Planning Proposal - Rezoning

Gumly Gumly Enterprise Corridor, Wagga Wagga

Prepared by:

RPS AUSTRALIA EAST PTY LTD

PO Box 4401
Sydney NSW 2001

T: +61 8270 8300
F: +61 8270 8399
E: sydney@rpsgroup.com.au

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Prepared for:

MR R ALLSOPP AND MR J HOWARD

182 Forsyth St
Wagga Wagga NSW 2650

T: 02 6921 1588
F: 02 6921 3900
E: joe@rundlesauctions.com.au
W: www.rundlesauctions.com.au

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Document Status

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Contents

Tables

Figures

Appendices

1.0 Introduction

This Planning Proposal has been prepared by RPS, on behalf of Mr R Allsopp and Mr J Howard, for the rezoning of Gumly Gumly Industrial Park, 3870 Sturt Highway, Gumly Gumly and is in accordance with the Department of Planning and Infrastructure's (DPIs) gateway rezoning process. It provides justification, based on strategic planning as well as locational and environmental considerations, for the Wagga Wagga Local Environmental Plan (LEP) 2010 to be amended to allow the subject site to be rezoned for the purposes Enterprise Corridor and or light industrial use.

The proposal has been preceded by a lengthy period of negotiation and consultation with the Wagga Wagga City Council including a submission presented to the draft Wagga Wagga LEP in 2008 and subsequent positive feedback received from the planning panel suggesting further exploration of issues. A meeting was also later held with the Department of Planning (now DPI), various land owners and Council to discuss pertinent issues and ideas were put forward from both the department and Council on the process and the thrust of the proposal including the suggestion by the DPI of an enterprise corridor zoning. Having investigated the issues and taking on board suggestions made throughout the consultation phase of the process, this report reveals that despite the identified constraints there is sufficient justification for the Enterprise Corridor zone across the majority of the Precinct Investigation Area (described below and located in Figure 1). The report demonstrates that a change of zoning will not result in any downstream effects or local environmental impacts. The main driver for this application has been the requirement of our clients growing and diversifying business "Rundles Auctions" to relocate from its cramped central city site to the subject site. The main change to the Rundles business has been a growth into the area of larger equipment and vehicle auctions with a decrease in general Auction items. The existing site in Forsyth Street is too cramped to accommodate this change and a facility could be purpose built at the Gumly site to adequately cater for existing business and future growth. The enterprise corridor zoning will permit the entire Rundles enterprise to relocate to the site, however an alternative zone such as IN2 light industry would limit land uses in general across the site and our clients land use would be restricted to vehicles and agricultural machinery sales only which could be permitted with consent in that zone.

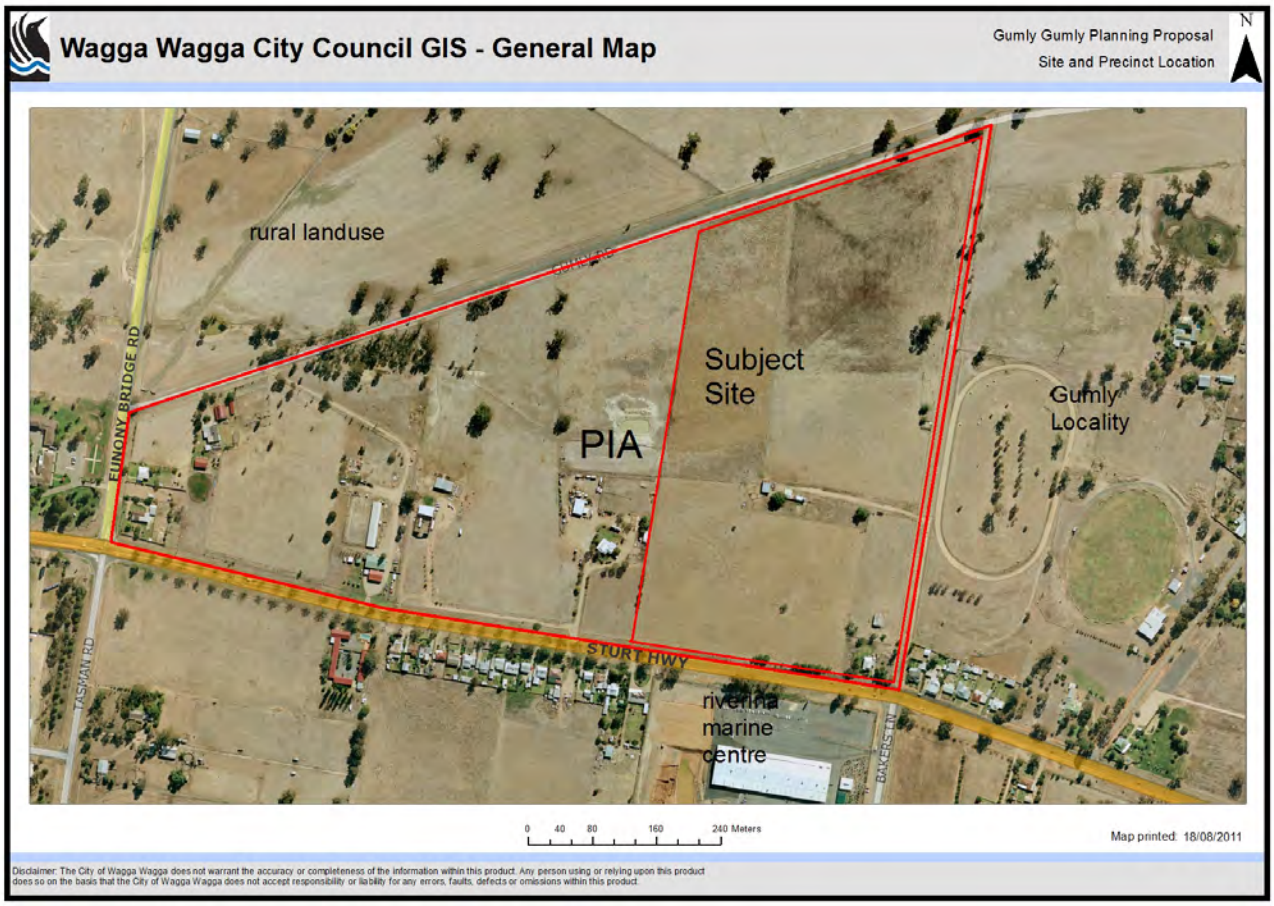

Figure 1 : Site and Precinct Investigation Area (PIA) location. Source: WWCC online mapping

While RPS acts in the interest of our client and their site we have looked beyond the boundaries of the site to the broader precinct to assess constraints and opportunities and identify any other land within the vicinity of the site (north of the Sturt Highway) which may also be suitable for Enterprise Corridor land uses. This precinct we identify as the Precinct Investigation Area (PIA).

Properties within the PIA include:
4 Eunony Bridge Road, Gumly Gumly – Lot 1 in DP 780069
6 Eunony Bridge Road, Gumly Gumly – Lot B in DP 162204
8 Eunony Bridge Road, Gumly Gumly – Lot C in DP 162204
3958 Sturt Highway (aka 10 Gumly Gumly Road) (Gumly Gumly Oval) - Lot 11 in DP 879776
3934 Sturt Highway (aka 18 Gumly Gumly Road) – Lot 2 in DP 829057
3928 Sturt Highway – Lot 1 in DP 842774
3908 Sturt Highway – Lot 2 in DP 842774 & Lot 3 in DP 842774;
3906 Sturt Highway – Lot 4 in DP 842774
3870 Sturt Highway (Subject Property) – Lot 1 in DP 305702 & Lot 1 in DP1085667

1.1 Proposed Rezoning

The land is currently within a Rural Zone, RU1 Primary Production. Based on strategic and environmental investigations carried out for the PIA, the appropriate zones to be considered for the land included:

- IN2 - Light Industrial, or
- B5 – Business Development
- B6 – Enterprise Corridor

The following table (Table 1) provides a comparison between these zones:

Table 1 : Zoning Comparisons

Zone	Aim of the zone	Permitted without consent	Permissible	Prohibited
IN2 Light Industrial	• To provide a wide range of light industrial, warehouse and related land uses. • To encourage employment opportunities and to support the viability of centres. • To minimise any adverse effect of industry on other land uses. • To enable other land uses that provides facilities or services to meet the day to day needs of workers in the area.	Home businesses; Home occupations; Roads	Depots; Industrial training facilities; Light industries; Neighbourhood shops; Warehouse or distribution centres	Agriculture; Airports; Amusement centres; Biosolids treatment facilities; Bulky goods premises; Business premises; Caravan parks; Cemeteries; Child care centres; Correctional centres; Crematoria; Educational establishments; Entertainment facilities; Farm buildings; Forestry; Function centres; Hazardous industries; Health services facilities; Heavy industries; Home-based child care; Home occupations (sex services); Information and education facilities; Livestock processing industries; Offensive industries; Office premises; Places of public worship; Recreation facilities (major); Registered clubs; Residential accommodation; Retail

				premises; Sawmill and log processing works; Stock and sale yards; Storage premises; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures
B5 – Business Development	• To enable a mix of business and warehouse uses, and bulky goods premises that require a large floor area, in locations that are close to, and that support the viability of, centres.	Not a current zone within the Wagga Wagga LEP 2010. Optional land uses to be included by Wagga Wagga City Council with the concurrence of DPI if this zone is selected.	Bulky goods premises; Child care centres; Garden centres; Hardware and building supplies; Landscaping material supplies; Passenger transport facilities; Respite day care centres; Warehouse or distribution centres	Not a current zone within the Wagga Wagga LEP 2010. Optional land uses to be included by Wagga Wagga City Council with the concurrence of DPI if this zone is selected.
B6 – Enterprise Corridor	• To promote businesses along main roads and to encourage a mix of compatible uses. • To provide a range of employment uses (including business, office, retail and light industrial uses). • To maintain the economic strength of centres by limiting retailing activity.	Not a current zone within the Wagga Wagga LEP 2010. Optional land uses to be included by Wagga Wagga City Council with the concurrence of DPI if this zone is selected.	Business premises; Community facilities; Garden centres; Hardware and building supplies; Hotel or motel accommodation; Landscaping material supplies; Light industries; Passenger transport facilities; Plant nurseries; Warehouse or distribution centres	Not a current zone within the Wagga Wagga LEP 2010. Optional land uses to be included by Wagga Wagga City Council with the concurrence of DPI if this zone is selected.

It should be noted that the inclusions in the above table have been derived from the Wagga Wagga LEP 2010 and the Standard Template Instrument. No land uses are currently included in the permissible without consent or prohibited column for the zones which do not currently apply to Wagga's LEP. Council can include other objectives and other uses within the permissible and prohibited table with the concurrence of the DPI.

In the context of this site and the uses proposed the B6 Enterprise Corridor zone is the most suitable for the PIA considering the locality and existing variety uses including non conforming uses, demand for development in the area including large format agricultural machinery sales, auction premises etc and the justification for additional land supply outside of the existing industrial zones and uses not suited to CBD or other business zones. The B6 Enterprise Corridor zone offers more flexibility in terms of uses. Retailing components are permissible, however the objectives state that retailing be limited. While the full gamut of retail activity is considered unjustified considering the distance of the PIA from the CBD, limited retailing activities controlled by the inclusion of prohibitions, further objectives and the creation of a DCP for the precinct would result in appropriate development of this site which will not compromise existing business within the city but will boost the economy of Wagga Wagga overall, increase employment and social opportunities and general urban image improvements to the locality of Gumly Gumly. The B6 zone will support the relocation of the general auction premises including car and truck sales component of the Rundles Auction house out of its cramped urban location and into a suitable purpose built site within a precinct of compatible land uses. The B5 zone is not considered appropriate as it appears to cater predominantly for bulky goods retailing activity. Previous strategic planning within the city has identified that enough sites already exist for bulky goods development and this is not the intended use for the subject proposal.

1.1.1 Previous Planning Feedback

This report also presents information that has been previously tabled to Council in a formal submission to the LEP in 2009, which includes some graphical structure planning urban design work undertaken by David Lock and Associates (See Appendix H). The planning panel considered the submission and noted that while the proposal had merit the "proposal requires further justification especially in relation to the quantity of already zoned industrial land in the locality and the Bomen Industrial Estate" (Planning Panel Report 17 February 2010).

In 2011, the meeting with land holders, the Department of Planning and Council, resulted in the suggestion by the Department of examining the constraints of the precinct and exploring the suitability of the site for an Enterprise Corridor zone. This suggestion was raised given the sites prime and prominent location on the major highway link to the city. The argument has moved away from straight industrial uses to this new zone which can offer a point of difference in terms of what land use activities, economic and employment opportunities will exist and what can be achieved in terms of the resulting urban character of the locality.

In relation to identified constraints, the Council further clarified what merit issues needed closer examination and detailed these in their letter of 29 October 2010. These are summarised below:

- Sewerage – including the need for a sewage strategy and a detailed investigation. (See Section 2.6)
- Water and other infrastructure – letters of support are required. (See Section 2.6.)
- Flooding and localised drainage constraints and stormwater management – as the site is within a floodplain, detail is required as to how this would be addressed and also a flood study and stormwater strategy should be prepared. (See Section 2.72)
- Access, traffic management, road safety and efficiency – including any proposal to extend Bakers Lane

and for any intersection treatments, staging plan and RTA consultation. (See Section 2.5)

- Urban and landscape design – including consideration of the village/semi-rural character of Gumly Gumly and the aim to provide an attractive eastern gateway to Wagga City. Consultation with Council's marketing staff regarding the City's branding and image was carried out and while this precinct is not included in their marketing focus, the opportunity presents to include appropriate controls within a DCP to maintain a consistent entry theme to the city.

