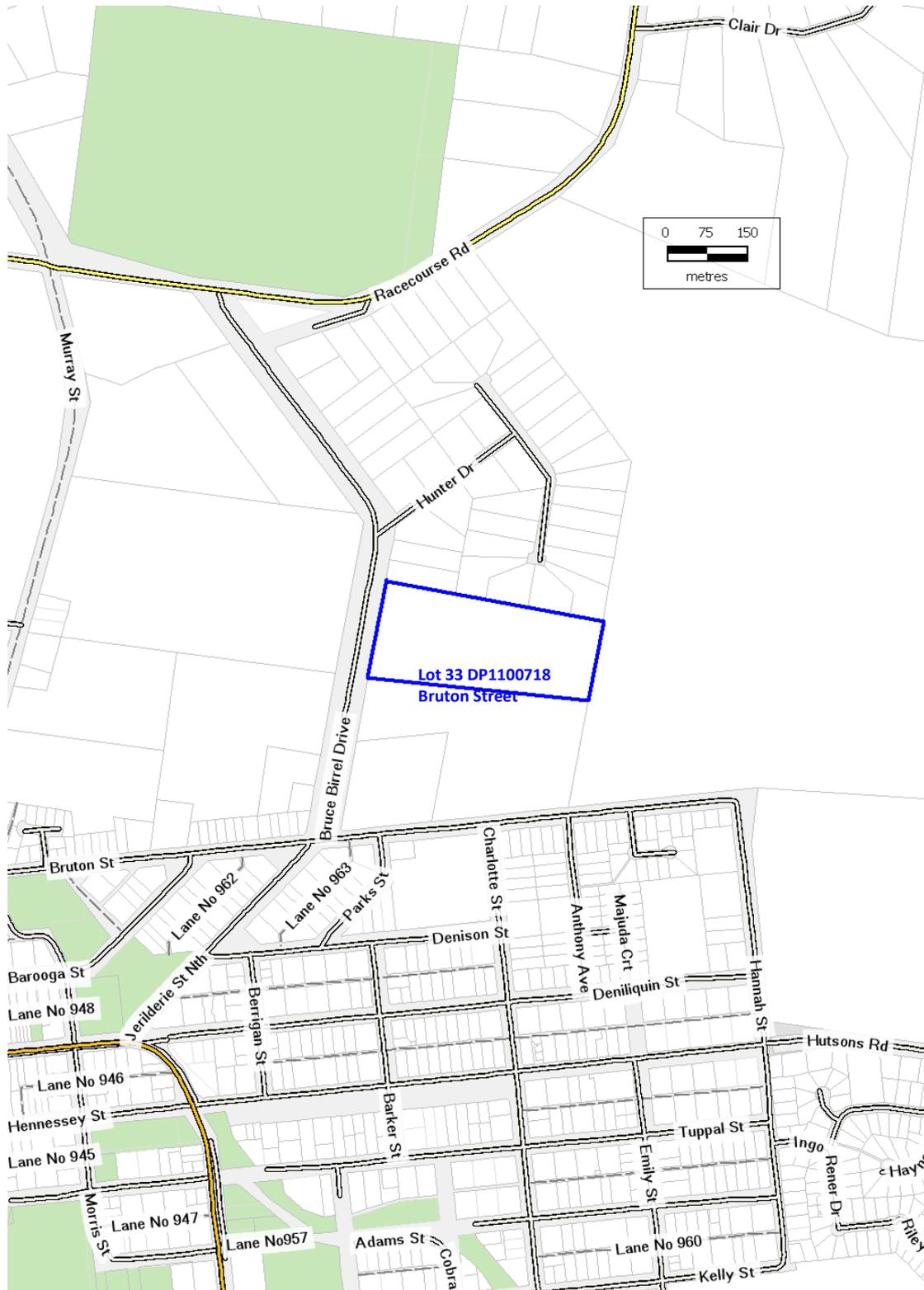
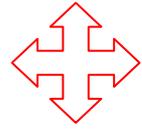
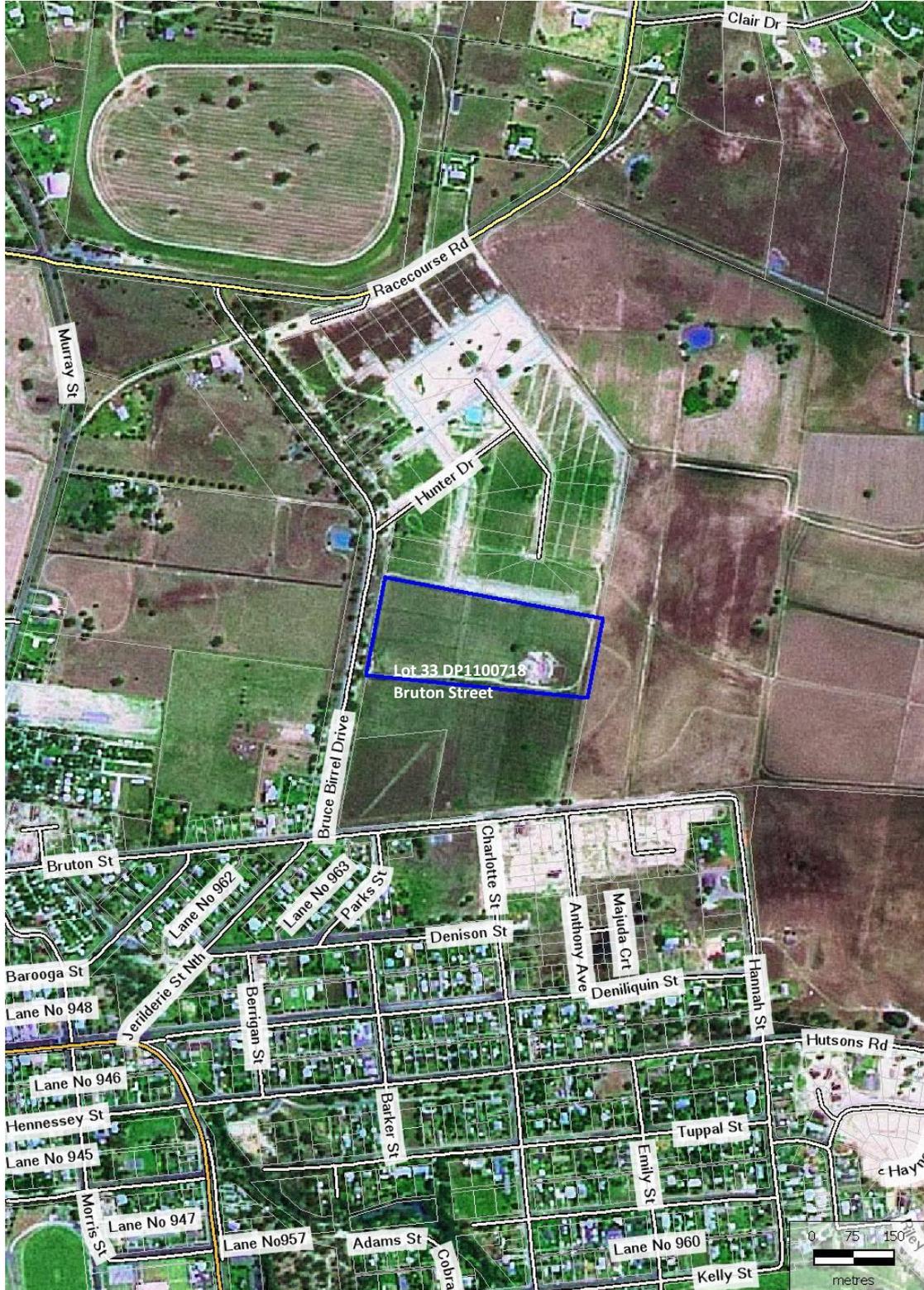
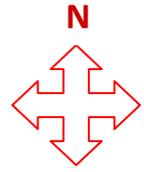


Figure 2 Satellite image

 Area for rezoning





**(Plate 1)** View from southern boundary of site towards rural residential land



**(Plate 2)** View from north of site towards village



## Part 1 – Objectives or Intended Outcomes

To enable the development of the land described as Part of Lot33 in DP1100718, Bruton Street, Tocumwal by way of subdivision for residential land use, public open space and stormwater drainage purposes

## Part 2 – Explanation of Provisions

The amendment of Berrigan LEP 1992 as illustrated on the attached plan to include the northern section of Lot 33 in DP1100718 within the 2(v) – Village or Urban Zone. (see **Appendix B**)

## Part 3 – Justification

### Section A – Need for the planning proposal

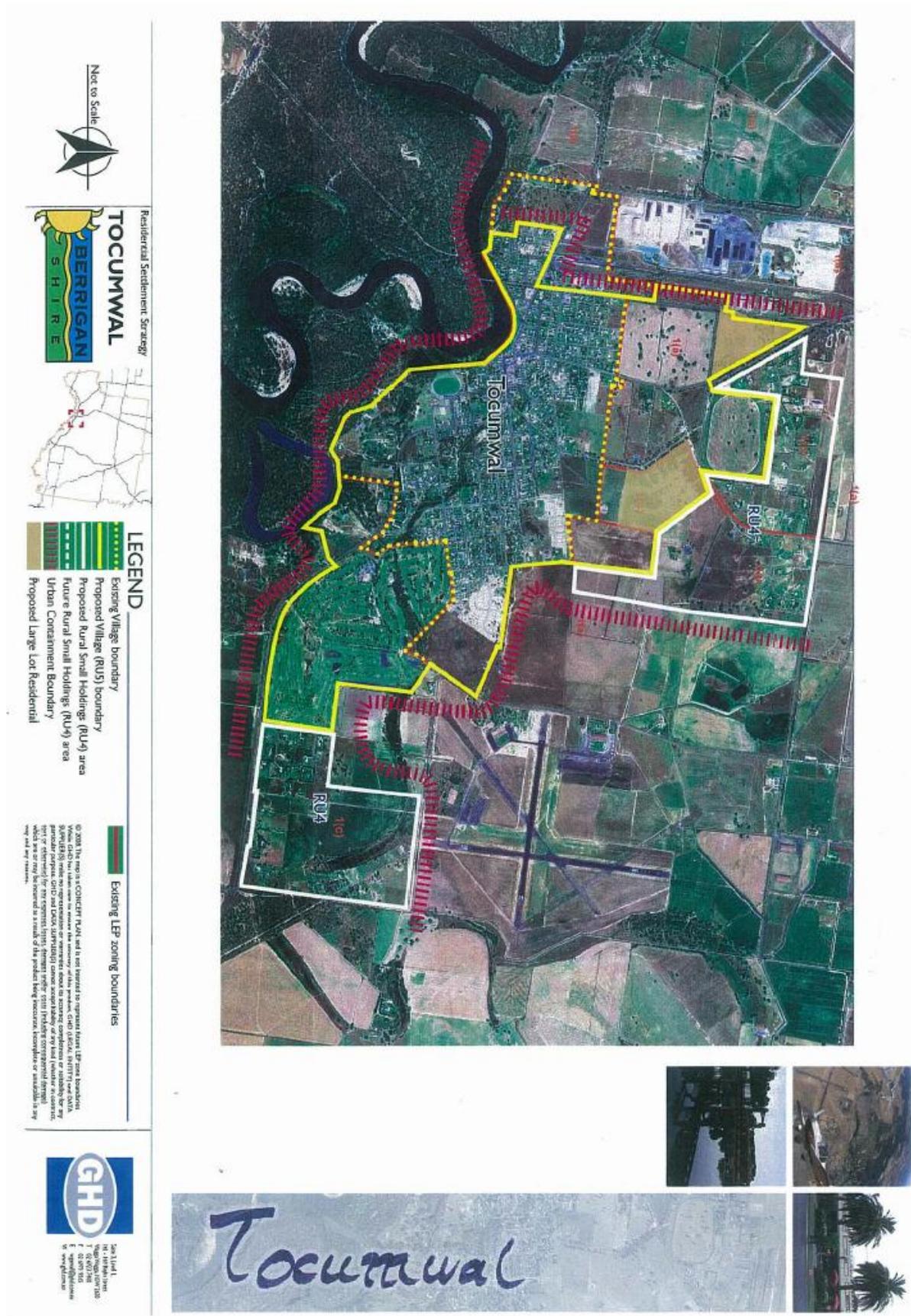
#### ***1. Is the planning proposal a result of any strategic study or report?***

The land has been identified as suitable for inclusion within the village for residential purposes in the Draft Berrigan Land Use Strategy, in particular, future land use map included in Part 3 – Residential Settlement Strategy. (see **Figure 4** – page 9)

The land is part of a parcel that was subject to a Local Environmental Strategy (LES) that was prepared in support of the rezoning of the southern section of the property in 2006.

Whilst the LES was prepared specifically for the southern section of the property, as well as a small adjoining allotment, the attributes of the northern section of the property are essentially the same and it is considered that the land would be suitable for inclusion within the village zone.

# Figure 4 Future Land Use Map



***2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?***

The rezoning of the northern section of the parcel is the best means to achieve the objectives and intended outcomes of this planning proposal.

Two areas of land, consisting of three titles under separate ownership, were rezoned in 2006 for the express purpose of providing a sufficient supply of residential land to cater for the growth of Tocumwal. (see **figure 5** – page 11).

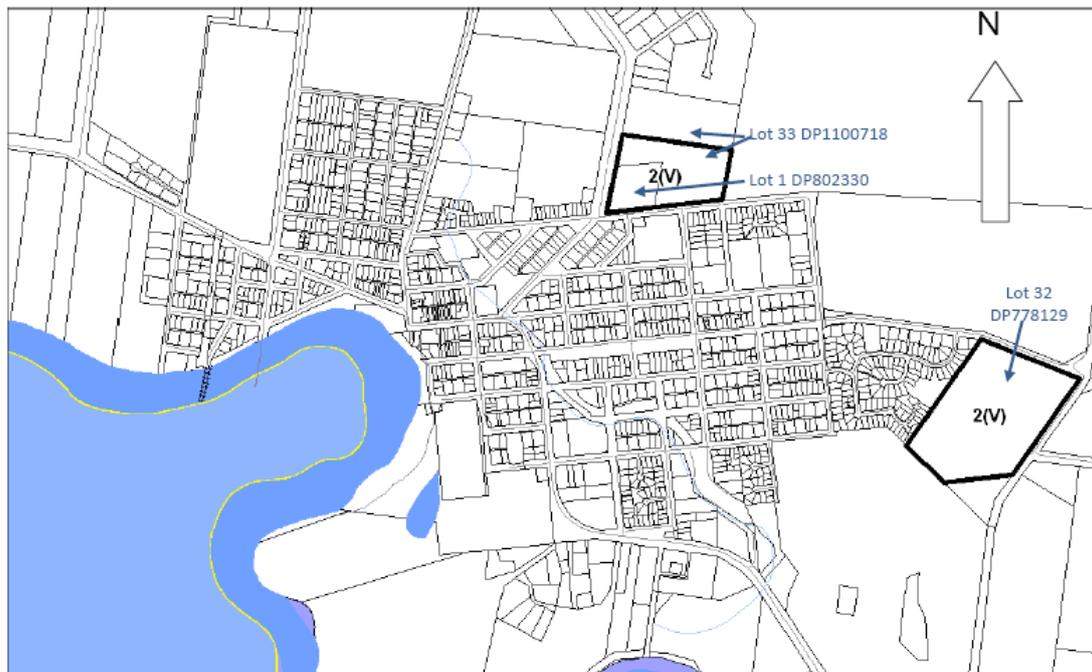
The owner of Lot 32 in DP778129 has indicated to Council that the development of that Lot will not be proceeding for at least 2 to 3 years which will result in a shortfall of approximately 180 allotments.

The owner of Lot 1 in DP802330 has also indicated to Council that the development of that Lot is not anticipated to begin for at least five years.

The owner of Lot 33 in DP1100718, however, has submitted a concept plan for the subdivision of the whole of that lot which, subject to the rezoning of the land and the consent of Council for the subdivision, will assist in mitigating the loss of the development potential forgone with the uncertainty of the development potential of Lot 32 and Lot 1. It should be noted that the proposed area to be rezoned is 7ha which indicates that the creation of residential allotments will not completely offset the area of land in Lot 32 and Lot 1, which has a combined area of 24ha, however the proposal will assist in meeting current needs until such time as Lot 32 and Lot 1 is developed in the future.

The owner of Lot 33 in DP1100718 is committed to developing the whole of the land immediately, subject to approval, which will achieve the intended outcomes of this planning proposal.

**Figure 5**



SCALE: 1:4000

LOCALITY: TOCUMWAL

**ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979**

**BERRIGAN LOCAL ENVIRONMENTAL PLAN AMENDMENT NO. 6**

SHEET 1 OF 2

<b>DRAWN BY:</b> L STEVENS	<b>DATE:</b> _____	<b>STATEMENT OF RELATIONSHIP WITH OTHER PLANS</b>  AMENDS BERRIGAN LOCAL ENVIRONMENTAL PLAN 1992  CERTIFIED IN ACCORDANCE WITH THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979
<b>PLANNING OFFICER:</b> L STEVENS	<b>DATE:</b> _____	
<b>CERTIFICATE ISSUED UNDER SEC. 65 E.P.A. ACT 1979</b>	<b>DATE:</b> _____	
		General Manager _____ Date _____

### 3. *Is there a net community benefit?*

#### *Net Community Benefit Test (adapted from draft Centres Policy)*

1. **Will the LEP be compatible with agreed State and regional strategic direction for development in the area (eg. Land lease, strategic corridors, development within 800 metres of a transit node)?**

The proposed spot rezoning is compatible with the draft Murray Regional Strategy as the additional residential land will assist in meeting the expected growth as identified on page 19 of the draft Strategy (see Appendix H).

2. **Is the LEP located in a global / regional city, strategic centre or corridor nominated within the Metropolitan Strategy or other regional / subregional strategy?**

Not applicable

3. **Is the LEP likely to create a precedent or create or change the expectations of the landowner or other landholders?**

No. The expectations of the land owner will be met should the planning proposal be supported. No other landholders have expressed an interest in developing land for residential purposes at this time.

4. **Have the cumulative effects of other spot rezoning proposals in the locality been considered?**

Yes

5. **What is the outcome of these considerations?**

Part of the subject land and two separate parcels were rezoned in 2006. The owners of the separate parcels have chosen not to develop that land therefore that land can be discounted at this time. The rezoning of the subject land will enable the proponent to develop the subject property as a whole.

6. **Will the LEP facilitate a permanent employment generating activity or result in a loss of employment lands?**

The LEP will allow the development of the land for residential purposes which will generate employment in the locality, firstly during subdivision construction, and then on an ongoing basis with residential dwelling construction. The proposal will not result in the loss of employment lands.