Consistency with adopted industrial lands or employment lands strategy – there should be adequate strategic justification for additional industrial zoned land or employment lands in the context of existing supply. (See Section 5.1). **During the preparation of this planning proposal, continued consultation has occurred with the Council and remaining issues were distilled in Council's letters which are provided in Appendix A. These issues are covered by the contents of this report.**

In response to the above issues the following technical assessments have been undertaken for the PIA and are appended to this report:

- Flood Risk
- Infrastructure Services Assessment
- Traffic Assessment

Therefore, this Planning Proposal forms the rezoning application and takes into account the outstanding issues identified and demonstrates that a change of zoning will not cause any downstream effects or local environmental impacts.

2.0 Site and Locality Description

2.1 Property Details and Description

The Planning Proposal applies to Lot 1 DP 305732 and Lot 1 DP 1085667, 3870 Sturt Highway, Gumly Gumly (see Figure 1); however the surrounding precinct north of the Sturt Highway has been investigated in this report so that appropriate strategic decisions can be made for the locality and supports a more holistic planning approach.

The PIA is located within the Wagga Wagga City Council Local Government Area (LGA) approximately 5km to the east of Wagga Wagga city centre. The location of the PIA is shown in Figure 1.

The site is approximately 20 hectares in area while the PIA is approximately 43 ha. It fronts the Sturt Highway to the south and Gumly Road to the north.

The PIA is bounded by the Sturt Highway, Eunony Bridge Road, Gumly Road and the paper road extension of Bakers Lane (unmade). The PIA comprises predominantly flat and cleared land. Some small clusters of vegetation exist to the rear of the PIA which is outside of the area suggested for development.

2.2 Existing and Previous Land Use

The PIA area currently comprises approximately 7 dwellings which would be classified as rural residential or semi rural in nature. In addition to the dwellings the PIA supports a farrier's school, stables, shed sales and display centre and carnival equipment storage. The land has been predominantly utilised for horse agistment for the at least the last 20 years.

2.3 Current Land Use Zones

The site is zoned RU1 Primary Production under the Wagga Wagga Local Environmental Plan 2010 (WWLEP) as shown in Figure 2.

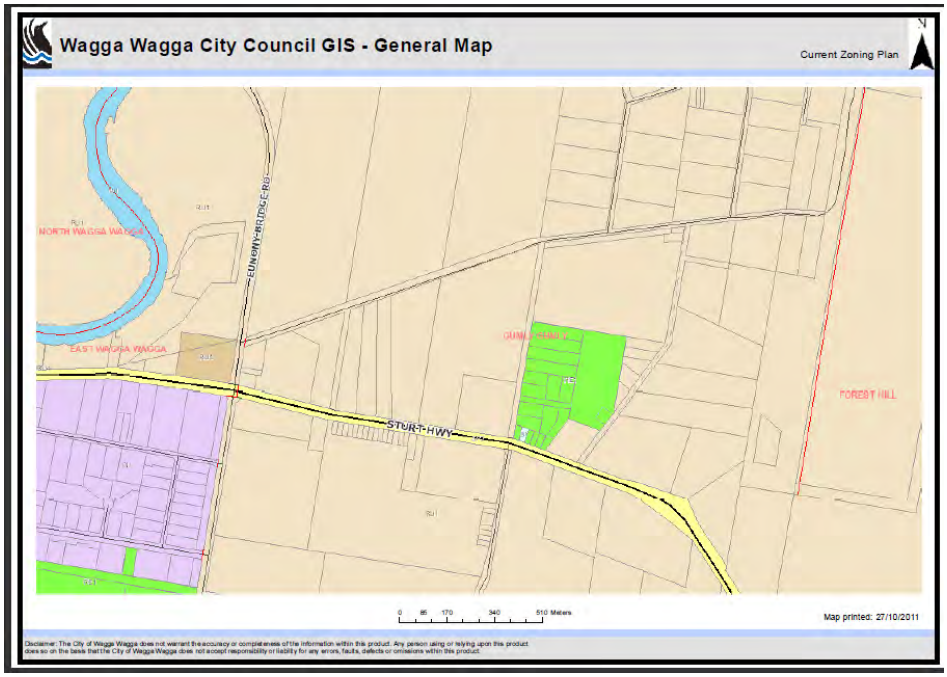

Figure 2 : Current Zoning – Wagga Wagga Local Environmental Plan 2010

2.4 Surrounding Development

The area surrounding the subject site includes a mixture of land uses including viable rural holdings to the north and then a variety of other land uses to the west, south and east including the following:

- Industrial
- Bulky Goods Retail
- Nursery
- Rural Residential
- Residential
- Motels
- Open Space / Public facilities
- Shops
- School (closed)

The variety of uses is a reflection of the following:

- This locality was part of the Kyeamba Shire prior to the amalgamation with Wagga Wagga in 1981 and the Kyeamba Shire approved a number of commercial, industrial and residential uses to exist nearby its boundary to the Wagga Wagga LGA to gain some proximity to the Wagga Wagga township and any benefits that could be gained from either living or doing business close to Wagga Wagga. Once the amalgamation took place some of these uses were considered generally unsuitable uses within the 1(a) rural zone under the Wagga Wagga Rural Local Environmental Plan 1991.
- The previous drive in theatre site with its large expanse of concrete paving was approved for reuse in the mid 1990's and the site now supports multiple bulky goods style retail uses including camping, boat and caravan sales as well as a nursery.
- As the city grows in population the corridor between the city centre and the airport is becoming more and more a focus for development.
- Gumly Gumly, although not a village introduces the school (albeit closed), shops, residential and open space components of the locality.

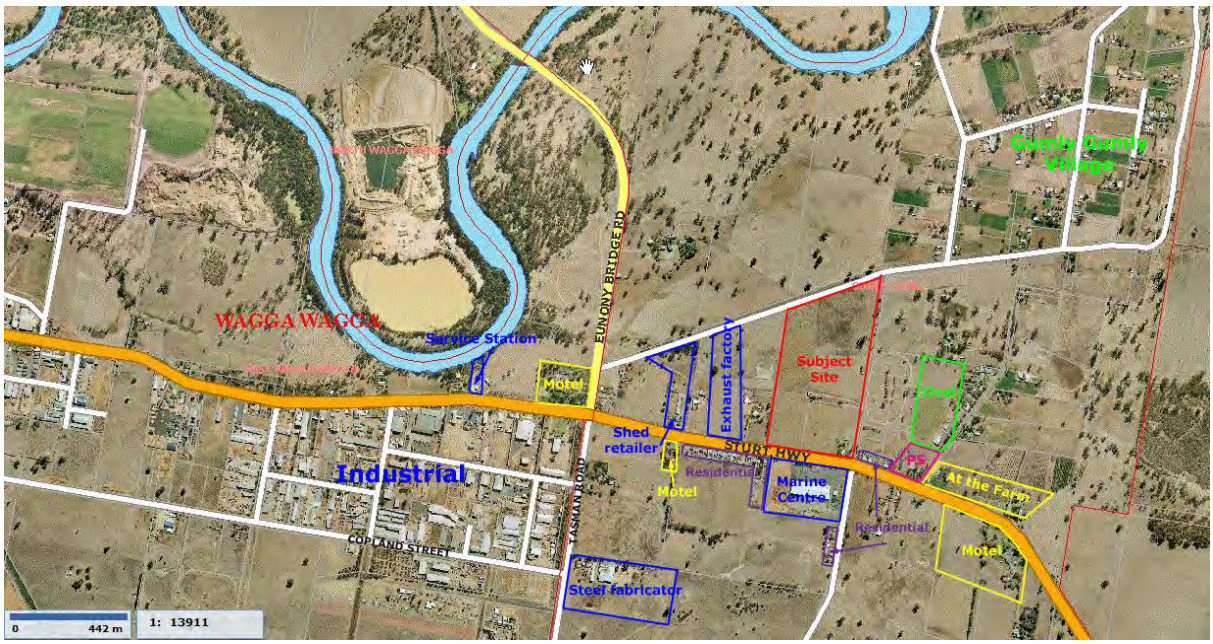

Figure 3: (source LSP submission to DWWLEP) land use survey of the surrounding area circa 2008.

Figure 3 above represents a land use survey carried out in 2008 including general industrial zoned land identified to the west of the PIA. The PIA itself is zoned Rural It should be noted that the exhaust factory site identified central to the PIA is an approved use that did not progress. A general store also exists to the east of the subject site (see Figure 5) and Gumly Gumly is referred to as a locality and not a village.

Figure 4 : The rear of the subject site reflects the rural land use that it is adjacent to. Due to the nature of flooding at the rear of the site this interface will be preserved as rural.

Figure 5 : View from Bakers Lane South towards Gumly store which is to the east of the PIA.

Figure 6 : Sheds display and sales within the PIA

Figure 7 : Riverina Marine Centre and multiple retail outlets opposite subject site

2.5 Traffic and Access

A traffic impact assessment has been undertaken by McClaren Engineering. The report assessed the PIA by forecasting traffic at a rate 10% higher than the generic industrial traffic generation rate. This was to adopt a worst case scenario to fully understand traffic implications for the precinct. It was determined that from a traffic viewpoint that the development of the site for industrial or business enterprise purposes could be supported. A number of site access options and intersection treatments were considered and three workable options for the future vehicular access condition are presented in the report which is located in **Appendix B**.

2.6 Infrastructure and Services

An investigation has been undertaken by MJM Solutions to determine the ability of the existing service networks for sewer, stormwater, electricity, telecom, gas and water. The report confirms that all services are either available or can be made available to the subject precinct. A summary of findings is contained within the subsections below, however the full report and associated plans are located in **Appendix C.**

2.6.1 Sewer and Drainage

The servicing of the proposed development site for industrial purposes was found to be a complex issue given the existing sewer network and Eastern Industrial Sewer Trunk Main system. It was found that the area can be successfully connected to the Council main using a combination of gravity and pressurised pipes as shown on the plan in **Appendix C.**

Due to capacity issues on the existing network and the current development of 200 rural residential lots in the locality which require servicing a proposed pump station at Edison Road (SPS26) will be further upgraded to support the Gumly Estate Development. This will have the dual advantage of freeing up load in the existing overloaded Hammond Avenue network.

Due to the flat and low lying nature of the topography, stormwater is proposed to be managed on site by constructing adequate storage at each industrial site using a combination of water tanks and paved areas

which are designed to retain stormwater in localised shallow depressions (maximum depth of 150mm) and release it at predevelopment flow rates.

It is concluded that both sewer and drainage can be adequately catered for and managed across the PIA to support the proposed zone change and potential land uses.

2.6.2 Water

Riverina Water advises that subject to regular water consumption requirements the existing network can service the proposal subject to some developer servicing charges.

2.6.3 Telecommunications

There is a significant telecommunications presence available in the area. Works would involve a shared telecom / electrical trench. An optic fibre cable is located on the southern side of the highway and extreme care should be taken if any works result in the vicinity of this cable.

2.6.4 Electricity

Essential Energy advise that the network in the area would be capable of servicing the development as proposed subject to additional works being undertaken by the developer. It was noted that overhead electricity is preferable for any industrial development.

2.6.5 Gas

Gas is in the vicinity of the site and the proposed development can be accommodated by the existing network.

2.7 Geology/Soils

The soil landscape is of the Kurrajong Plain group. The associated urban capability of this soil landscape is considered good with this landscape only being subject to occasional flooding and minor stream bank erosion which can cause difficulties for road and foundations building. The adjacent industrial land is also of the same soil landscape as well as land around Gumly Gumly and other industrial land fronting Copland Street through to Kooringal Road. However, as this site is elevated in comparison to the surrounding land it is unlikely that it would be affected by the nominated limitations.