7. **Will the LEP impact upon the supply of residential land and therefore housing supply and affordability?**

The LEP will have a positive impact on the supply of residential land by providing a wider choice of affordable land that can be developed within appropriate time frames and will not artificially inflate land prices due to a shortage of residential land.

8. **Is the existing public infrastructure (roads, rail, utilities) capable of servicing the proposed site?**

The existing public infrastructure adjoining the site is capable of servicing the proposed development of the land.

**9. Is there good pedestrian and cycling access?**

The land is located close to the town centre and serviced by sealed roads.

**10. Is public transport currently available or is there infrastructure capacity to support future public transport?**

Not applicable

**11. Will the proposal result in changes to the car distances travelled by customers, employees and suppliers? If so, what are the likely impacts in terms of greenhouse gas emissions, operating costs and road safety?**

The proposal will have minimal impacts as the land is located close to all services and facilities thereby diminishing adverse impacts associated with greenhouse gas emissions, operating costs and road safety.

**12. Are there significant Government investments in infrastructure or services in the area whose patronage will be affected by the proposal? If so, what is the expected impact?**

No anticipated impacts

**13. Will the proposal impact on land that the Government has identified a need to protect (e.g land with high biodiversity values) or have other environmental impacts? Is the land constrained by environmental factors such as flooding?**

Remnant grey box woodland within the road reserve adjoining the western boundary of the site has been identified as having biodiversity values and is worthy of protection which can be incorporated into the design of the subdivision of the land. Whilst not located within a nominated bushfire prone area it may be appropriate to incorporate an Asset Protection Zone within the design of any future residential subdivision.

The land is not constrained by any other environmental factors.

**14. Will the LEP be compatible / complementary with surrounding land uses? What is the impact on amenity in the location and wider community?**

The LEP will be complimentary with surrounding land uses and the proposal will extend the town boundary effectively utilising a remnant section of rural residential land.

**15. Will the public domain improve?**

Yes. Councils s94 Development Contributions Plan has identified the need for public open space upon development of this area and this space can be incorporated into the design of the future subdivision of the land.

Recent upgrading of the town stormwater drainage system includes an underground pipe and pumping station on this land which can also be incorporated into the design of the subdivision.

**16. Will the proposal increase choice and competition by increasing the number of retail and commercial premises operating in the area?**

The increase in population that will eventuate from the rezoning and development of the land will result in increased demand in the retail and commercial sectors thereby stimulating choice and competition and business sustainability in the town.

**17. If a stand-alone proposal and not a centre, does the proposal have the potential to develop into a centre in the future?**

Not applicable

**18. What are the public interest reasons for preparing the draft plan? What are the implications of not proceeding at that time?**

The rezoning of the land will allow for the development of additional serviced allotments, subject to Council approval, which are located close to all services and facilities as well as providing appropriately located public open space.

The implications of not proceeding may impact upon housing supply and affordability which will have negative economic and social effects in the locality.

**Summary**

It is considered that there will be a net community benefit from the proposed rezoning.

The development of the land for residential purposes will provide a wider range of allotments within the village which are located in close proximity to the town centre and other services and facilities.

The proposed rezoning and development of the land will maximize the use of the land situated in a central location. The site is less than 1km from the town centre which will be of a particular benefit to the ageing population. Existing infrastructure adjoining the site can be extended at minimal cost to the developer, Council and the community.

The construction of the proposed subdivision and future dwellings will benefit local contractors and businesses and the multiplier effects associated with the development will benefit the whole community.

It is also anticipated that there will be additional public open space made available upon the development of the land and part of the town stormwater system which traverses the land can be incorporated and formalized within the development.

## **Section B – Relationship to Strategic Planning Framework**

**4. *Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy?***

The planning proposal is considered to be consistent with the Draft Murray Regional Strategy as the rezoning and development of the land will assist in providing residential opportunities that are located close to the town centre

and services and facilities which will be of a benefit to the anticipated greater proportion of older people within the community as identified on page 15 (see **Appendix H**) of the above Draft Strategy.

The Draft Strategy, page 19 (see **Appendix H**), indicates that the Murray River towns of Barooga and Tocumwal can expect some growth which would indicate that the provision of additional residential land would be appropriate at this time.

Murray Regional Environmental Plan No. 2 – Riverine Land also applies to the land in particular ‘Part 2 – Planning principles’. The proposed rezoning and development of the land is consistent with the principles of the Plan, where applicable, as the land is flood free as it is protected by the town levee system, is close to existing services and facilities and is small in area and will not compromise the potential of prime crop and pasture land to produce food or fibre.

**5. *Is the planning proposal consistent with the Councils Community Strategic Plan, or other local strategic plan?***

Council and its consultants are currently finalising a draft strategic land use plan which has incorporated a Profile and Issues paper, a Review of Murray River Corridor Lands and a Residential Settlement Strategy.

One of the key issues identified was the need for periodic rezoning of land in Tocumwal for residential purposes to cater for the continued growth of the town.

Australian Bureau of Statistics (ABS) Census data indicates that the population has increased by 21.7% between 2001-2006. Census figures utilised in the strategic work indicate high rates of migration from Victoria and elsewhere in NSW during this period. Tocumwal also has a high median age of 54 which reflects the number of retirees electing to move to this river town to take advantage of its numerous facilities and services and country lifestyle.

The Tocumwal Land Demand Model, utilised in the formulation of the strategy, indicated a growth rate of 4.63% prior to 2006 however for the purposes of the strategy the historic growth rate of 2.7% has been adopted for the purposes of calculating the amount of land required for projected growth.

Council records indicate that, whilst there have been fluctuations in dwelling construction over the years, there has been an average of 24 dwellings constructed per annum over a 30 year period in Tocumwal.

It should be noted that there has been an average of 26 new dwellings constructed each year for the last 4 years.

Given that 24ha of land recently rezoned for residential purposes has now been effectively removed from available land stocks for up to 5 years due to external factors it is calculated that based on current demand there is only

enough land available for approximately 2 years based on the historic growth rate of 2.7%.

Another factor influencing the need to prepare this planning proposal is the reluctance or inability of current landowners of larger development sites within the Village Zone to develop that land for residential purposes. This is reflected in the strategic work where a discount factor of 25% has been incorporated into calculations of existing land available to be developed where those property owners do not wish to develop that land.

As mentioned previously Council and its consultants are advancing the strategic work and Council is committed to completing this work and preparing a Standard Instrument LEP. Whilst Berrigan is not a priority Council, a need has been identified to rezone land in Tocumwal in the interim, and the above comments provide sufficient justification for this proposal to proceed to ensure that sufficient land stocks are available until the Standard Instrument is gazetted.

***6. Is the planning proposal consistent with applicable state environmental planning policies?***

***SEPP (Rural Lands) 2008***

***Rural Planning Principles***

- a) The promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas.
- b) Recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State.
- c) Recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development
- d) In planning for rural lands, to balance the social, economic and environmental interests of the community
- e) The identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land
- f) The provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities
- g) The consideration of impacts on services and infrastructure and appropriate location when providing for rural housing,
- h) Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.

The land in question has an area of approximately 7ha and adjoins the Village boundary to the south and developed rural residential land to the north. The land has been intermittently cropped and utilised for grazing purposes. Given its location and small area the land has limited agricultural value.

It is considered that the proposal is consistent with the above planning principles in particular with reference to subclauses (d), (f) and (g) and is consistent with Councils draft strategy as the land is located within the identified urban containment boundary.

***MREP2 – Riverine Land***

It is considered that the planning proposal is consistent with the aims and objectives of this plan as the land is remote from the River, is flood protected, is located close to existing services and facilities and, due to the small area of the land, will not compromise the potential of the land to produce food and fibre.

***SEPP No. 55 – Remediation of Land***

The planning proposal is consistent with the SEPP as the land is not located in an investigation area pursuant to the provisions of the Contaminated Land Management Act 1997. A site audit of part of the land was undertaken by suitably qualified consultants during the preparation of an LES for the rezoning of part of this land where it was found that the land was not contaminated and it is considered that the section of land to which this proposal relates would be consistent with the remainder of the site.

***SEPP (Mining, Petroleum Production and Extractive Industries) 2007***

The planning proposal is considered to be consistent with the provisions of the SEPP as there are no known resources on the land and would be unlikely to be developed considering the proximity to the town and rural residential developments.

***SEPP (Housing for Seniors or People with a Disability) 2004***

The planning proposal is consistent with the aims of the SEPP as the proposed rezoning and development of the land for residential purposes will increase the supply and diversity of residences that are located close to all services and facilities and which meet the needs of seniors and people with a disability. The proposal will also make efficient use of existing infrastructure and services given the location of the land.

***7. Is the planning proposal consistent with applicable Ministerial Directions (s.117 directions)?******1.2 Rural Zones***

The planning proposal is not inconsistent with this direction as the land to be rezoned, from rural residential to village, is of minor significance as the land has a minimal area of 7ha, adjoins the existing village boundary and has minimal agricultural value.

***1.3 Mining, Petroleum Production and Extractive Industries***

The land is not located in an identified resource area, adjoins an existing village and has a minimal area of 7ha. The planning proposal is considered to be consistent with this direction as the proposal is of minor significance and will not impact upon the future extraction of State or regional resources.

**1.5 Rural Lands**

The planning proposal is considered to be consistent with this direction and with SEPP (Rural Lands) 2008 as the proposed land to be rezoned has been identified in Councils Draft Land Use Strategy for the future expansion of the village boundary as indicated by the urban containment boundary in **figure 4** – page9. The land adjoins the existing village boundary, is of a small area and has minimal agricultural value in the context of surrounding agricultural uses in the locality and the proposal is considered to be of minor significance.

**3.5 Development near Licensed Aerodromes**

The planning proposal is considered to be consistent with this Direction as the land is located approximately 1600m from the aerodrome, is outside the ANEF 15 contour and any permissible development in the proposed zone would not encroach the OLS plan applicable to the land. Any future development of the land can be controlled by appropriate restrictions to user to ensure that the effective and safe operation of the aerodrome is not compromised. (see **Appendix C** Obstacle Limitation Surface Plan and Australian Noise Exposure Forecast.)

**Section C – Environmental, Social and Economic Impact****8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?**

A flora and fauna assessment for Lot 1 DP802330 and Part Lot 2 DP802330 (Now Lot 33 DP1100718) was undertaken by the Johnstone Centre – Charles Sturt University in 2005 in support of a rezoning of that land, from 1(c) – Rural Small Holdings to 2(v) – Village or Urban, being Amendment No. 6 of Berrigan Local Environmental Plan 1992 (see **Appendix D**)

The above assessment identified the study area as North Tocumwal and covered an area of approximately 10ha.

This planning proposal relates to the northern section of Lot 33 DP1100718, an area of approximately 7ha, which is in the same ownership, has been intermittently cropped and grazed for many years and has the same attributes as the land to which the above study applied.

The flora and fauna assessment indicated that the subject site offered little habitat value for native flora and fauna.

An 8-Part test was also undertaken as part of the study where it was found that the proposed development of the land is unlikely to have a significant effect upon species or habitats within the study area. Given that the land to which this planning proposal relates is part of the above land, and has similar attributes, the above findings would apply to this land.

It is considered that the land to which this planning proposal relates is consistent with the above study and the proposed rezoning and development of the land will have minimal environmental impact.

**9. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?**

The site is not constrained and can be developed quickly for residential purposes.

There is a corridor of remnant vegetation located within the road reserve adjacent to the western boundary of the site which is worthy of retention. This area can be incorporated within the design of the subdivision of the land to enhance biodiversity values.

An Environmental Site Assessment of Lot 1 DP802330 and Part Lot 2 DP802330 was undertaken by Coffey Geosciences Pty Ltd in 2005 with regard to potential contamination of the site.

The study concluded that the risk associated with potential land contamination is low. A copy of the Study is included in **Appendix E**.

Given that the land to which the planning proposal relates adjoins, and is part of the same property to which the study relates and has the same attributes, it is considered that the findings of the Coffey report would apply to this land.

The proposed residential development of the land will not have an impact on the operation of the Tocumwal Aerodrome nor will the aerodrome adversely impact the residential use of the land given the separation distance of 1.6km to 2km. The land is subject to an Obstacle Limitation Surface Plan with regard to the height of structures, vegetation and the like. An Australian Noise Exposure Forecast has been prepared for the aerodrome and surrounding land and which indicates that the site is not subject to noise intrusion.

A copy of the OLS and ANEF is attached in **Appendix C**

The LES prepared in support of Amendment No. 6 of BLEP contains a number of reports that are consistent with this planning proposal due to the proximity of the site and the historical land uses being the same as the land to which Amendment No. 6 applied. A copy of the LES is attached in **Appendix G**.

**10. How has the planning proposal adequately addressed any social and economic effects?**

The planning proposal will provide an acceptable supply of suitably zoned land available for residential purposes which will maintain the economic and social status quo and not negatively inflate costs due to lack of available land. The rezoning of the land will assist in improving employment opportunities for developers, building and related industries as well as for the benefit and well being of the local and surrounding community.

An indigenous cultural heritage assessment and European cultural assessment was conducted as part of the LES for Amendment No. 6 and

given the proximity and historical use of the site to which this planning proposal relates it is considered that the outcomes of these assessments are consistent and can be applied to this proposal. A copy of the report is contained in **(pages 42 & 43 of Appendix G)**

## **Section D – State and Commonwealth Interests**

### ***11. Is there adequate public infrastructure for the planning proposal?***

With regard to this planning proposal Council is the authority for most infrastructure including water, sewer, roads, drainage, waste management and recycling services and the like. Services such as health, which includes a hospital, nursing home and doctors surgery as well as education, public transport and emergency services are more than adequate to support the additional population that will be generated by the development of the land. It should be noted that the land is located close to the town centre and all services are located adjacent to the western and southern boundaries of the site.

A traffic impact assessment for the North Tocumwal site was included in the LES for Amendment No. 6 and is consistent with this planning proposal and is applicable.

Maps indicating reticulated water, sewer and drainage are included in **Appendix F** in support of this planning proposal.

### ***12. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?***

Due to the low impact nature of the planning proposal no consultation with State and Commonwealth public authorities, other than the Department of Planning, has been undertaken at this time.

Upon receipt of a gateway determination consultation with relevant authorities will be undertaken in a timely manner in accordance with that determination.

## **Part 4 – Community Consultation**

- The planning proposal is considered to be low impact in nature.
- The exhibition period is to be 14 days.
- The planning proposal is to be exhibited:
  - In the local newspaper
  - In the library of the town to which the planning proposal applies.
  - On the Council website
  - By notification of adjoining land owners.



# APPENDICES

# Appendix A

Minutes of the Ordinary Council meeting held in the Council Chambers on  
Wednesday, 16<sup>th</sup> December, 2009

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**Min.No.**

**5.9 REZONING OF LAND TOCUMWAL – AMENDMENT TO  
BERRIGAN LEP**

**AUTHOR: Town Planner**

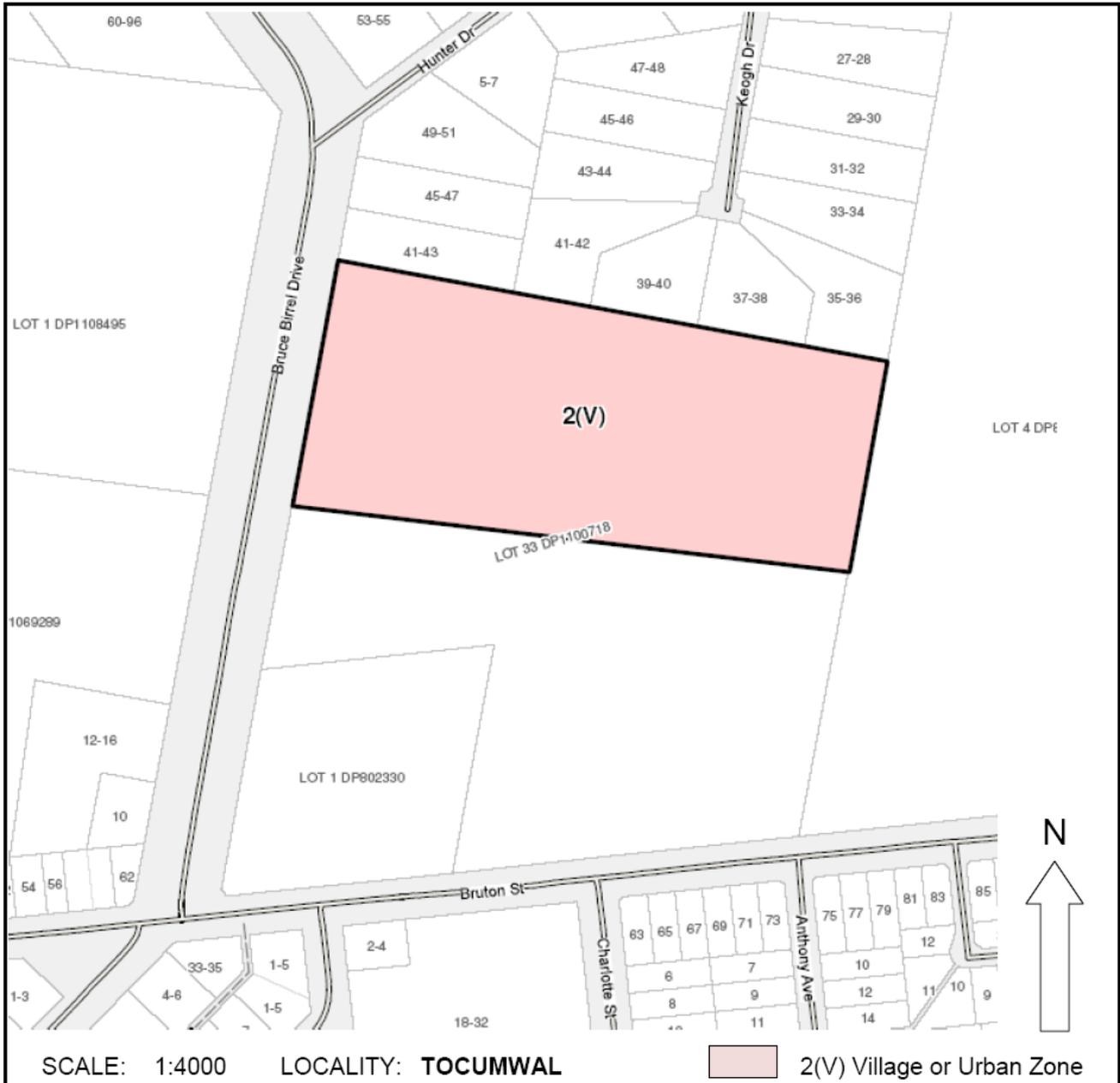
**FILE NO:**

**332**

**RESOLVED** Crs. McGee and McLaurin that the Council

1. Submit the Planning Proposal, subject to amendments required by the Department of Planning, to the Minister of Planning under s55 of the EP&A Act 1979 to rezone part of Lot 33; DP1100718, Bruton Street, Tocumwal from 1(c) – Rural Small Holdings to 2(v) – Village or Urban Zone.
2. Undertake community consultation in accordance with the s56 Gateway Determination.
3. Delegate to the General Manager the authority to make any required amendments to the Planning Proposal.