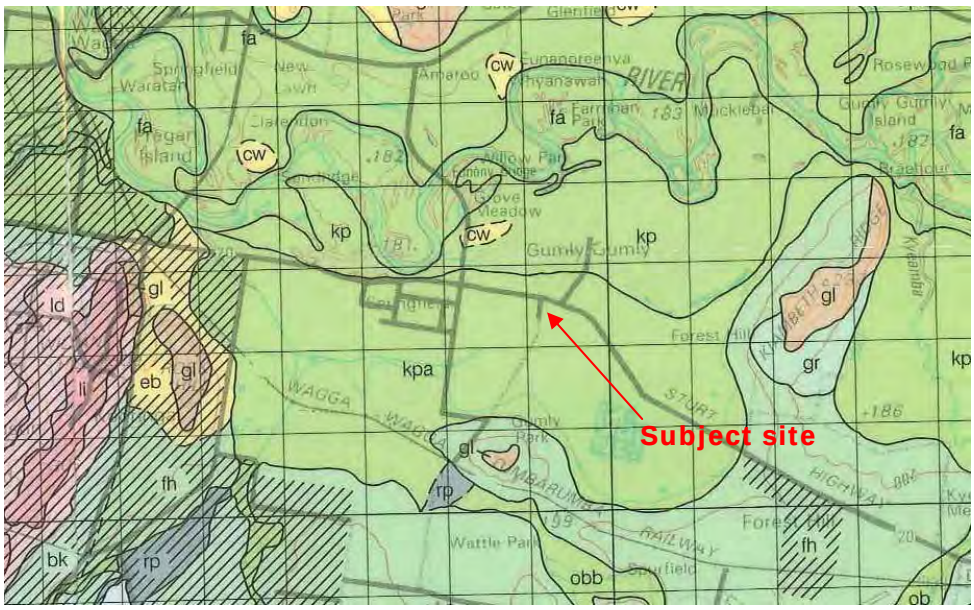

Figure 8 : Soil landscapes of site and surrounds

2.7.1 Topography

The landscape of this group is described as extensive level plain of higher Murrumbidgee River Floodplain. Local relief is mostly <2m and slope gradients are <1%. The site has little cross fall, although there is a dipping effect through the centre of the site in an east west direction where the landscape falls away to floodway. The aerial photograph in **Figure 9** reveals the lower lying land to the rear of the site as the picture was taken during the 2010 December floods. The rear of the site is below the height of Gumly Gumly Road

2.7.2 Flooding

The site is subject to flooding, being located on the Murrumbidgee River floodplain. Wagga Wagga Council's Flood Precinct Map identifies the site as Gumly Gumly (High Flood Risk) as shown at Figure 9 : Wagga Wagga Flood Precinct Map 2010

The site has a drainage line running from the east approximately 100m into the site, as shown on the contour map above. The height of this contour/drainage line is 182m.

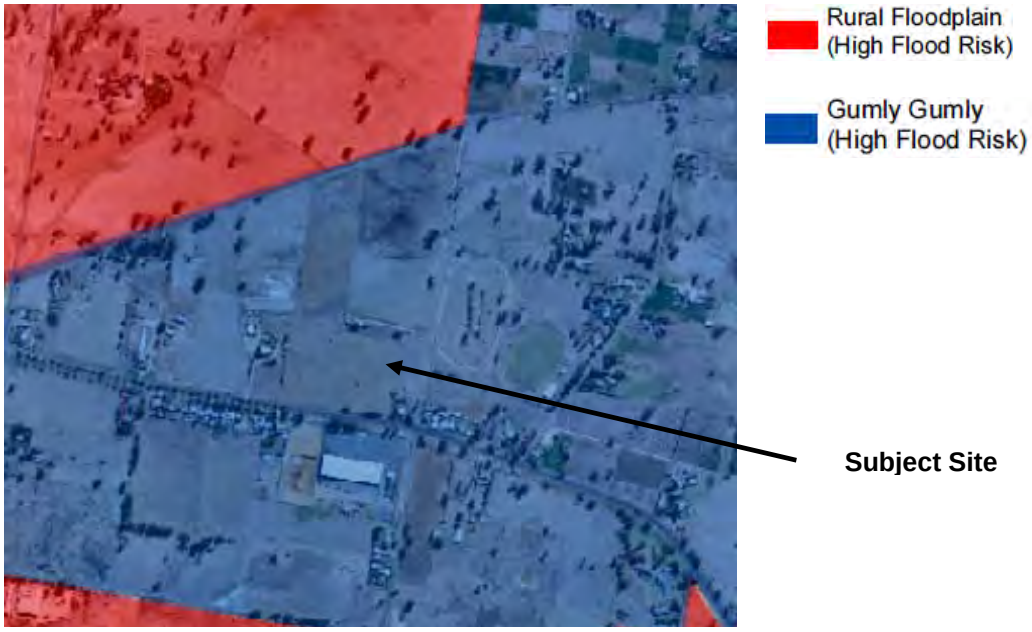

Figure 9 : Wagga Wagga Flood Precinct Map 2010

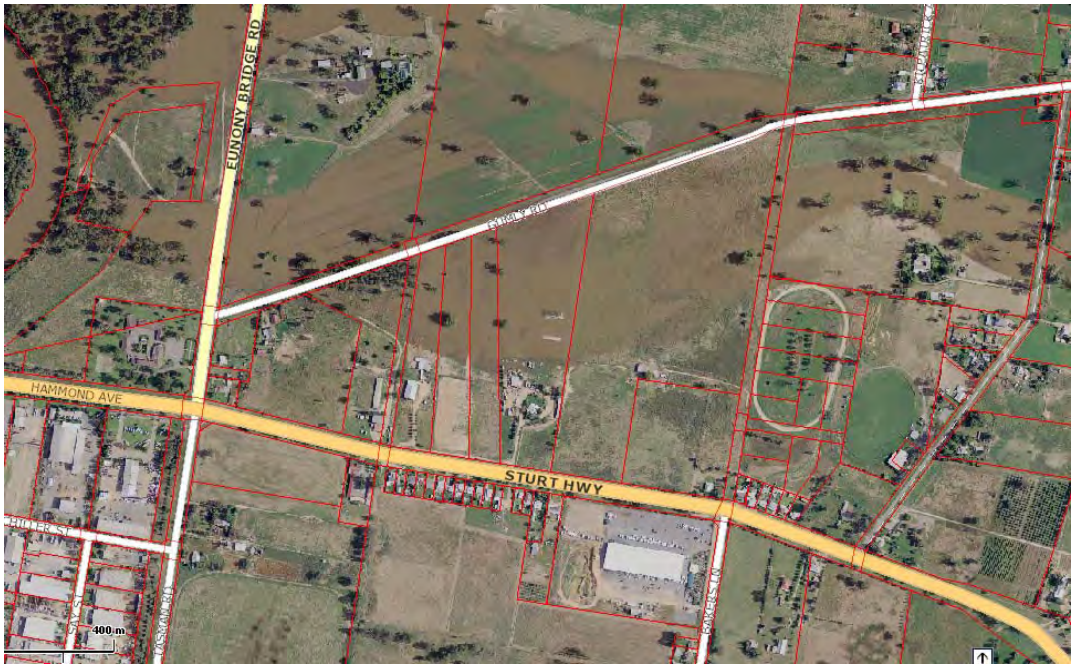

Figure 10 : Aerial Photograph of site during the December 2010 floods

A broad Floodplain Risk Management Plan was carried out for Wagga Wagga City Council by WMA water in 2009 and the land was classified generally as High Flood Risk - Rural Floodplain. As part of the broad study classification of flood risk was essentially based on modelled flood extents and consideration of existing land use zoning. A precinct specific flood impact study was prepared for the site by WMA water – August 2011. A range of conceptual proposed development scenarios for various flood events have been modelled in addition to a review of the sites provisional hydraulic hazard and flood risk classifications. The report concluded that the proposed development could be supported across the central and southern portion of the site as shown in WMA's option B. Adoption of Option B with filling to the 5% AEP would also warrant a reduction in the flood risk classification to medium flood risk. The full report and plan can be located in **Appendix D.**

2.7.3 Agricultural Capability

The following figure shows the agricultural land suitability for the site - Prime Cropping Land, Class 2 and 3

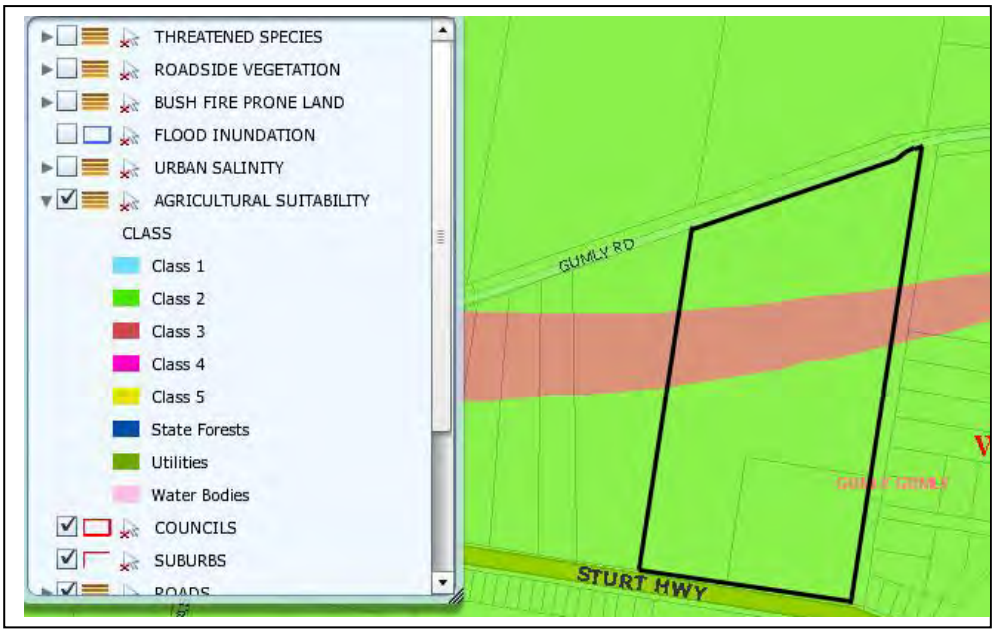

Figure 11 : Agricultural land suitability.

The viability of agricultural pursuits is restricted in this precinct by the small lot sizes on each of the individual lots. To the centre of the subject site a number of north south narrow lots that were created via subdivision in the mid 1990's for the purposes of hydroponics. No agricultural pursuit ever resulted and the lots remained unsold for many years. The issue of the small lot sizes is further exacerbated by the requirement to maintain adequate buffers between certain agricultural pursuits and other development.

Table 2 : Examples of buffers between agricultural land use and residential development

Purpose of Buffer	Buffer Width
For spray drift where there is no vegetative buffer	300m +
For spray drift where there is adequate and effective buffer available	40m +
Between dwellings and sources of noise such as a working tractor, fans and pumps.	500m +
Between dwellings and a cropping enterprise that involves soil cultivation (this would include a vegetated buffer).	50m +
An adjoining drinking water supply	100m +
Where aerial application of chemicals is involved	150m +

The subject site is only 20 ha in size, with the entire subject precinct being approximately 43.3ha in area. The applicants land (and the precinct as a whole) is limited from an agricultural viewpoint due to surrounding land uses which include industrial commercial and residential uses and the need to buffer these land uses from the impacts of agricultural pursuits.

It is concluded that this site is:

- not of a sufficient area to support rural uses,
- predominantly located within an urban environment, and
- not being used for active agricultural activities

Despite being zoned for rural purposes the land is not suitable for rural pursuits and the proposal is considered the highest and best use of the subject precinct.

2.7.4 Bushfire

The subject site is not bushfire prone as is demonstrated by the map below.

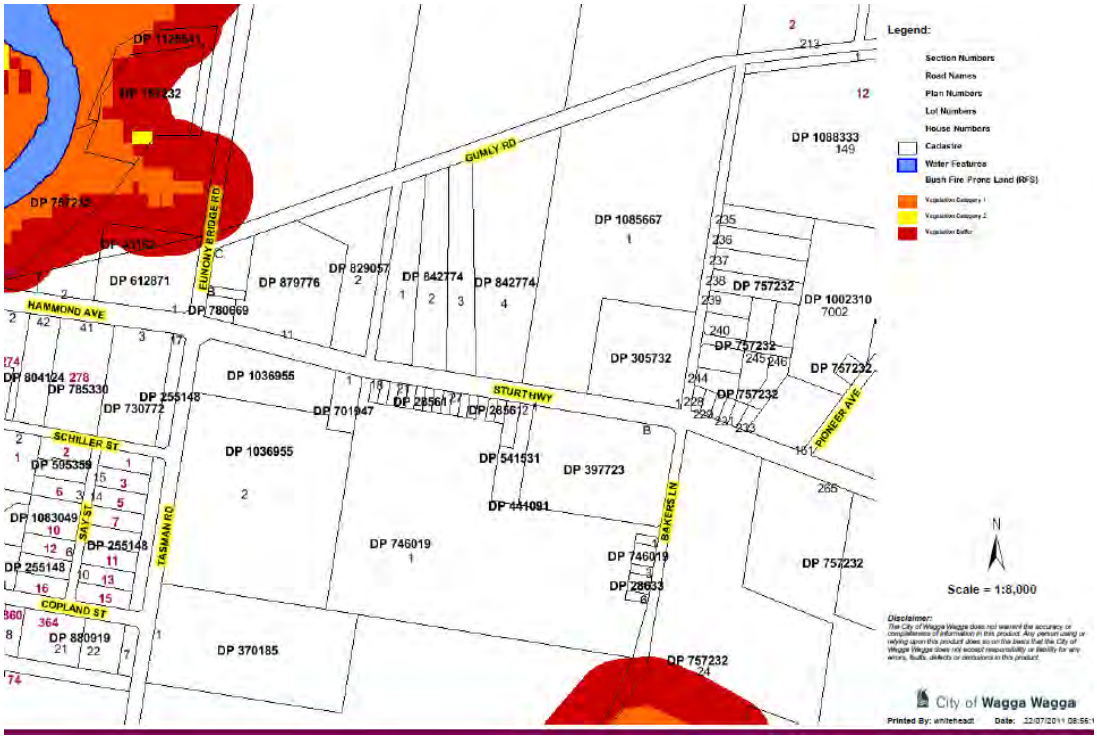

Figure 12 : Bushfire Map

2.7.5 Native Vegetation

Although the site exists outside of the area that was bio certified for the making of the Wagga Wagga LEP 2010 it is cleared and the paddocks have been utilised for horse agistment over the last 20 years. As a result there is a high presence of weeds and a nil presence of native habitat or threatened species.

Native vegetation cover or other such environmentally sensitive constraints do not pose a constraint for the intended proposal.

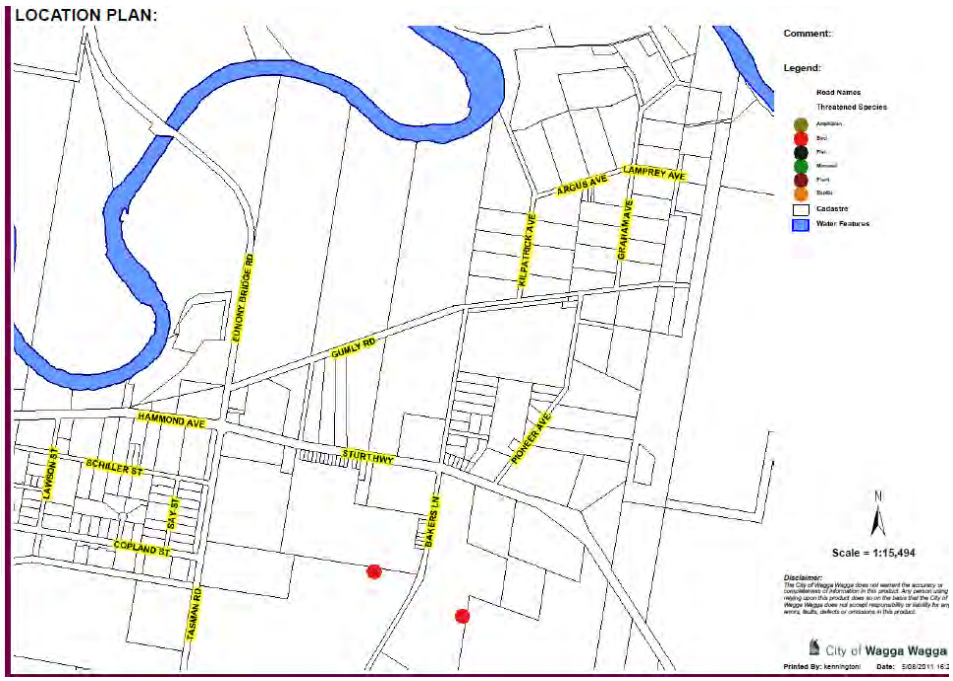

Figure 13 : Threatened species layer from WWCC. No species have been sited on the subject site

3.0 Part 1 – Objectives or Intended Outcome

While a number of zones have been considered for the PIA, it is concluded that due to the sites prominent highway frontage location the enterprise Corridor zone with its offering of a broader spectrum of uses will afford the precinct the opportunity to evolve into a well designed business / industrial precinct with limited retailing activity. Supported by a development control plan, these uses will present well to the highway and surrounding locality from an urban design perspective creating a gateway to the city. With a variety of employment prospects, improved local services, access improvements and minimal environmental impacts, this zone is the most desirable outcome for the PIA.

The intended outcome of the Planning Proposal and Local Environmental Plan (LEP) therefore is to rezone the site to B6 Enterprise in accordance with section 55(2) of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The intended outcome will enable the gazettal of the LEP as an amendment to Wagga Wagga Local Environmental Plan 2010. A copy of the proposed zoning plan is provided at **Appendix E**.

Technically the outcomes of the planning proposal are well supported by:

- The justification that highway frontage land is required for business enterprise development to enable clustering of like uses that would not necessarily be suited to the Bomen industrial area for example. Refer to Macroplan report in **Appendix F.**
- A site specific flood risk assessment which demonstrates the sites suitability for the proposed use and that it will not be adversely impacted upon nor will it externally impact surrounding areas during times of flood. Refer to Flood Impact Assessment **Appendix D.**
- Utility services assessment, including sewer and drainage has been prepared by the proponent. Refer to **Appendix C.**
- Other findings within this report.

This proposal is consistent with a similar proposal which was submitted to Council to support the rezoning of this land when the City was preparing the current LEP in 2008 and further investigations have been carried out subsequently to address issues raised in the feedback to that proposal. This submission and supplementary submission as well as urban design work are attached as **Appendix H.**

Key aspects of the proposed rezoning plan (**Appendix E**) are:

Enterprise Corridor

The physical, environmental and planning constraints analysis has demonstrated that the majority of the PIA has potential to:

- Accommodate light industrial and enterprise corridor uses that would benefit from passing trade on the Sturt Highway, complementing the heavier industrial uses in Bomen whilst preserving the supremacy of the CBD.
- Provide diversity in the industrial / economic corridor lands market and provide Gumly Gumly Village with a key activity generating node contributing to a gateway and sense of approach to Wagga Wagga.
- Act as a catalyst for further activity around the Gumly Gumly area.
- Job creation during construction and operation of the site.
- Provide synergies with the existing uses such as the marine retailer to the south of the Sturt Highway and

the East Wagga Wagga Industrial Precinct.

- Form a natural extension and limit to the East Wagga Wagga industrial precinct with a complementary use and confirm that the boundary of the urban area of Wagga Wagga is to the east of the Gumly Gumly locality.
- Benefits to the local public realm by preventing potential land use conflicts between agricultural and residential uses and the possibility of refurbishing Gumly Gumly open space areas to service the locality. .
- Create opportunity to open up Bakers Lane through to Gumly Road. This action will improve local traffic circulation and the option could be further explored via the community consultation activity that would be carried out with the draft LEP.

The flooding constraint limits the extent of development within the PIA. The southern portion of the site is only infrequently inconvenienced by minor inundation and it is this larger portion of the site which has been found to be suitable for development subject to the incorporation of specific design criteria such as the height of floor levels above the flood line and amount of permeable surfaces. The Flood Risk Assessment has identified that the northern portion of the site is less suitable for development but that it could support a combination of car parking / storm water detention and ecological purposes (see below). .

With the exception of the floodplain allocation, the southern portion of the site is free from environmental constraints and it is this area that is therefore proposed for enterprise corridor rezoning.

Ecological Area and Car parking

The site is within the floodplain. The Flood Risk Assessment has identified that the northern portion of the site is not suitable for industrial use but could be utilised for car parking. Therefore, it is proposed that part of this area may be utilised for car parking and associated stormwater detention but the majority would be used for ecological purposes and could be planted out with trees.

4.0 Part 2 – Explanation of Provisions

The provisions to be included in the proposed LEP are outlined below, in accordance with section 55(2) of the Environmental Planning and Assessment Act 1979 (EP & A Act).

1 Name of plan

This plan is *Wagga Wagga Local Environment Plan 2010* (Amendment No: *To Be Confirmed*).

2 Aims of the plan

This plan aims to amend *Wagga Wagga Local Environmental Plan 2010* to zone the land to which this plan applies as follows:

(a) To rezone the land to which this plan applies to Zone B6 Enterprise Corridor.

(b) To ensure any development on that land incorporates the principles associated with ecologically sustainable development in its planning and design.

(c) To ensure that any development on that land is in accordance with the relevant objectives of the zone to which it relates.

3 Land to which this plan applies

This plan applies to the land shown on the zoning plan contained in **Appendix E**.

5.0 Part 3 – Justification

5.1 Section A – Need for the Planning Proposal

5.1.1 Is the planning proposal a result of any strategic study or report?

The Planning Proposal is a response to numerous strategies and studies which have been prepared for land within the local and surrounding area, such as:

- State Government Policy to grow regional NSW.
- Vision 21 Land Use Strategy
- Wagga Wagga Industrial Land Use Study 2006
- Spatial Plan 2008
- Copland Street/Highway/Tasman Road Precinct Land Use Study
- Wagga Wagga Local Environmental Study 2008 (Willana and Associates)
- Submission prepared by Lennon Salvestro Planning to the Wagga Wagga LEP 2010 that was submitted to Council, and the response that was received from the Wagga Wagga Planning Panel.
- Market Needs Assessment prepared by Macroplan

State Government Policy

The State government has released a contract with NSW within which they pledge to rebuild the NSW economy including the creation of 40,000 jobs in regional NSW.

The NSW department of Trade and Investment has established an Enterprising Regions Program to assist community and regional development organisations to undertake planning activities and implement projects which have broad-based local support and the potential to generate economic benefits. Under this plan, funding is available for industry development strategies, preparation of masterplans, and employment land strategies, amongst other things.

In August 2010, the State government released a Regional Business Growth Plan for the Riverina Region. An identified strategy within this plan is “planning and employment lands”, where initiatives are being developed to ensure employments lands are available and needs and gaps are identified. The strategy aims to ensure that there are enough employment lands for current and future developments.

Due to the recent change in government, the above growth plan is currently being reviewed and the 2021 State plan is due to be released with the budget in the near future. Although the contents of this plan are not known, the rezoning of the subject site will facilitate the state government’s commitment to growing regional NSW and will contribute to the supply of employment lands within Wagga Wagga.

Vision 21 Land Use Strategy

The purpose of the Vision 21 document was to examine the constraints, issues and options for Wagga Wagga in regard to urban development and the changing social, environmental, and economic factors facing the community. Its preparation began in the late 1990s.

The Strategy includes a section titled Employment lands. This section makes reference to the Wagga Wagga Industrial Land Use Study 2006 which was completed at a similar time to the strategy.

Wagga Wagga Industrial Land Use Study 2006

The Wagga Wagga Industrial Land Use Study was completed in 2006 by Hill PDA. It considers industrial land use demand on a city wide basis, however, supply options surveyed were limited to a number of sites which had been nominated by Council which raises the possibility that other sites could exist which could satisfy requirements and meet anticipated demand just as adequately as those nominated for the study.

Council determined to prepare the study for a number of reasons, including:

- The existing land bank for small lot development and light industry is limited and much of it is subject to flooding from the Murrumbidgee River
- The existing industrial land bank for lots between 2 and 5 hectares is also limited and much of it is subject to flooding
- The existing land bank for large multi-hectare sites is not compatible to some industries due to the undulating landform
- The Council does not have a comprehensive strategy for the provision of industrial lands beyond those existing
- The Council wishes to support local industry and attract new employment generators to strengthen the local and regional economy

The Industrial Land Use study forecasts demand for industrial land up to 2016. Based on average take up rates of 4–5 hectares per annum over the past 25 to 30 years for the “east-end” and Bomen, it is expected that 176 ha of industrial land will be required in 2016, an increase from 161.2ha in 2011.

The Industrial Land Use study suggests that, although there appears to be a 15 year surplus of land, much of this is constrained by being owner–occupied, limited through environmental factors including topography, and vacant or underused land to the east of the city (adjoining the subject site) being owned by private owners who may not want to develop their land. The subject site is in private ownership with the owner wishing to develop the site.

The study identified a number of trends, the following of which can be related to the subject site and the planning proposal:

- Economic globalisation and the increasing trend towards greater flexibility in location choice, with firms requiring large sites for consolidation of previously fragmented activities.
- An increase in the development of economic gateways through which commodities are exchanged between regions.
- Increasing reliance on transport efficiencies and a growing number of industries seeking proximity to transport nodes.
- The relocation of traditional industries from Sydney to an increase in the number of business parks in regional centres.

Economic globalisation and the requirement for larger sites is evidenced in Wagga Wagga by companies such as John Deere and Hutcheon and Pearce, which are agricultural-based sales businesses, wanting to relocate to larger more high profile sites to create a regional head office style presence in the city.

The gateways for commodities relates more to the clustering of primary industries and value adding industries in precincts such as Bomen; however, by releasing some other industrial land on highway frontage locations, other industry clusters can still be supported.

The subject site and PIA is on an unrestricted B Double route which also allows for vehicles 4.5 metres in height. Being located on the highway with ready access for all types of vehicles gives this site an added advantage over other industrial areas in the city, and definitely provides proximity to transport nodes such the highway and airport, and ready access to other industrial areas for cross-pollination of services.

It is assumed that where industries are considering relocating out of metropolitan areas into regional areas they are likely to require sites with some profile to assist with becoming "known" within the region.

The subject site and PIA is in the vicinity of the area referred to as East Wagga Wagga in the study. The East Wagga Wagga area has been described as follows:

> *"East Wagga Wagga developed from the 1970s and some larger regional and national businesses located there in the 1980s. The area is predominately light industrial, transport and service, wholesaling and storage. On Sturt Highway there is some bulky goods retailing including a relatively new Harvey Norman centre. More recently there have been some quasi-commercial (office) uses establishing themselves in the area. Whilst there remains a considerable amount of undeveloped land, most of it is flood prone."*

The report further describes the area as enjoying a number of attributes including proximity and rapid travel times into the CBD and also the airport. It is along a major highway and major road and enjoys significant visual exposure between the CBD and airport.

Four alternative sites within close proximity to Wagga Wagga were proposed for possible future industrial use, as follows:

(1) **Copland Street South Side** – a 30 ha block, which is zoned industrial, generally flood free, the bulk of the site is in a single ownership, has minor potential land use conflicts, is close to the CBD, has existing infrastructure and is in close proximity to the airport. Strategy - suitable for small industrial parcels, light industry. Timing to be short term, providing around 5 years supply.

(2) **Sturt Highway North Side (Forest Hill)** – around 200 ha, generally flood free, close to airport, minor potential land use conflicts (little residential in area, opposite defence site), 15 minutes to CBD, requires rezoning. Strategy – requires further investigation. Timing to be medium term. Sizes ranging from 2000m2 to 20ha to large strata or community titled units.