# Appendix B



SCALE: 1:4000

LOCALITY: TOCUMWAL

 2(V) Village or Urban Zone

## ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979

### BERRIGAN LOCAL ENVIRONMENTAL PLAN 1992

DRAWN BY: L STEVENS DATE: \_\_\_\_\_

PLANNING OFFICER: L STEVENS DATE: \_\_\_\_\_

#### STATEMENT OF RELATIONSHIP WITH OTHER PLANS

AMENDS BERRIGAN LOCAL ENVIRONMENTAL PLAN 1992

CERTIFIED IN ACCORDANCE WITH THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979

General Manager

Date

10<sup>th</sup> June 2010

# Appendix C

PAGE 1 OF 2

## OBSTACLE LIMITATION SURFACE PLAN TOCUMWAL AERODROME



10<sup>th</sup> June 2010

# Appendix C

PAGE 2 OF 2

## AUSTRALIAN NOISE EXPOSURE FORECAST



10<sup>th</sup> June 2010

# Appendix D

PAGE 1 OF 6

Johnstone Centre

Environmental Consulting

Report No. 123

**Flora and Fauna Assessment for  
Tocumwal and Barooga  
Local Environment Study**

Prepared for the  
Berrigan Shire Council



**CHARLES STURT**  
UNIVERSITY



10<sup>th</sup> June 2010

# Appendix D

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## North Tocumwal

The survey recorded 21 native and 30 introduced flora species within this site. The subject site was almost entirely cleared for cropping with the exception of two isolated remnant Grey Box (*Eucalyptus macrocarpa*) trees and significant remnant roadside vegetation. Crop dominated the northern portion of the site occupying at least 60% with the lower southern section co-dominated by a mixture of native grasses and introduced pasture grasses (see Plate 1). This portion had also been cropped or grazed, as was evident by the rip lines/soil contouring. Native grasses co-dominated this section including: Windmill Grass (*Chloris truncata*), Wallaby Grass (*Austrodanthonia spp.*), and Spear Grass (*Austrostipa sp.*) accounting for ~40% diversity and ~50% of the ground cover abundance.

These grasses are remnant of those that are associated with the Grey Box woodland which formerly occurred across the subject site, yet now only occurs along the roadside (see Plate 2).

No native understorey (shrubs) was recorded with the exception of a small line of native revegetation (approximately 2 m x 15 m) in the south-east corner of the site (see Figure 3.1) consisting of *Eucalyptus sp.*, *Acacia sp.*, *Callistemon sp.*, and *Melaleuca sp.* Overstorey within the area proposed to be rezoned consisted of two isolated juvenile Grey Box (1 mature 40 cm dbh and 1 juvenile 20 cm dbh, multi-stemmed, no obvious hollows in either tree) and two isolated juvenile Peppercorn trees (*Schinus molle*).

The subject site offered little habitat value for native flora and fauna, with the exception of the remnant roadside vegetation. A small dam was recorded along the southern boundary; however given its location and lack of aquatic and surrounding vegetation it provides little habitat value for native flora and fauna. A pile of felled tree trunks/branches was located next to the dam and would provide some habitat in the form of ground substrate yet would be better placed in the roadside corridor.

The roadside corridor forming the western boundary of the subject site is dominated by old growth and mature remnant Grey Box. Most trees contain multiple hollows of various sizes. Tree health was overall good with little dieback, however only minor regeneration was recorded (see Plate 2). This corridor extends the length of the subject site providing an important link between remnant vegetation north and south of the subject site (see Figure 3.1). The roadside corridor provides the most important habitat value for native flora and fauna within the subject site.



**Plate 1: North Tocumwal subject site.**

Cleared pastureland dominated the subject site accounting for more than 95% of the area proposed for rezoning (excluding roadside corridor). Note the crop, left of the broken line and native grasses and introduced ground covers right of the broken line.

# Appendix D

PAGE 3 OF 6

0217 Draft Flora and Fauna Assessment for Tocumwal & Barooga LES – Berrigan Shire Council

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## 3.3.2 NSW legislation

### Assessment of significance

The *EP&A Act 1979* includes in Section 5A, eight factors which are to be considered when determining if the proposed development or activity ‘*is likely to have a significant effect on the threatened species, populations or ecological communities, or their habitats*’. These eight factors must be taken into account by consent or determining authority when considering a development proposal or development application. This enables a decision to be made as to whether there is likely to be a significant effect on the species and hence if a Species Impact Statement is required (NSW NPWS, 1995).

The Brown Treecreeper listed as vulnerable under the *TSC Act 1995* was recorded within the East Tocumwal site. In addition the Squirrel Glider is considered to have potential habitat within the remnant roadside corridor of the North Tocumwal site and the River Red Gum vegetation of the East Tocumwal site. The eight part test would need to consider the impact of the proposal on both these species and the White Box Yellow Box Blakely’s Red Gum Woodland remnants of the Barooga site.

A formal Section 5A was not conducted for each of the threatened species or endangered ecological community recorded. The assessment below indicates that the proposed activity is unlikely to impose a “significant effect” upon threatened species recorded within the study area or those species considered to have potential habitat within the study area, only in concurrence with the impact amelioration measures of this report.

With respect to Section 5A of the *EP&A Act 1979* and in concurrence with the impact amelioration measures of this report:

***(a) in the case of a threatened species, whether the lifecycle of the species is likely to be disrupted such that a viable local population of the species is likely to be placed at risk of extinction.***

No evidence for the presence of a ‘viable local population’ of any threatened species of flora or fauna occurring within the study area exists and there is no evidence that any such population in the vicinity of the study area would be resident within or dependent on the resources of the study area for their survival. Furthermore, the relevant habitat to the Brown Treecreeper and Squirrel Glider within the North and East Tocumwal sites will not be removed or modified as a result of the proposed activity or subsequent development. Consequently, there is no likelihood that the proposed activity would render any such populations, if they existed ‘at risk of extinction’.

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*0217 Draft Flora and Fauna Assessment for Tocumwal & Barooga LES – Berrigan Shire Council*

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*(b) in the case of an endangered population, whether the lifecycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised.*

No evidence exists for the presence of 'an endangered population' occurring within the study area. Consequently, it is not likely that the proposed activity could be regarded as likely to involve any such populations 'likely to be significantly compromised' even if individuals of that population use the study area.

*(c) in relation to the regional distribution of the habitat of a threatened species, population or ecological community, whether a significant area of known habitat is to be modified or removed.*

The proposed activity will not involve 'a significant area of known habitat' for any threatened species, population or endangered ecological community 'being modified or removed'. The proposed activity itself will not remove any vegetation or habitat, however the subsequent development may remove: 2 mature Grey Box from the North Tocumwal site; 1 old growth Cypress Pine and 7 Remnant clumps of Grey Box woodland (9 old growth, 6 mature, 10 juvenile, 100 + stems of regenerating Grey Box) from the east Tocumwal site; and 3 remnant isolated paddock trees (2 old growth Yellow Box and 1 Red Gum) from the Barooga site. Overall less than 7 ha of native vegetation across three sites may be removed/modified (excluding the remnant roadside vegetation of Tocumwal North and the River Red Gum woodland of Tocumwal East). This vegetation is not considered significant for any threatened species. Furthermore, the proposed impact amelioration measures provided in this report will provide recommendations for compensatory habitat and ensure that the proposed will have a minimal impact on any threatened species which may utilise the study area as part of its overall habitat area.

*(d) whether an area of known habitat is likely to become isolated from currently interconnecting or proximate areas of habitat for a threatened species, population or ecological community.*

The area of known habitat for the Brown Treecreeper is limited to the River Red Gum woodland within the East Tocumwal site. This vegetation will not be removed or modified by the proposed activity or subsequent development. The adjacent River Red Gum woodland surrounding the study area is also considered to be known habitat for this species. The proposed activity and subsequent subdivision will not isolate this habitat from currently connecting or proximate areas of habitat. The integrity of the North and East Tocumwal sites as a wildlife corridor linking to known habitat areas in the surrounding landscape is to be maintained through the impact amelioration measures. Therefore, it is considered unlikely that the proposed development will involve 'an area of known habitat' becoming 'isolated from currently interconnecting or proximate areas of habitat'.

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***(e) whether critical habitat will be affected.***

No 'critical habitat' within NSW under the register of critical habitat is yet to be declared for any threatened species mentioned in this report.

***(f) whether a threatened species, population or ecological community, or their habitats, are adequately represented in conservation reserves (or other similar protected areas) in the region.***

There are no known protected areas within the locality for any threatened species. Whilst both the Squirrel Glider and Brown Treecreeper are represented in conservation reserves and similar protected areas in the region, it is unlikely that any threatened species is adequately protected within the locality or the region.

***(g) whether the development or activity proposed is of a class of development or activity that is recognised as a threatening process.***

The proposed development is not of a class of development or activity that is recognised as a threatening process, pursuant to *TSC Act 1995*. Whilst clearing of native vegetation is recognised as a threatening process no significant native vegetation is to be removed/modified (less than 7 ha across three sites) and the proposed activity will not involve 'a significant area of known habitat' for any threatened species, population or endangered ecological community 'being modified or removed'. However, there are a number of threatening processes listed under the *TSC Act 1995* that currently influence the habitat value and fauna of the study area including: removal of ground debris such as fallen timber by firewood collectors. Although the proposed development has the potential to exacerbate this potentially threatening process, the recommended impact amelioration measures have been designed to address the problems of ground debris removal and other potential threatening processes.

Considering the extent of vegetation to be removed and the proposed impact amelioration measures it is considered 'unlikely' that the proposed development including removal of native vegetation would threaten the survival or evolutionary development of any of the subject species.

***(h) whether any threatened species, population or ecological community is at the limit of its known distribution.***

The known distribution of each threatened species was researched during the database search and literature review. It was concluded that the known distribution of many of these species is poorly understood and incomplete. It is also likely that some of the threatened species mentioned in this report are at the limit of their known distribution. Considering

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the extent of vegetation to be removed and the proposed impact amelioration measures it is considered 'unlikely' that the proposed development will significantly alter the habitat of a species within the study area as to 'significantly effect' the known distribution of that species.

Consequently as a result of conducting the eight part test for each of these species it is considered that the proposed development is unlikely to have a significant effect upon these species or their habitats within the study area.

**It is determined that the proposed development is unlikely to have a significant effect only in concurrence with the proposed impact amelioration measures as outlined in Section 4.**

# Appendix E

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BERRIGAN SHIRE

LIMITED ENVIRONMENTAL SITE ASSESSMENT LOT 1; DP 802330, &  
PART LOT 2; DP 802330 TOCUMWAL, NSW

E10183/3-AA

1 November 2005

**Coffey**

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10<sup>th</sup> June 2010

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**Important Information About Your Coffey Environmental Site Assessment**



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## FIGURES

- 1 Site Location Plan (External)

## TABLES

- 1-1 Aerial Photograph Review (Embedded)
- 3-1 Possible Contaminant Sources and Potential Contaminants of Concern (Embedded)

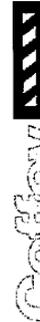
## APPENDICES

- A Site Photographs
- B Site Aerial Photographs
- C Groundwater Bore Search Results

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## 1. INTRODUCTION

This report presents the findings of a limited Environmental Site Assessment (ESA) completed by Coffey Geosciences Pty Ltd (Coffey) at a site east of Birrell Drive and north of Bruton Street, Tocumwal, New South Wales. The limited assessment comprised a site history review of the subject site and a site visit. The site comprises an area of approximately 10Ha and is legally referred to as Lot 1; DP 802330 & Part Lot 2; DP 802330. The limited ESA was commissioned by Mr Wayne Chisholm of Berrigan Shire and confirmed by the correspondence of 23 June 2005. It is understood that an independent assessment of the site history was required to facilitate the processing of the development application for the proposed residential subdivision on the property.

The location of the site is shown on the Locality Plan, Figure 1.

### 1.1 Scope of Work

The scope of work undertaken during the course of this assessment included:

- A review of the site history/background; and
- Data reporting.

## 2. BACKGROUND

The site history study undertaken by Coffey to gain background information relating to the site included:

- a site visit;
- discussions with persons familiar with the subject lands;
- a review of records held by Berrigan Shire Council;
- a review of historical aerial photography for the last 36 years;
- a check of NSW Department of Environment and Conservation (DEC) records for notices on the site; and
- a search of the Department of Infrastructure, Planning and Natural Resources (DIPNR) for registered water bores in the area.

## 3. SITE HISTORY REVIEW

Information for the site history review was retrieved from a review of Berrigan Shire records for the site, personnel communication with the property owner and other persons familiar with the site and a review of DEC records.

### 3.1 Site Identification and Zoning

The site comprises an area of approximately 10 ha legally referred to as Lot 1; DP 802330 & Part Lot 2; DP 802330. The site is currently vacant and is used for grazing and agricultural cropping. In the broader area, the subject site is situated to the north of the township of Tocumwal and forms part of the broader agricultural landscape. The Tocumwal aerodrome is situated 2 kilometres west of the subject site. Vegetation on the site is limited to exotic pasture species. No buildings or structures are present on site. A large dam is situated at the northern boundary of the subject site. Determining the exact position of the dam in relation to the title boundary would require a cadastral surveyor and was beyond the scope of this assessment. For the purpose

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of this assessment, it has been assumed that the dam was within the subject site. Currently the site is zoned as 1 (c) Rural small holdings zone.

It was reported that no environmental assessments had been previously completed on the subject property.

### 3.2 Berrigan Shire Council Records

Based on a review of council records and discussions with Wayne Chisholm of Berrigan Shire and Anthony Newland of the Planning Connection the site has likely been used for broad-acre agricultural and grazing purposes but may have also formed part of the former Tocumwal RAAF aerodrome, and, as such, could have been affected by the historic disposal of coal tar wastes associated with pavement construction activities within the aerodrome site.

Construction at the Aerodrome site commenced during 1942 and involved the completion of approximately 115 km of sealed pavements. Sealing of runways, taxiways and roadways during construction reportedly consumed three (3) months supply of "tar" from Broken Hill Pty Ltd and the total "tarred" surface of the site was approximately 115 hectares.

### 3.3 Aerial Photograph Review

Aerial photographs of the site were purchased from the Department of Lands and reviewed. The results of the assessment are summarised in Table 1. Copies of the relevant portions of the photographs are presented within Appendix B.

TABLE 1.1: AERIAL PHOTOGRAPH REVIEW

YEAR	SITE	SURROUNDING LAND
1969	The site consists of cleared improved pasture with a few small trees or shrubs.	The land north and east of the subject site is mostly broadacre agricultural land, with the township of Tocumwal immediately south of the subject site and the aerodrome west of the subject site.
1976	The south east corner appears to have been recently burnt with black discoloration visible on the aerial photograph. The remainder of the site has been recently used for cropping.	Similar to the previous photograph. The field to the north and east of the subject site have been recently used for cropping.
1991	The site is similar to the previous photograph.	Minimal development has occurred south of the site in the township of Tocumwal.
2003	Residential development has occurred immediately south of the subject site. A dam has been constructed on the northern boundary of the subject site.	Similar to previous photographs.



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### 3.4 NSW DEC Notices Search

A check with the NSW Contaminated Land public record of DEC notices revealed that no notices have been issued within the area.

The contaminated land public record is a searchable database of:

- actions taken by the EPA under section 15, 17, 19, 21, 23, 26 or 28 of the *Contaminated Land Management Act 1997* (CLM Act)
- actions taken by the EPA under section 35 or 36 of the *Environmentally Hazardous Chemicals Act 1985* (EHC Act) \*
- site audit statements provided to the EPA under section 52 of the CLM Act on sites subject to an in-force declaration or order (<http://www.environment.nsw.gov.au/clm/aboutclmrecord.htm>)

### 3.5 Groundwater Bore Search

NSW Department of Infrastructure Planning and Natural Resources (DIPNR) records were checked for registered groundwater bores within a 1km radius of the site to assess groundwater usage and quality within the vicinity of the site. The DIPNR records search is presented within Appendix C. Summary information from DIPNR indicated that no registered bores were located within a 1km radius of the site.

### 3.6 Contamination Potential

The documented site history indicated that the potential contamination sources at the site include those related to burial of coal tar waste utilised during construction of roads, runways and taxi ways of the former Tocumwal Aerodrome facility and Organochlorine & Organophosphorous Pesticides associated with agriculture.

On this basis, a relatively limited range of Potential Contaminants of Concern (PCOCs) may have been introduced onto the site, a summary of which is included in Table 3-1.

**TABLE 3-1. POSSIBLE CONTAMINANT SOURCES AND POTENTIAL CONTAMINANTS OF CONCERN**

Possible Source	Potential Contaminants of Concern (PCOCs)	Likelihood of Contamination
Wastes containing coal tar	Polycyclic Aromatic Hydrocarbons (PAHs), Heavy Metals, total petroleum hydrocarbons (TPHs) and Phenols	Low
Use of general pesticides and herbicides associated with agriculture	Organochlorine & Organophosphorous Pesticides	Low

### 3.7 Regional Geology and Hydrogeology

The Geological Survey of New South Wales, 1:253,440 Series, Jerilderie S1/55-15 mapsheet, indicates that the site is likely located on "Tertiary sediments consisting of clay, silt, sand and gravels".

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## 4. SITE OBSERVATIONS

On 19 September 2005 a Coffey Environmental Scientist and Technician visited the site to determine if any indications of potential contamination were apparent at the site. During the site visit no odorous substances or visual evidence (surficial soil staining, stressed vegetation etc.) of contamination were observed. No evidence of former structures such as building footings or road base materials were observed. Particular attention was also paid to denoting evidence of soil disturbance that may have been related to waste burial; no evidence of recent soil disturbance was noted with the exception of a drainage channel and a dam at the northern end of the site.

An existing dam is situated on the eastern edge of the northern boundary of the subject site. Around this dam one partially buried drum was noted during the site visit; however, at the time of the visit this drum was empty. Various other forms of waste were noted at the subject site, particularly around the dam. Waste included wire, tyres, poly pipe, timber, including treated pine posts, ceramic pipe, PVC pipe and metal.