(3) **Riverina Farm (Bomen)** – Approximately 100 ha, in single ownership – owners are currently seeking approval for masterplan of the site which includes a number of industrial parcels. Includes intermodal terminal. Strategy – timing is short term.

(4) **Elizabeth Avenue near the Airport** – on west side of Elizabeth Avenue, requires rezoning, around 400ha, excellent position close to airport, generally flood free, servicing likely to be inexpensive, building restrictions near airport, potential land use conflicts with residential areas of Forest Hill village. Strategy – requires further investigation. Timing to be medium term. Sizes ranging from 2000m2 to 20ha to large strata or community titled units.

Figure 14 shows the location of these sites.

Uranquinty has also been identified as a future industrial area; however it is 11km from Wagga Wagga so was considered less attractive than the other short listed sites.

In order to prevent the cost of industrial land rising too high, it was suggested that the supply of light industrial/enterprise uses be kept strong to hopefully maintain sufficient competition between multiple landowners, and thus keep prices lower than has been the case in the past few years where demand has exceeded supply.

This proposal supports the land use study as the proposed site and PIA is free from environmental constraints, represents a logical extension to the industrial uses to the west of the site, the potential uses will complement the existing suite of uses both within and directly adjacent to the PIA.

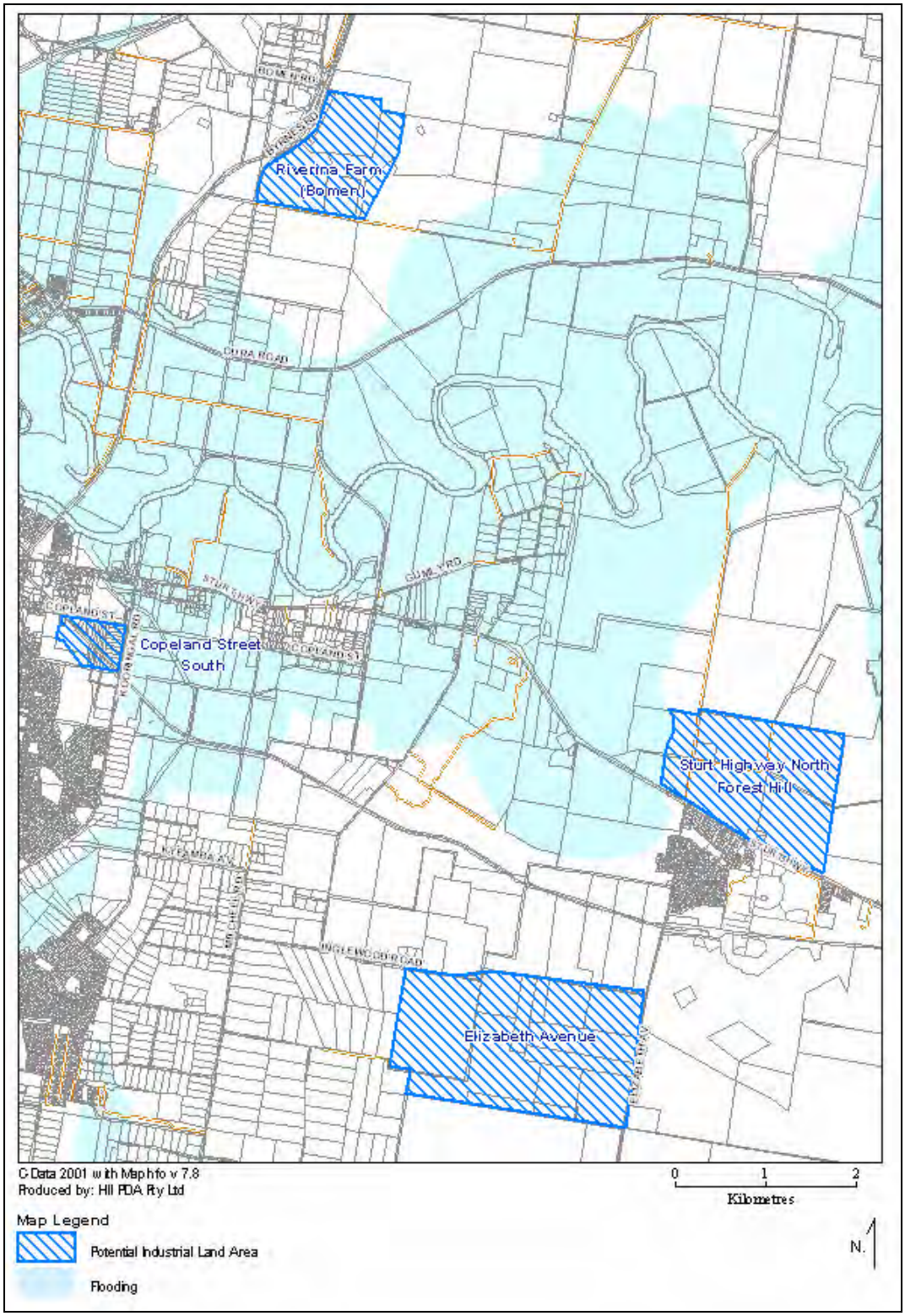

Figure 14 : Location of sites nominated for investigation in the Wagga Wagga Industrial Lands Study.

Spatial Plan 2008

The Wagga Wagga Spatial Plan maps out the key directions for the future development of Wagga Wagga, the villages and rural areas over the next 25 years or more. Section 2.6 of the spatial plan is devoted to discussion of industrial lands.

The existing land bank section suggests that of the available land within the city some of it suffers from serious constraints, either in terms of land ownership characteristics or environmental factors. The plan goes on to say that "vacant land with highway frontage is in demand; much of the land needs to be built up to meet flood constraints". The subject site falls into this category and is relatively elevated in terms of the precinct and does not require a great deal of additional elevation to support development free of flood hazard. The plan recognises that supply of industrial land must consider strategic clustering opportunities and the land requirements of particular industries.

Spatial Planning decisions arising from the study include:

(1) The formulation of an Industrial Lands Development Program which will ensure an adequate and timely supply for industrial land for the city, with a 15 year bank of land being included in the program and special opportunity sites being recognised and prepared for release. This will be achieved through the development of an Industrial Lands Register which will list and prioritise land suitable for industrial uses in the city. This proposal demonstrates the subject land is relatively unconstrained, suitable for industrial use, and can readily be developed. As such, it is requested that it be included in the spatial plan register as land to be developed for industrial use in the short to medium term.

(2) Link with Council's Acceler8 and WISDOM projects

(3) Identify Future Land Supply which will ensure sufficient supply of industrial land is available to meet the cities requirements. Nine areas have been nominated as options for possible future industrial zones. The nine areas are listed as :

   (a) Copland Street Southside (Council). Area - 30ha (approx)

   (b) Bomen Area – Larger study area is over 20km2

   (c) Riverina FARM (within Bomen). Area – 100ha (approx) undeveloped

   (d) Edison Road

   (e) Airport East. Area – 120ha (approx)

   (f) CSU and Biotech Precinct. Area – within CSU environs

   (g) Sturt Highway Northside. Area – 200ha (approx)

   (h) Elizabeth Avenue (near airport). Area – 400ha (approx)

   (i) Uranquinty/Kapooka area

(4) Advancing Serviced Land - A strategy for the timed release of industrial land in the future will be developed which will ensure the servicing of these lots is in place

(5) Clear rules and Investment Confidence Through Good Policy – using the standard instrument for development of LEPs to develop defined zones for industrial areas within the city

(6) Environmental and Amenity Outcomes

Wagga Wagga Local Environmental Study 2008 (Willana and Associates)

As a response to the Council's Spatial Plan and the Industrial Land Use Study, and as a supporting strategic document for the creation of a consolidated Local Environmental Plan, this Local Environmental Study was carried out to specifically address certain land use issues raised in previous studies and review a number of the sites nominated in those studies, as well as some new sites for suitability for development.

In terms of employment generating uses such as general or light industrial, the study confirmed the previous finding that there was a shortage of readily available larger blocks at competitive prices. The study also discussed the continued expansion of the transport, logistics and warehousing sectors and the likely increase in demand for industrial land in proximity to transport infrastructure. Manufacturing was also stated as an industry that had steady activity. The study focused on the Bomen industrial area as well as smaller sites in Copland Street, Hammond Avenue and Edison Road. The industrial sites that were studied and the outcomes of the investigation are presented in the following table.

Wagga Wagga Council Advice

City of Wagga Wagga Council outlined the path required to propose an amendment to the LEP in their letter of 29 October 2010 (**Appendix A).** The preparation of a Planning Proposal is considered to be the first step in developing a local environmental plan to amend the LEP. Merit issues that should be addressed by the initial planning proposal are identified in **Appendix A** and summarised in Section 1.1.1. They are addressed as follows:

Table 3 : Consideration of Council Outstanding Issues

Issue	How addressed
Sewerage	
A sewer strategy is required	Addressed within the Services Report in **Appendix C.**
Council's downstream sewer infrastructure not designed to accommodate the proposed rezoning	Addressed within the Services Report in **Appendix C.**
Detailed investigation for Council's downstream sewer infrastructure	Addressed within the Services Report in **Appendix C.**
Potential replacement of sections of sewer	Addressed within the Services Report in **Appendix C.**
Identify impact with the use of the Water Directorate Guidelines.	Addressed within the Services Report in **Appendix C.**
Water and other infrastructure	
Letters of support required from the Riverina Water County Council and from all other relevant infrastructure providers.	Addressed within the Services Report in **Appendix C.**
Flooding, localised drainage constraints and stormwater management.	
Detail on how the site as being of high flood risk will be adequately dealt with.	Addressed within the Flood Risk Assessment in **Appendix D**.
A flood study to be undertaken.	Addressed within the Flood Risk Assessment in **Appendix D.**
Stormwater strategy is required	Addressed within the Services Report in **Appendix C.**
Access, traffic management, road safety and efficiency	
Include any proposal to extend bakers Lane through to Gumly Road.	Addressed within the Traffic Study at **Appendix B.**

Proposed intersection treatment – Bakers lane and the Sturt Highway	Addressed within the Traffic Study at **Appendix B.**
Staging Plan	Addressed within the Traffic Study at **Appendix B.**
RTA consultation and sign off	RTA were consulted during the traffic study. However, further consultation will occur as part of the exhibition and consultation period for the proposal.
Urban and landscape design	
Consideration of scale and quality of built form having regard to the village/semi rural character of Gumly Gumly with the aim of providing an attractive eastern gateway in Wagga Wagga. Consultation with Council's marketing staff.	It is acknowledged that quality of built form will be an important element of any future development. It is proposed that further urban design and masterplanning work is to be carried out post gateway determination and will inform any future DCP for the precinct to ensure high quality standards will be met.
Detailed view analysis	Some view analysis has occurred in the original urban design / site analysis work that was carried out as part of the LEP submission. It is proposed that this along with other design elements will be implemented and developed post gateway determination.
Consistency with adopted industrial lands or employment lands policy	
Adequate strategic justification for additional industrial or business zoned land.	Addressed throughout the report but specifically in this Section 5. (see also Table 4 - Section 117 Directions)

Department of Planning

A meeting was also held with the Department of Planning (now DPI), various land owners and Council in early 2011 to discuss pertinent issues and suggestions were put forward from both the department and Council on the process and the suggested thrust of the proposal. This included the suggestion by the DPI to examine the existing constraints and explore the option for an enterprise corridor zoning. Having investigated the issues and taking on board suggestions made throughout the consultation phase of the process, this report reveals that despite the identified constraints there is ample justification for the Enterprise Corridor zone across the majority of the PIA.

Market Needs Assessment prepared by Macroplan

MacroPlan Australia were commissioned on behalf of the proponent of this planning proposal to assess the market needs of the area in respect of the proposed PIA. This assessment included a review of the Wagga Wagga Industrial Land Study and is relevant to the subject site due to one of Wagga's 3 main industrial precincts being located proximate to the PIA being located less than 1km to the west.

The assessment identified that there is a very limited supply of short to medium term industrial land and a risk of a 'gap' in the supply of suitable industrial land which could potentially stagnate the growth of some industry sectors within Wagga Wagga and result in leakage of investment and employment, as well as ensuring industrial land prices remain competitive.

It indicated that the lands that were relatively free from landownership, servicing, and environmental constraints, and that would be readily developed for industrial uses, could:

- fulfil an important short term need for Wagga Wagga by satisfying 2-3 years worth of growth (based upon take up rates of 8-10 ha per year)
- free up room in other industrial land precincts which may have limited short to medium term supply, and
- allow other precincts to intensify development according to their existing profiles (e.g. bulky precincts, auto-motive repairs, food & beverage manufacturing, agri-business or transport and distribution)

Macroplan discussed the clustering of sub industries and that highway frontage land is attractive for the following types of industry:

- warehouse/showroom activities
- agricultural and farm machinery sales and service
- transport related industries

The report considered that although ample land across the local government area was likely to be rezoned for industrial purposes (editors note: and since has been via the WWLEP2010), the location of these land parcels may not actually suit the sub industries and therefore gaps in supply of appropriate land may still exist even if net supply appears adequate in terms of land area.

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

The proposal seeks to employ a zoning which allows a range of uses compatible with light industrial / enterprise development across the site. Alternatively, the use of an enabling clause, such as Schedule 1 of *Wagga Wagga Local Environmental Plan 2010* which permits a use that would normally be prohibited within the zone, could be used to allow a specified use i.e. warehouse and storage facility to occur on the site. This type of amendment to the LEP would not provide flexibility for different types of uses compatible with light industrial/ enterprise uses over time and therefore would not promote the orderly and economic use of the site. It is also understood that the DPI are discouraging further amendments to the Schedule 1 uses preferring future land uses to be legitimized through rezonings.

5.1.3 Is there a net community benefit?

The Department of Planning Guidelines (July 2009) includes the following advice in relation to the net community benefit assessment:

- The Assessment should only evaluate the external costs and benefits of the proposal (i.e. the externalities).
- Consideration must be given to changes that reflect a higher community benefit.
- The proposal should be assessed against the matters specified in the justification. The Assessment should evaluate the proposal against a base case or base cases including retaining the existing zoning on the land.
- The Draft Centres Policy includes guidance on conducting a Net Community Benefit Test that should be followed when assessing the net community benefit of a Planning Proposal. This guidance has been reproduced in the Department of Planning's Guidelines but adapted to suit all types of Planning Proposals.
- Because of the difficulty in assigning values to certain costs and benefits associated with the planning

proposal, the Net Community Benefit Test will not be a purely quantitative test.

As outlined below the overall community benefit from the rezoning would be positive as future development of the land for enterprise purposes will improve opportunities for the following:

- Employment in the locality.
- Improvements to streetscape, urban design and entrances to the city.
- Create the opportunity for the land uses in the area to begin to conform to like uses and not be as disparate as the existing selection of uses (see Figure 3)
- Potential to provide linkages through to and improvements to the Gumly open space areas.
- Business creation opportunities.
- Improved essential services.
- Provide general services to the public in close proximity to the city of Wagga Wagga.
- Reduce potential land use conflict issues between residential uses to the north and the existing agricultural zoning of the site.

The area of East Wagga Wagga is reasonably well serviced as discussed in Section 2.6. Sewer upgrades to facilitate this development will result in improvements to existing sewer systems in the Hammond Avenue precinct as some existing tenements will be able to be diverted with this development to the new sewer line proposed at Edison Road. Any necessary traffic upgrades to the Sturt Highway and Bakers Lane to facilitate safe access and egress from the site will general improve traffic safety to the area and will also provide benefit to other users and the residents of Gumly Gumly.

The construction and building works associated with future development of the site will also provide temporary employment opportunities and the resulting developments will offer employment in the enterprise associated uses and service sectors. Rezoning of the land will facilitate an orderly extension of industrial land within East Wagga Wagga with a complementary use and the proposal will address a genuine need for additional industrial land identified in the Wagga Wagga Industrial Landuse Study. In terms of base case, maintaining the existing rural zoning would not represent the best use of the land. As the site is flood plain it is preferable to move the existing sensitive residential uses off the site. The site areas are not of sufficient size to support rural land uses and is the predominate reason why the site has not been used for agricultural purposes for many years. Overall the proposal will result in numerous community benefits which justify the change of zone proposed.

5.2 Section B – Relationship to strategic planning framework

5.2.1 Is the planning proposal consistent with the objectives and actions contained within the applicable regional or sub-regional strategy (including the Sydney Metropolitan Strategy and exhibited draft strategies)?

There are no regional or sub-regional strategies that are relevant to the site.

5.2.2 Is the planning proposal consistent with the local council's Community Strategic Plan, or other local strategic plan?

There are numerous local strategic plan and studies that are relevant to the proposal. The relevance of these plans to the site and the proposal has been discussed at Section 5.1.1.

5.2.3 Is the planning proposal consistent with applicable state environmental planning policies?

The following state environmental planning policies (SEPPs) apply to the site:

- State Environmental Planning Policy (Rural Lands) 2008
- State Environmental Planning Policy 44 – Koala Habitat
- State Environmental Planning Policy 55 – Remediation of Land

The proposal's relevance to and consistency with these SEPPs is discussed below.

State Environmental Planning Policy (Rural Lands) 2008

The aim of this policy is to facilitate the orderly and economic use and development of rural lands for rural and related purposes. It applies mainly to rural subdivision and the development of dwellings on rural land but also contains rural planning principles that are relevant to this proposal. These are as follows:

Clause 7 Rural Planning Principles

The relevant rural planning principles are listed and addressed below.

- The promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,
- 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,
- 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,
- In planning for rural lands, to balance the social, economic and environmental interests of the community,
- 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, and
- Ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.

Comment

As discussed at Section 2.7.3, the subject site is classified as Prime Cropping Land, Class 2. This proposal does not pose a threat to agricultural activities as the site:

- is not of a sufficient area to support rural uses,
- is predominantly located within an urban environment, and
- is not being used for active agricultural activities.

The location of the site between the Gumly Gumly locality and other industrial zoned land to the south west of the PIA represents a logical extension of urban land without causing fragmentation of rural land or resulting in any land use issues.

The proposal will provide additional employment land close to the town centre of Wagga Wagga which will have ongoing economic and social benefits.

The proposal supports Wagga Wagga's Industrial Land Use Study 2006 as it is free from environmental constraints, is owned by parties interested to develop in the short term and represents a logical extension to

the industrial uses to the south west of the site and other commercial and industrial uses in the direct vicinity of the site with a complementary land use.

State Environmental Planning Policy 44 – Koala Habitat

This SEPP aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas. For the preparation of draft LEP's, the DPI will consider giving a direction that Section 57 and the EP&A Act is to apply to a draft local environmental plan. This means an environmental study is to be prepared if, under the draft plan, it is proposed to zone (or rezone) land that is a potential koala habitat or a core koala habitat otherwise than as environment protection.

The site exists outside of the bio-certified area of Wagga Wagga, however, it is predominately cleared with vegetation being mainly isolated paddock trees and exotic garden species around existing dwellings. It is understood that Wagga Wagga as an LGA and particularly around its core is not a common location for tree species which may constitute potential koala habitat. We are also not aware of any koalas being sighted on the property in recent times. Therefore the site is highly unlikely to be potential or core koala habitat.

State Environmental Planning Policy 55 – Remediation of Land

This SEPP introduces planning controls for the remediation of contaminated land. The policy states that land must not be developed if contamination renders it unsuitable for a proposed use. If the land is unsuitable, remediation must take place before the land is developed.

The site has been used in the past for agricultural purposes which is listed within Table 1 of the *Managing Land Contamination Planning Guidelines, SEPP 55–Remediation of Land* as an activity which may cause contamination. There is no evidence on the site that it has historically been used for stock dipping etc. so likelihood of contamination is low. The proposed or B6 Enterprise Corridor zone prohibits the majority of sensitive land uses such as residential, educational and recreational facilities (major). However, childcare facilities are permissible in the Enterprise zone uses and therefore future and preliminary site assessments could be carried out prior to development approval where warranted.

5.2.4 Is the planning proposal consistent with applicable Ministerial Directions (s117 directions)?

The Minister for Planning, under section 117(2) of the EP&A Act, issues directions that relevant planning authorities such as local councils must follow when preparing planning proposals for new LEPs. The following table contains a response to each of the directions in relation to the planning proposal.

Table 4 : Compliance with Section 117 Directions

Relevant S 117 direction	Response
1.1 Business and Industrial Zones	This direction applies when a relevant planning authority prepares a planning proposal that will affect land within an existing or proposed business or industrial zone The objectives of this direction are to: *(a) encourage employment growth in suitable locations,* *(b) protect employment land in business and industrial zones, and* *(c) support the viability of identified strategic centres.* A planning proposal must: *(a) give effect to the objectives of this direction,* *(b) retain the areas and locations of existing business and industrial zones,* *(c) not reduce the total potential floor space area for employment uses and related public services in business zones,*

	(d) not reduce the total potential floor space area for industrial uses in industrial zones, and *(e) ensure that proposed new employment areas are in accordance with a strategy that is approved by the Director-General of the Department of Planning.* **Comment** The proposal involves the rezoning of currently underutilised rural land for low density employment uses which is compatible with the adjacent IN1 zoned land to the south west and other commercial and industrial uses in direct vicinity to the site. It will create an additional 20 -43 hectares of industrial land which will assist Wagga Wagga Council to meet the anticipated demand of 176.0 ha by 2016 as identified in the Wagga Wagga Industrial Land Use Study 2006. The proposal represents a logical extension to an existing industrial area with a complementary land use and is held by owners who are prepared to develop in the short term.
1.2 Rural Zones	This direction provides that a planning proposal must: *(a) not rezone land from a rural zone to a residential, business, industrial, and village or tourist zone.* *(b) not contain provisions that will increase the permissible density of land within a rural zone (other than land within an existing town or village).* *The proposal may be inconsistent with this direction where it is justified by* *(a) a strategy which:* *(i) gives consideration to the objectives of this direction,* *(ii) identifies the land which is the subject of the planning proposal (if the planning proposal relates to a particular site or sites), and* *(iii) is approved by the Director-General of the Department of Planning, or* *(b) justified by a study prepared in support of the planning proposal which gives consideration to the objectives of this direction, or* *(c) in accordance with the relevant Regional Strategy or Sub-Regional Strategy prepared by the Department of Planning which gives consideration to the objective of this direction, or* *(d) is of minor significance.* **Comment** The proposal is justified for the following reasons: ▪ Wagga Wagga Industrial Land Use Study 2006 considers industrial landuse on a city wide basis and identified needs in the short to medium terms that this site could supply to. ▪ The subject site is in the vicinity of the area referred to as East Wagga Wagga in the study. Land in the East Wagga Wagga area is described as *"predominately light industrial, transport and service, wholesaling and storage"*. ▪ The Wagga Wagga Industrial Land Use Study 2006 was adopted by Council. ▪ The objective of this direction is to protect the agricultural production value of rural land. The land is not of sufficient size for agricultural uses, is predominantly located within an urban environment and is not currently being used for active agricultural.

	The rear of the site is proposed for non industrial purposes and will create a transition to the rural land use to the north. ▪ There are no regional or Sub-regional studies which are relevant to the site.
1.3 Mining, Petroleum Production and Extractive Industries	N/A
1.4 Oyster Aquaculture	N/A
1.5 Rural Lands	This direction requires that a planning proposal that will affect land within an existing or proposed rural or environmental protection zone be consistent with the SEPP (Rural Lands) 2008. The requirements of this direction have been discussed above in Section 5.2 and the proposal is found to have been consistent with this SEPP.
2.1 Environment Protection Zones	The PIA is not identified as being environmentally sensitive.
2.2 Coastal Protection	N/A
2.3 Heritage Conservation	This direction requires that a planning proposal must contain provisions that facilitate the conservation of: (a) *items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area,* (b) *Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974, and* (c) *Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.* **Comment** The land is highly disturbed having being previously used for agricultural purposes. The property does not contain any local or State listed heritage items and it is not located within a heritage conservation area. An Aboriginal Heritage Information Management Search within a 200m radius of the site has found that there are no items within the vicinity of the PIA (refer **Appendix G**). If any heritage items or relics are located on the site in the future they would be subject to Clause 5.10 of the WWLEP which relates to heritage conservation.
2.4 Recreation Vehicle Areas	N/A
3.2 Caravan Parks and Manufactured Home Estates	N/A
3.3 Home Occupations	N/A
3.4 Integrating Land Use and Transport	The objective of this direction is to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives: (a) *improving access to housing, jobs and services by walking, cycling and public transport, and* (b) *increasing the choice of available transport and reducing dependence on cars, and*

	(c) *reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and* (d) *supporting the efficient and viable operation of public transport services, and* (e) *providing for the efficient movement of freight.* *This direction applies when a council prepares a draft LEP that creates, alters or removes a zone or a provision relating to urban land, including land zoned for residential, business, industrial, village or tourist purposes. A council must ensure that a draft LEP shall locate zones for urban purposes and include provisions that give effect to and are consistent with the aims, objectives and principles of:* *(a) Improving Transport Choice – Guidelines for planning and development (DUAP 2001), and* *(b) The Right Place for Business and Services – Planning Policy (DUAP 2001).* **Comment** The proposal satisfies the principles of the *Improving Transport Choice – Guidelines for planning and development as follows:* ▪ the Enterprise Corridor zone would accommodate businesses with significant freight movements and low to medium employment density, ▪ the site is ideally located adjacent to an established industrial area and approximately 5 km from the Wagga Wagga Town Centre, ▪ the site has sufficient area to accommodate well designed car parking facilities in the future ▪ There are opportunities to extend the city's bike path network to this site. ▪ An increase in business activity to the precinct will facilitate justification for improved public transport options to the Gumly locale by making public bus scheduling viable. ▪ The traffic report concludes that the proposal can be supported on traffic grounds. **Appendix B** The *Right Place for Business and Services – Planning Policy* applies to retailing, leisure and entertainment facilities, offices, health and educational facilities and community and personal services. The aim of the policy is to ensure that trip generating activities can be co-located where there is transport choice and is also aimed to protect existing centres. The predominant types of uses expected to locate in the precinct are agricultural based sales and service industries and other light industries. Council has the ability to alter the landuse table for the proposed Enterprise Corridor zone to limit the type of retailing and other service uses that could occur on the site which will ensure the integrity of the CBD is maintained.
3.5 Development Near Licensed Aerodromes	N/A. The proposal does not include any permissible land uses that would be sensitive to noise associated with the Wagga Wagga Airport.
4.1 Acid Sulfate Soils	N/A
4.2 Mine Subsidence and Unstable Land	N/A
4.3 Flood Prone Land	Wagga Wagga Council's Flood Risk Precinct Map identifies the site as Rural Floodplain (High Flood Risk). A Design Flood Information

	Report prepared by WMA water (**Appendix D)** concludes that the portion of the site nominated in their report as option B (and transferred to the proposed zoning map) is suitable for development. The reduction of dwellings on the floodplain will be a positive impact and the rear of the site will still act as a floodway.
4.4 Planning for Bushfire Protection	The site is not bushfire prone.
5.1 Implementation of Regional Strategies	N/A
5.2 Sydney Drinking Water Catchments	N/A
5.3 Farmland of State and Regional Significance on the NSW Far North Coast	N/A
5.4 Commercial and Retail Development along the New England Highway, North Coast	N/A
5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	N/A
5.6 Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1)	N/A
5.7 Central Coast (Revoked 10 July 2008. See amended Direction 5.1)	N/A
5.8 Second Sydney Airport: Badgerys Creek	N/A
6.1 Approval and Referral Requirements	The Planning Proposal will not include provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority. Therefore, the Planning Proposal is consistent with this direction.
6.2 Reserving Land for Public Purposes	N/A
6.3 Site Specific Provisions	N/A
7.1 Metropolitan Planning	N/A

5.3 Section C – Environmental, social & economic impact

5.3.1 Likely adverse effects on critical habitat or threatened species, populations or ecological communities, or their habitats.