The majority of the area was recently planted with a grain crop.

No irrigation or significant drainage channels were observed to intersect the site at the time of Coffey's visit. Selected site photographs are presented within Appendix A.

## 5. DISCUSSION & RECOMMENDATIONS

Based on the site history review it is considered the potential for contamination at the site is low. As with any assessment it is possible that not all potential contamination issues at the site have been identified and, as such, it is considered important that the potential developers adopts best practice with regard to site demolition and waste disposal activities during site redevelopment.

Any potentially contaminated areas (odorous/discoloured soils, potential waste burial pits, previously unidentified chemical/fuel storage areas i.e. 'materials of concern') should be reported to the relevant development Project Manager if they are encountered during proposed development works. An appropriately qualified Environmental Consultant could then be engaged to examine the material, to undertake any appropriate analysis or studies, and to determine an appropriate course of action.

### 5.1 Management of potentially contaminated material

All excavated materials of concern should be documented and disposed of in accordance with the recommendations of the environmental consultant and the requirements of the NSW DEC.

### 5.2 Records management

The party responsible for any engineering works on the site should keep detailed records of excavation restoration, including the retention of any landfill docketts.

### 5.3 Occupational health and safety

Appropriate Occupational Health and Safety (OH&S) strategies should be put in place for activities having the potential to involve contact with materials of concern. Typical OH&S precautions would include the following:

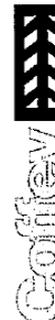
- All workers who may come into contact with materials of concern should wear appropriate personal protection equipment (PPE), i.e. gloves, overalls and dust masks.

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Workers should ensure that they wash their hands before eating or drinking. Food and drink should not be consumed within work areas where materials of concern are present and a separate 'clean' area should be set aside for meal and refreshment breaks. Workers entering this 'clean area' should wash their face and hands and should ensure that no loose material adheres to clothing or footwear. PPE would not be brought into clean areas.



## 6. CONCLUSIONS

Based on the results of the historical review and site observations conducted to date, the conclusions of the Limited Environmental Site Assessment conducted by Coffey at Lot 1; DP 802330 & Part Lot 2; DP 802330, Tocumwal are presented below:

- The site history review indicates the risk associated with potential land contamination at the subject property is low.
- During a site walkover no visual or olfactory evidence of contamination was noted and no evidence of disturbed soil (such as that related to the disturbance associated with waste burial activities) was noted.
- Some waste was noted around a farm dam at the eastern end of the northern site boundary, this waste included one partially buried drum, wire, tyres, poly pipe, timber, including treated pine posts, ceramic pipe, PVC pipe and metal.
- We note that the current assessment did not assess impacts on or from adjacent properties.

## 7. LIMITATIONS

The findings contained within this report are the result of discrete/specific sampling methodologies used in accordance with normal practices and standards, with some variations as indicated in the report. To the best of our knowledge, they represent a reasonable interpretation of the general condition of the site within the sampled areas. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

Note that this report does not constitute a Statutory Environmental Audit Report in the meaning of its use in the Environment Protection Act (1970) and has NOT been prepared to comply with New South Wales EPA Auditor guidelines and requirements.

For and on behalf of

COFFEY GEOSCIENCES PTY LTD

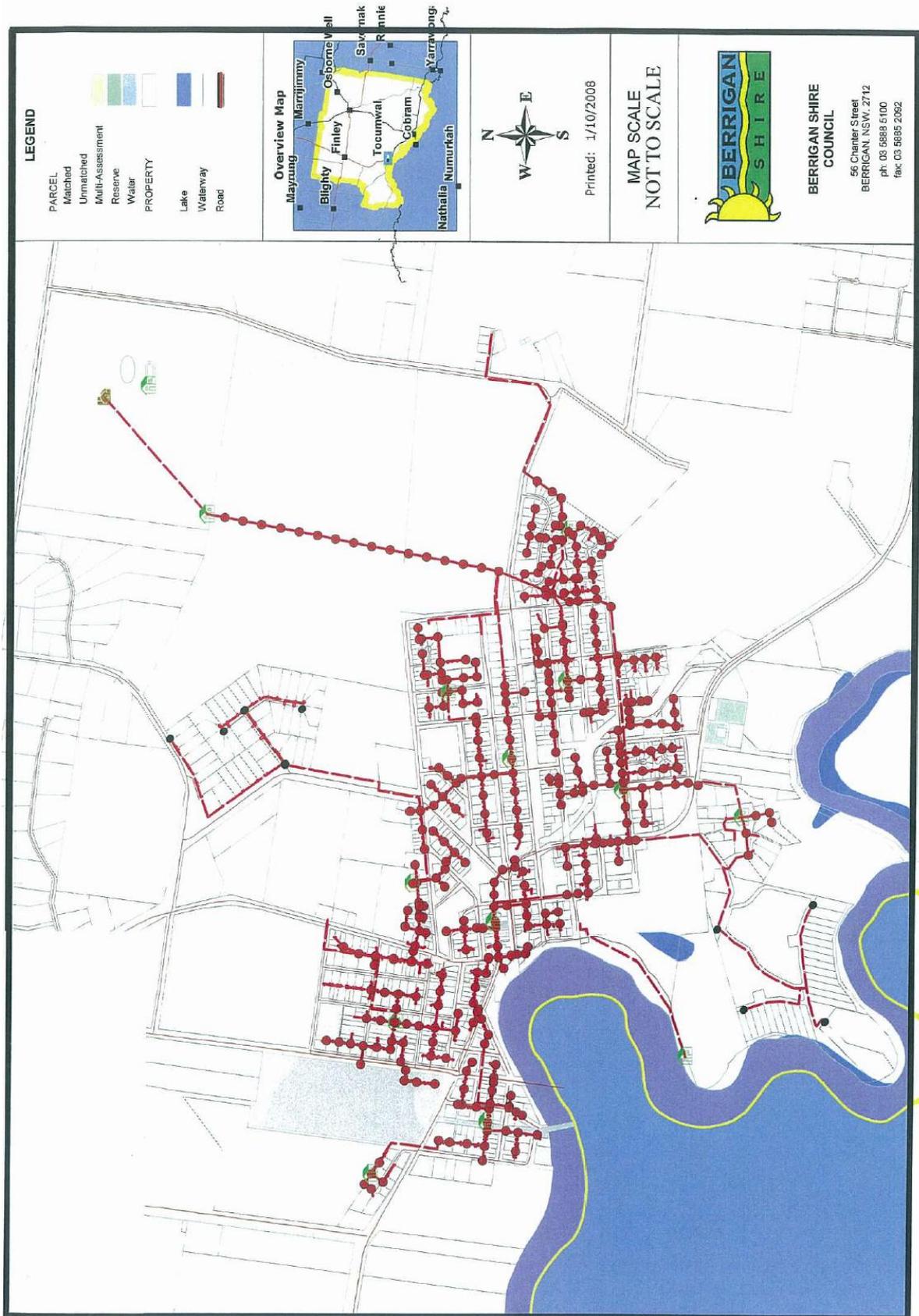
A handwritten signature in black ink, appearing to read "Toby Hobbs", written over a white background.

TOBY HOBBS

# Appendix F

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## SEWER

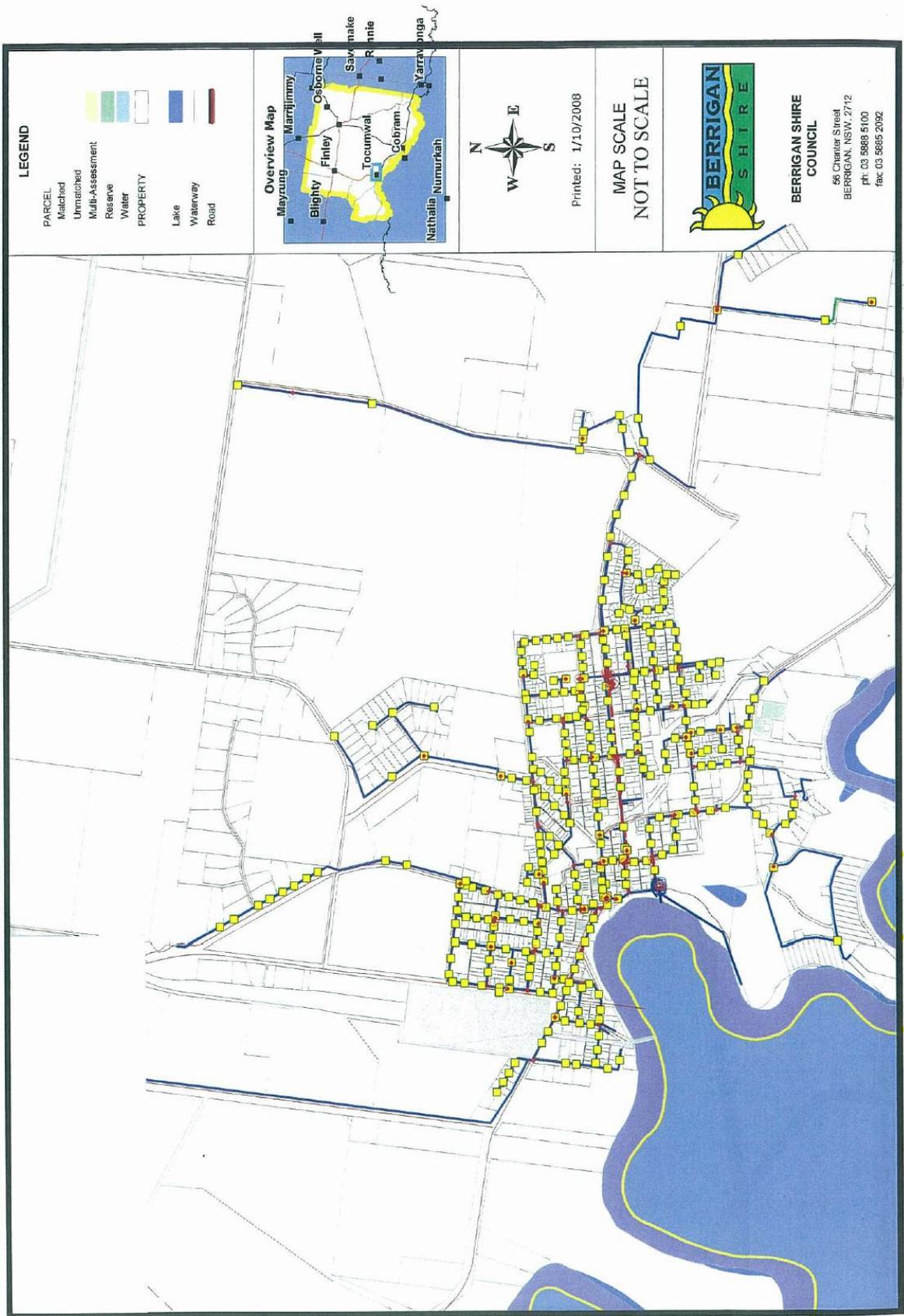


10<sup>th</sup> June 2010

# Appendix F

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## WATER



# Appendix F

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## STORMWATER DRAINAGE



10<sup>th</sup> June 2010

# Appendix G

## Local Environmental Study

### – Proposed Residential Lands in Tocomwal and Barooga

Prepared by Anthony Newland – The Planning Connection  
December 2005

**(see attached file)**

## Settlement and housing

### BACKGROUND

The size and diversity of the Murray Region means that there are a range of settlement patterns and emerging trends. Parts of the Region are strategically located just three hours north of Melbourne and in the Sydney to Melbourne corridor. Other areas are more isolated. A few parts of the Region such as the Murray Shire are experiencing some of the fastest rates of population growth in NSW. Albury has also grown considerably. Growth in Victoria is projected to remain strong and influence growth in some parts of the Region. Other areas, particularly areas away from the river have experienced population decline in recent times, as a result of the ongoing restructuring of the agriculture sector, the ageing population, lifestyle trends and the impact of the current dry conditions. These areas are not expected to grow, presenting other challenges for housing and settlement in those areas.

The Murray Region had a population of 108 700 in 2006. This is projected to grow by 8000 to 116 700 by 2036.

Major issues for the Region include managing the demand for housing in environmentally sensitive locations, the decline of towns and villages in more remote rural areas, the growth in the number of people aged 65 years and older, and the coordination of growth and the efficient provision of infrastructure and services within NSW with the neighbouring communities in Victoria.

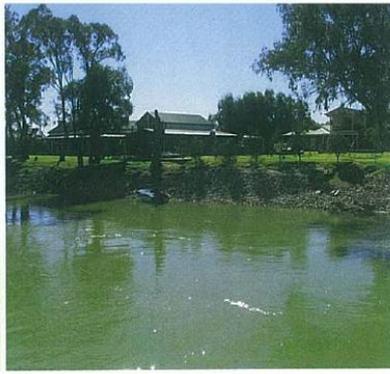
### SETTLEMENT CONTEXT

The Region is dominated by three major regional centres—Albury–Wodonga in the east, Echuca–Moama in the central subregion and the Victorian centre of Mildura, adjacent to the NSW settlement of Buronga–Gol Gol in the west. In addition to the major regional centres, the Region is serviced by a number of major towns, including Deniliquin and Corowa in NSW and Swan Hill, Cobram and Yarrawonga in Victoria. Most towns

and villages are within two hours drive of a major regional centre (including Shepparton, Bendigo and Wagga Wagga outside the Region), providing people with access to a broader range of services, shops and facilities. At present, 65% of the population of the wider Murray Valley Region lives and works in Victoria and many NSW residents travel across the border to access employment opportunities in Victoria.

Around half of the Region's towns and villages are located on the bank of the Murray River. Eight towns along the Murray River are co located with a Victorian counterpart (often referred to as 'twin towns'). Of these, only Albury, Corowa and Barham have populations greater than their Victorian counterparts. There is strong demand for new housing in the most attractive and environmentally sensitive areas along the Murray River, which needs to be carefully managed.

The Region's hierarchy of settlements is shown on the Regional Strategy map.



# 4

## DEMOGRAPHIC CHANGE AND AN AGEING POPULATION

The population of the Murray Region is projected to grow by 8000 by 2036. While the number of younger people is likely to decline, the number of people aged 65 or older is projected to increase by 18 900 between 2006 and 2036. Ageing populations are a widespread demographic trend, although the trend is particularly strong in the Murray Region. In 2036, it is expected that 31% of

the Region's population will be aged 65 or older, up from 16% in 2006. By comparison, across NSW as a whole the expectation is that 22% of the population will be aged 65 or over in 2036. Some towns in the Region such as Moama and Barham already have large proportions of older people (26% and 33% respectively) compared to the current NSW average of 14%. The trend towards a much greater proportion of older people is expected to be strongest in the Corowa, Berrigan and Murray local government areas.

Drivers behind the significant increase in aged people into the Region include the gradual ageing of the existing population, increased life expectancy, outward migration of younger people and increased in migration of retirees and other older people seeking a change in lifestyle. These changes to the future population will increase the demand for smaller and more accessible housing as well as for local services and amenities such as a secure water supply, public transport, health care and recreational facilities.

### TWIN TOWNS ALONG THE MURRAY

In many respects, the 'twin towns' on the Murray River often have a high degree of interdependence in terms of services, employment, transport links and retail catchments. As separate jurisdictions however, the state and local government service provision and planning systems are different.

There are eight cross border twin towns along the Murray River, each with its own unique

interdependencies. For example, Albury and Wodonga (a combined population of almost 75 000) are both major regional centres but function as one centre and have the ability to provide and share a range of higher order retail, commercial and educational services. Corowa and Wahgunyah on the other hand have a strong but different relationship with Corowa being seven times larger than Wahgunyah.

Although major employers are located in both Corowa and Wahgunyah, Corowa provides the majority of employment, commercial and other services.

The challenge for governments at all levels is to work together on issues where there is a common interest, whilst acknowledging that there may be differences in the community expectations of the role of each town and how they develop.



## The Central Murray subregion

The Central Murray subregion is likely to have areas of contrasting growth—some experiencing rapid population growth, while others are relatively stable or show substantial population decline—over the period to 2036. Overall the population is expected to grow by approximately 600, however, with growth pressure around Moama and the changing needs of the population, an estimated 3400 new dwellings will be required. Moama, which is in Murray Shire, has experienced strong growth in recent years and it is expected that it will be responsible for the majority of growth in Central Murray. The Murray Shire overall is expected to grow by 2600, with a demand for 2150 new dwellings. Murray Shire Council is investigating opportunities for large urban release areas, focusing on areas without flooding risks between the existing urban area and Rich River Golf Club Resort.

Deniliquin is the largest town in the Central Murray subregion. Projections indicate its population will be relatively stable over the next decade, with a small decline towards 2036. Local planning will need to ensure land is available for an additional 450 dwellings, including opportunities for infill development.

In Berrigan Shire, towns on the Murray River such as Barooga and Tocumwal can expect some growth, while other towns are likely to gradually decline. Overall, Berrigan Shire can expect a relatively stable population between 2006 and 2036, as well as demand for approximately 650 new dwellings over this period.

The recent trend of population decline in Conargo Shire and Wakool Shire is likely to continue over the period to 2036. Wakool Shire is planning for growth at Murray Downs, which could complement the growth of neighbouring Swan Hill. In the longer term, there is capacity for significant residential development. As is the case across the Central Murray subregion, opportunities exist for additional growth in towns and villages along major rivers, such as Barham and Tooleybuc. The housing needs of itinerant farm workers will also require consideration throughout the subregion.

## The Lower Murray subregion

Projections indicate that the Lower Murray subregion will continue to experience a slight decline in population, with demand for approximately 400 additional dwellings, as household sizes fall and different styles of housing are needed.

In Wentworth Shire, the settlement of Buronga–Gol Gol is immediately opposite the major regional centre of Mildura and is likely to be the focus of future dwelling growth in this part of the Region. Wentworth Shire Council has identified opportunities for further urban development between the two townships that may in fact lead to an increase in the current rate of development in conjunction with the growth of Mildura. Infrastructure in Buronga–Gol Gol has sufficient capacity to deal with growth and the area is within easy access of shopping, employment, health and education services in Mildura. New areas of residential development in Buronga–Gol Gol will need to be planned carefully to avoid flood liable areas and sensitive locations close to the Murray River.

Balranald Shire is unlikely to experience significant demand for new housing. It is likely that existing supply of zoned urban land will be sufficient to cater for future housing needs, predominantly in Balranald and Euston.

## URBAN DESIGN AND CHARACTER

Good urban design is critical to improving the sustainability and liveability of communities. Well designed housing, streets and neighbourhoods respond to their natural setting and reflect the local