The land is primarily cleared and unconstrained and it is reasonable to expect that the land could be developed for urban purposes without any significant impacts on the environment.

5.4 Section D – State and Commonwealth Interests

5.4.1 Is there adequate public infrastructure for the planning proposal?

Section 2.6 discusses the existing public infrastructure available to the site. Water, telecommunications and electricity is available to the site. Gas, sewerage and drainage infrastructure servicing the IN1 General Industrial zone to the south of the site is located in Lawson Street. It has been identified that sewerage upgrades will be required due to this development and the Bakers lane approved rural residential development. The upgrades will alleviate existing overloads in the current network. The extension and connection of these services, as well as any necessary upgrades to other services, to accommodate the future uses of the site would be borne by the developer of the land. It is not considered that the rezoning of the land would place an unreasonable demand on the existing public infrastructure available to the site and within the area beyond that which would be offset by Section 94 contributions.

5.4.2 What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

As previously mentioned, a preliminary planning proposal meeting was held in 2011 with the Department of Planning, land owners and Council. The Department advised on the process of gateway proposals and offered advice and encouragement to explore the constraints of the site against an enterprise corridor zone for the site. With the issues and constraints now formally covered within this report there is ample justification for the suggested enterprise corridor zoning to now be considered via a gateway determination.

This Section of this Planning Proposal will be completed following consultation with the State and Commonwealth Public Authorities identified in a Gateway Determination.

Any issues raised by these Authorities will be summarised and addressed as appropriate.

6.0 Part 4 - Community Consultation

A Gateway Determination will specify the community consultation that must be undertaken in relation to this Planning Proposal. Consultation is tailored to specific proposals generally on the basis of a 14 day exhibition period for low impact Planning Proposals and a 28 day exhibition period for all other Planning Proposals.

Community consultation will be commenced by the placing of a public notice in the local newspaper and on the website of Wagga Wagga Council and/or the Department of Planning. In addition, adjoining landowners will be notified in writing.

Normal exhibition material will be made available by the relevant planning authority during the exhibition period. The community consultation process will be completed when the relevant planning authority has considered any submissions received concerning the proposed Local Environmental Plan and has forwarded those reports to the Department of Planning for final consideration by the Minister.

7.0 Conclusion

As reflected throughout this report, this Planning Proposal involves the rezoning of 20 - 43 ha of currently underutilised land for enterprise corridor purposes which will result in a range of uses spanning business, industrial and limited retailing activity. The site is currently unoccupied rural land and is not of a sufficient area for viable agricultural operations. It is relatively unconstrained and the southern portion has been demonstrated to be suitable for development even though it is subject to minor flooding. Access to and from the site can be safely achieved via a number of future development options outlined in the traffic impact assessment. The site is well located in terms of public infrastructure and any upgrade and extension of the existing infrastructure network to accommodate the future uses of the site would be borne by the developer of the land. Sewer upgrades will alleviate existing overloaded networks in Hammond Avenue and improve the current servicing standard.

In relation to what this zoning will offer in terms of industrial land, it is expected that Wagga Wagga is going to require 176 ha of new industrial land by 2016. Much of the land identified in the Wagga Wagga Industrial Land Use Study as possible future industrial use is constrained by environmental and tenure issues or located in Bomen which is not suitable for all types of industrial land uses. The subject site is in private ownership and can be developed immediately. As such, the site represents a logical extension to the existing industrial area to the south west of the site.

In relation to business and retailing uses the permitted uses within the proposed enterprise corridor zone will be complementary to the existing uses in the locality and will create an opportunity to create consistency in terms of streetscape and urban design while preserving the supremacy of the CBD.

This proposal presents Wagga Wagga Council with an excellent opportunity to meet some of the current and future demand for industrial / enterprise development to utilise this prime highway frontage land. The resulting development will generate employment and instigate localised service and infrastructure improvements that will be of general benefit to the Gumly Gumly locality. The city will benefit from economic growth and a diversifying of land use opportunities with this new zone. The image of the city will be uplifted through contemporary development of this significant gateway precinct.

Appendix A

Council's letter regarding outstanding issues

City of
Wagga Wagga

Civic Centre
Cnr Baylis & Morrow Sts
PO Box 20
Wagga Wagga NSW 2650

abn 56 044 159 537
p 1300 292 442
f 02 6926 9199
e council@wagga.nsw.gov.au
w www.wagga.nsw.gov.au

Contact: Ian Grant

24 March 2011

Mr Joe Howard
622 Hammond Avenue
WAGGA WAGGA NSW 2650

Dear Mr Howard,

RE: Rezoning application

In the interests of assisting you in making a rezoning application under the state government's new "Gateway" Planning provisions, we wish to confirm the advices provided to you by the representatives of the Department of Planning at our joint meeting on 20th January 2011.

To summarise, the critical issue to be addressed by you in lodging a request to Council to prepare a Planning Proposal for the land on your behalf, is to substantiate that the concerns consistently raised by Council staff and the Wagga Wagga City Council Planning Panel, can be overcome. That is, that the change of use of the entire precinct, and not just one site, can work and will be sustainable.

The Department advised that before it issues any "Gateway" approval - for the project to proceed to the next step –it has to be convinced that the proposal has merit on sustainability grounds. Only then will it advise Council of any further studies and consultation required.

The Department advised that under the new "Gateway" provisions, the steps in making a rezoning application are:

- The applicant, representing the group of interested landowners in the precinct, writes to council requesting Council to prepare a Planning Proposal, substantiating that on the basis of its investigations all identified impediments to the form of zoning and development sought, can be overcome.
- Council staff assess the submission and either seek additional information, or prepare, have endorsed and submit a Planning Proposal to the Department. (Note that Council will not publicly exhibit a Planning Proposal until after the Department has advised of "Gateway" approval and any requirements for further community consultation). In relation to this step, Council appreciates the extent of studies completed to date, but would strongly endorse the Department's advice that it is the responsibility of the applicant to fully

substantiate that all concerns previously advised in relation to sustainability and serviceability of the land can be overcome.

- The proposal is exhibited for 28 days (14 days only in relation to minor proposals)
- As the consent authority, Council then assesses any submissions and varies the Planning Proposal as necessary. It is then re-submitted to the Department of Planning's parliamentary Counsel, with a request for the Minister to prepare a local environmental plan.

We trust that this information is consistent with your understanding of the advice provided on the day and look forward to your submission.

Yours sincerely

Andrew Crakanthorp
Acting Director Planning

cc: Richard Skellern

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Wagga Wagga

Civic Centre
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PO Box 20
Wagga Wagga NSW 2650

abn 56 044 159 537
p 1300 292 442
f 02 6926 9199
e council@wagga.nsw.gov.au
w www.wagga.nsw.gov.au

Ref: **Proposed Rezoning, Sturt Highway**
Contact: **Ian Grant**

21 April 2011

Mr J Howard
Rundles Auctions
182 Forsyth Street
WAGGA WAGGA NSW 2650

Dear Joe

Re: Proposed Rezoning, Sturt Highway Gumly Gumly

Further to our letter of 24 March 2011, I am pleased to offer the following advice about exactly what additional information Council is seeking from you, in order for Council to provide support to your rezoning application.

As mentioned previously, Council's two major concerns relate to sewer and flooding. What has yet to be addressed in detail by you- and our requirements were well put by the Department of Planning Regional Director, Brett Whitworth at our recent meeting on the matter – are:

- How connection to Council's sewer system can and will be achieved and;
- Additional information on how you propose to overcome the problems of creating a large footprint industrial development within a defined floodplain. Again, we require you to explain how this can in fact be achieved without adverse consequences. Can I suggest that your consultants can provide this information.
- Reasons why such development should be permitted on land not currently zoned for that purpose.

I trust that this additional information is sufficient to enable you to proceed to the finalisation of your proposal. I look forward to your response.

Yours sincerely

Andrew Crakanthorp
Director Planning

Appendix B

Traffic Impact Assessment

MR R ALLSOPP & MR J HOWARD

OCTOBER 2011

PROPOSED GUMLY GUMLY INDUSTRIAL PARK, WAGGA WAGGA

TRANSPORT, TRAFFIC & SERVICING IMPACT ASSESSMENT

M^C^LAREN TRAFFIC ENGINEERING
Level 1, 29 Kiora Road Miranda NSW 2228
PH (02) 8543-3811 FAX (02) 8543-3849
Email : mclarenc@ozemail.com.au

CONTENTS PAGE

1.0 INTRODUCTION

M^CLaren Traffic Engineering was commissioned in August 2011 to undertake a traffic and parking impact assessment in support of a rezoning application for a large parcel of land generally contained by the Sturt Highway, Eunony Bridge Road, Gumly Road and the northerly projection of Bakers Lane, Gumly Gumly, within the City of Wagga Wagga.

The full details of the land description, existing land use details and current / proposed land use zones are provided in the *Planning Proposal – Rezoning : Gumly Gumly Industrial Park, Wagga Wagga*, dated August 2011, prepared by RPS Australia East Pty Ltd. This traffic & parking report needs to be read in conjunction with that report.

The subject rezoning will need to be the subject of later development applications, and these will be assessed in detail under the provisions of SEPP Infrastructure (2007).

The traffic assessment of the subject site for the current rezoning application is therefore based upon a concept design for the site which demonstrates the likely development potential under current planning controls. This may be considered to result in a worst case scenario and will provide Council with a clear understanding of the traffic implications arising from the proposed rezoning.

The proposal involves a change of use of the site from *Rural Zone, RU1 Primary Production* to:

- *Light Industrial (IN2 Zone), or*
- *B5 – Business Development, or*
- *B6 – Enterprise Corridor.*

For the purposes of this traffic assessment we have adopted a worst case development scenario using a business park traffic generation level which is 10% higher than the generic industrial traffic generation rate.

Part of the northern end of the site is affected by flooding.

2.0 THE SITE & SURROUNDING ENVIRONS

The site location is shown in **Figures 1a & 1b**. The site is currently used as rural land with very little traffic generation.

3.0 EXISTING ROAD & TRAFFIC CONDITIONS

3.1 Road Hierarchy

Sturt Highway is a STATE ROAD under the care and control of the Roads & Traffic Authority (RTA) which provides an east to west connection from the Hume Highway in the east (via Wagga Wagga) to Narrandera further west.

Eunony Bridge Road is a local distributor road that provides a north to south connection along the western side of the site serving the Bomen Industrial Area. Eunony Bridge Road links to Tasman Road to the south of the Sturt Highway, via the 40m diameter roundabout to industrial / rural development further south. The 40m diameter roundabout on the Sturt Highway serves B-Double turning movements.

Gumly Road provide local road links between Eunony Bridge Road and Pioneer Avenue and further east to the village of Gumly Gumly. These roads are local roads under the care and control of Wagga Wagga City Council. The surrounding road network and hierarchy in proximity to the subject sites is shown in **Figures 1a & 1b** and can be summarised as follows:

Road	Classification	Carriageway	Formation
Sturt Highway	STATE Road	6.5m to 7m (2LU)*	Sealed
Eunony Bridge Rd	Distributor	7 to 8m (2LU)*	Sealed
Gumly Rd	Local	Varies, but 6m typically	Sealed / Gravel

* 2LU = 2 lanes undivided

3.2 B-Double Routes

Sturt Highway and Eunony Bridge Road are both classified as B-Double routes.

3.3 Speed Limits

The posted speed limit along the Sturt Highway changes from 80km/h east of Bakers Lane to 60km/h within 700m on the approach to Eunony Bridge Road and further west through the city of Wagga Wagga. **Figure 1c** shows the speed limit along the highway frontage to the site.

3.4 Traffic Management

The following prevailing traffic management exist within the immediate vicinity of the site:

- 6.5m to 7m wide sealed traffic lanes for two way traffic along the Sturt Highway, wideing at roundabout junctions;
- 7m to 8m wide sealed traffic lanes for two way traffic along Eunony Bridge Road;
- 80km/hr speed limit along both Eunony Bridge Road and Gumly Road frontages of the site; the speed limit along Gumly Road reduces to 50km/h within the last (eastern) 350m length on its approach to Pioneer Avenue;

3.5 Traffic Flows

The most recent 2003 Roads & Traffic Authority (RTA) published data shows that the Annual Average Daily Traffic (AADT) along Sturt Highway, neaer the airport access road was 7,500 vehicles per day. Adopting a Council advised compound growth rate of +1.0% per annum results in an estimated 2011 ADT of 8,100 vehicles per day along the Sturt Highway near the site.

3.6 Traffic Generation Estimates & Traffic Assignment

Traffic Generation was generated using the following steps, as identified in **Figure 2**:

Total Site Area= 432 915m^2

Area Prone to Flooding= 125 188m^2

Area of Development= 307 727m^2

20% of site area used for subdivisional road network

0.8 x 307 727m^2 = 246 182m^2

FSR (Floor Space Ratio)

0.5:1

246 182m^2 / 2 = 123 091m^2

Traffic Generation for Business Park

1.1/100m^2 peak hour

= 1,354 veh/hour.

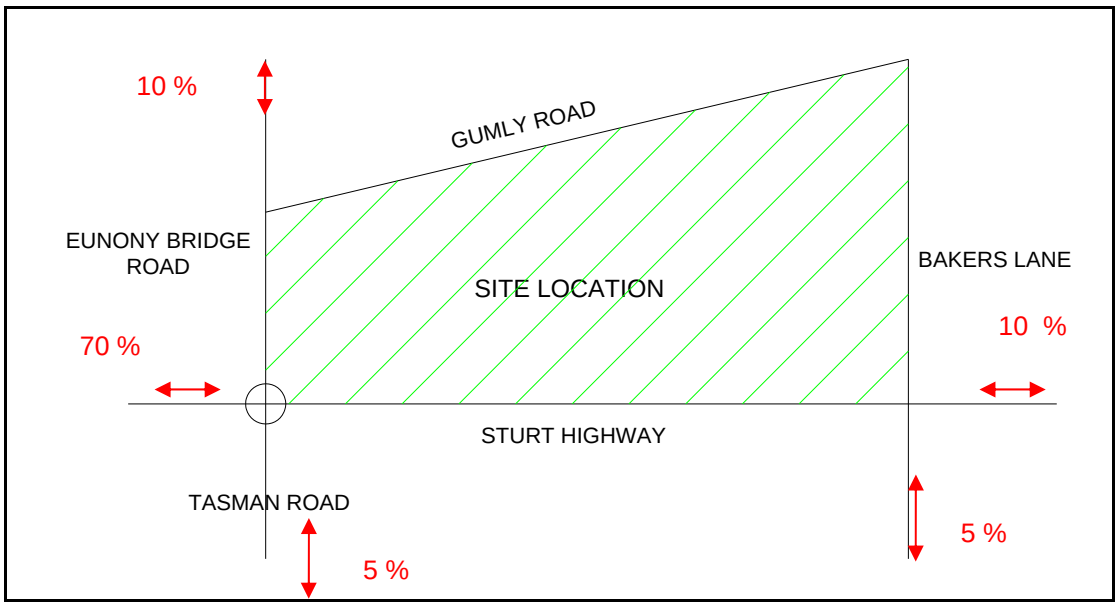
Trips Entering and exiting the site at peak hour:

	AM	PM
IN	80%	20%
OUT	20%	80%

Equivalent Car trips using the above ratios:

	AM	PM
IN	1083	271
OUT	271	1083

The expected traffic assignment is shown in the diagram below



3.7 Intersection Performances

Traffic counts were undertaken at the following intersections during the weekday AM & PM peak hour commuter periods:

- Sturt Highway / Eunony Bridge Road / Tasman Road;
- Sturt Highway / Gumly Road;
- Eunony Bridge Road / Gumly Road;

The peak hour flows recorded are presented in **Figures 3** & **4** for the 8 to 9am and 5:30 to 6:30pm commuter peak hour periods.

The performance of the key intersections were analysed with the aid of the **SIDRA Intersection 5.1** computer program, which is used to evaluate the performances of intersections controlled by stop/give way signs, roundabouts or traffic signals. It provides a number of measures of performance including vehicle delay, degree of saturation and level of service.

The result of the analysis is shown in **Table 1** below.

TABLE 1 : EXISTING INTERSECTION PERFORMANCES ("SIDRA 5.1")

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
EXISTING PERFORMANCE						
Sturt Hwy / Bakers Lane	5.30-6.30pm	0.29	3.1 (22.0)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Sturt Hwy / Bakers Lane	8.00-9.00am	0.21	2.5 (16.3)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Sturt Hwy / Eunony Bridge Rd / Tasman Rd	5.30-6.30pm	0.44	11.6 (19.1)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Sturt Hwy / Eunony Bridge Rd / Tasman Rd	8.00-9.00am	0.32	11.4 (17.7)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Eunony Bridge Rd / Gumly Road	5.30-6.30pm	0.05	1.0 (2.5)	**A** (Worst: A)	Giveway / Yield	Right turn onto Eunony Bridge Rd
Eunony Bridge Rd / Gumly Road	8.00-9.00am	0.06	1.1 (2.6)	**A** (Worst: A)	Giveway / Yield	Right turn onto Eunony Bridge Rd

*** Maximum Delay to most critical movement shown in brackets.**

NOTES : (1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

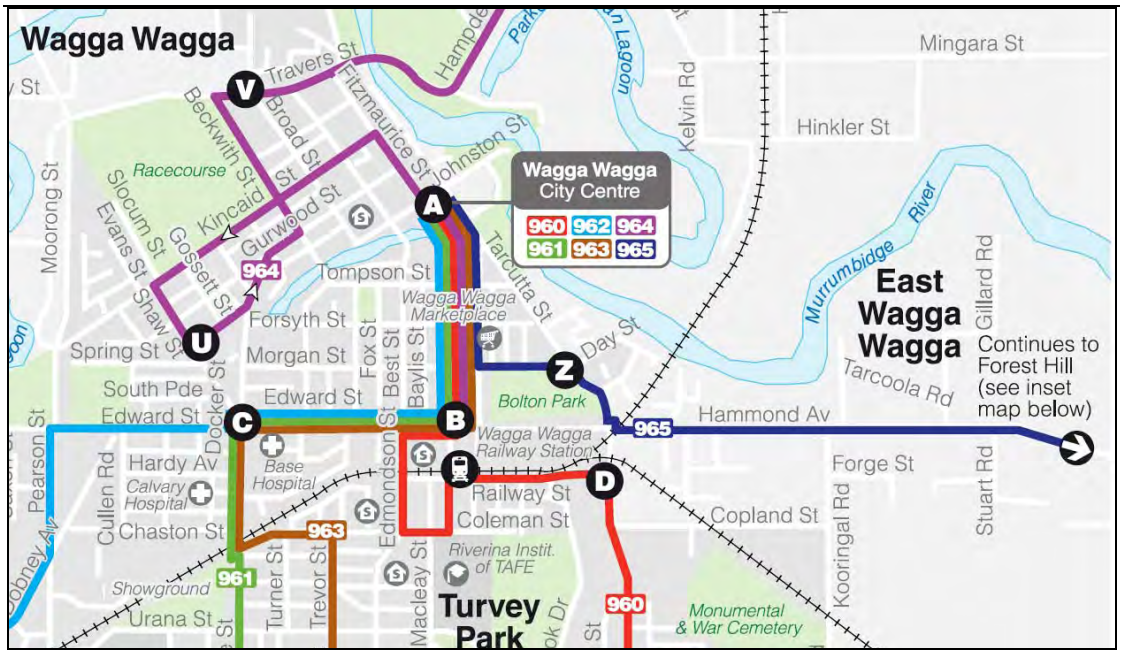
(2) Average delay is the delay experienced by the most disadvantaged movement under stop / give way or roundabout control modes. Maximum delay to the most disadvantaged movement shown in brackets.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst.

The criteria used to evaluate performance are shown in **Annexure A**. It is evident from **Table 1** above that all the key intersections currently operate at a good level of service.

3.8 Public Transport Services

Limited bus services operate in the vicinity of the site, operating along Sturt Highway (Hammond Avenue). The diagram below illustrates current route near the site.



4.0 DEVELOPMENT CONCEPT OF PROPOSED REZONING

It is emphasised that the development assessed in the subsequent sections of this report is a conceptual plan only at this stage and may change at development application stage. However, in traffic terms, the traffic impacts created will be essentially similar to (if not less than) that assessed and this concept may in fact be considered to represent a worst-case scenario. The concept vehicular access options are shown in **Annexure B** and include the following options:

- **Option A**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) under sub-options of traffic control as follows:
  - Give Way priority control
  - STOP sign control
  - Single Lane Roundabout control (32m diameter)

- **Option B**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) but with channelisation to prevent right turn movements to and from Sturt Highway as well as preventing through traffic from north to south. Effectively left turn entry with deceleration lane and left turn only onto Sturt Highway.

- **Option C**: Create "T" intersection control at least 200m to the west of the Bakers Lane junction to industrial road standard (no kerb & gutter) under sub-options of traffic control as follows:
  - Give Way priority control
  - STOP sign control
  - SEAGULL treatment to RTA standards for 60km/h speed zone.
  - Traffic signal control.

- All options to include internal subdivisional road layout to Council standards, as development occurs, with a connection to Gumly Road offset by some 180m to the east of Eunony Bridge Road.

In the short term with a smaller STAGE 1 development Options A, B, or C could occur that serves a reduced site area (excluding flood affected land) of some 127,000m^2 or some 40% of the developable land.

5.0 PARKING IMPACT OF PROPOSED REZONING

The parking requirements of the proposed development scale has been assessed having regard for the requirements of Council's car parking rates (DCP No. 2010 - Section 2).

For a GFA of some 123,091m^2, strict application of Council's DCP requires 1,231 parking spaces.

6.0 TRAFFIC IMPACT

The traffic generation levels of the development proposed have been assessed having regard for the rates contained in the RTA's "Guide to Traffic Generating Developments". The forecast traffic generation levels and traffic assignment were previously estimated in **Section 3.6** of this report and in **Figure 2**.

The SIDRA tests for all of the access options are presented in **Annexure C**.

The criteria used to evaluate performance are shown in **Annexure A**.

The background growt in traffic modelled includes the following outcomes over a 10 year planning horizon:

- 1%p.a growth along the Sturt Highway over 10 years resulting in inflated through traffic volumes by a factor of 1.1.

- Additional 100 vehicle trips generated associated with the residential subdivision off Bakers Lane to the south of Sturt Highway. The assignment assumed 80 vehicle trips in the peak direction of travel and 20 vehicle trips in the non-peak direction of travel.

- 0.5% p.a growth along the both Tasman Road and Eunony Bridge Road over 10 years resulting in inflated through traffic volumes by a factor of 1.05.

It is evident from **Annexure C** that the key intersections based upon ULTIMATE development on the subject site will perform at a satisfactory level of service to the 10 year planning horizon, subject to either of the following options, including an internal subdivisional road layout to Council standards,

as development occurs, with a connection to Gumly Road offset by some 180m to the east of Eunony Bridge Road:

- **Option A**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) under a Single Lane Roundabout traffic control (32m diameter). Other capacity measures include:

  - Upgrade of Sturt Highway with 100m eastbound shared through & left lane plus 30m shared through / left in Tasman Road & 30m taper in Eunony Bridge Road downstream of roundabout.

- **Option B**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) but with channelisation to prevent right turn movements to and from Sturt Highway as well as preventing through traffic from north to south. Effectively left turn entry with deceleration lane and left turn only onto Sturt Highway. Other capacity measures include:

  - Upgrade of Sturt Highway with 100m eastbound shared through & left lane plus 30m shared through / left in Tasman road & 30m taper in Eunony Bridge Road downstream of roundabout & 30m shared through / left in Eunony Bridge Road & 30m taper in Tasman Road downstream of roundabout.

- **Option C**: Create "T" intersection control at least 200m to the west of the Bakers Lane junction to industrial road standard (no kerb & gutter) under traffic signal control.

The extent of necessary roadworks will be the subject of more detailed traffic studies at future DA stages.

7.0 TRAFFIC ACCESS / CIRCULATION & PARKING DESIGN

The on-site vehicle access and circulation for vehicles associated with the proposed development will satisfy Council's subdivisional road standards, AS2890.1-2004 & AS2890.2-2002 requirements. The design vehicle is expected to be a 19m long semi-trailer.

8.0 CONCLUSIONS

In view of the foregoing, the proposed rezoning application is supportable with respect to road safety, traffic flow efficiency and residential amenity considerations.

The development can accommodate on-site parking needs in full compliance with Council's controls.

The proposed rezoning and concept scheme is supportable on external traffic grounds with the recommended future (ULTIMATE) vehicular access condition comprising either of the following vehicle access controls:

- Create an internal subdivisional road layout to Council standards, as development occurs, with a connection to Gumly Road offset by some 180m to the east of Eunony Bridge Road.

- **Option A**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) under a Single Lane Roundabout traffic control (32m diameter). Other capacity measures include:

  - Upgrade of Sturt Highway with 100m eastbound shared through & left lane plus 30m shared through / left in Tasman Road & 30m taper in Eunony Bridge Road downstream of roundabout.

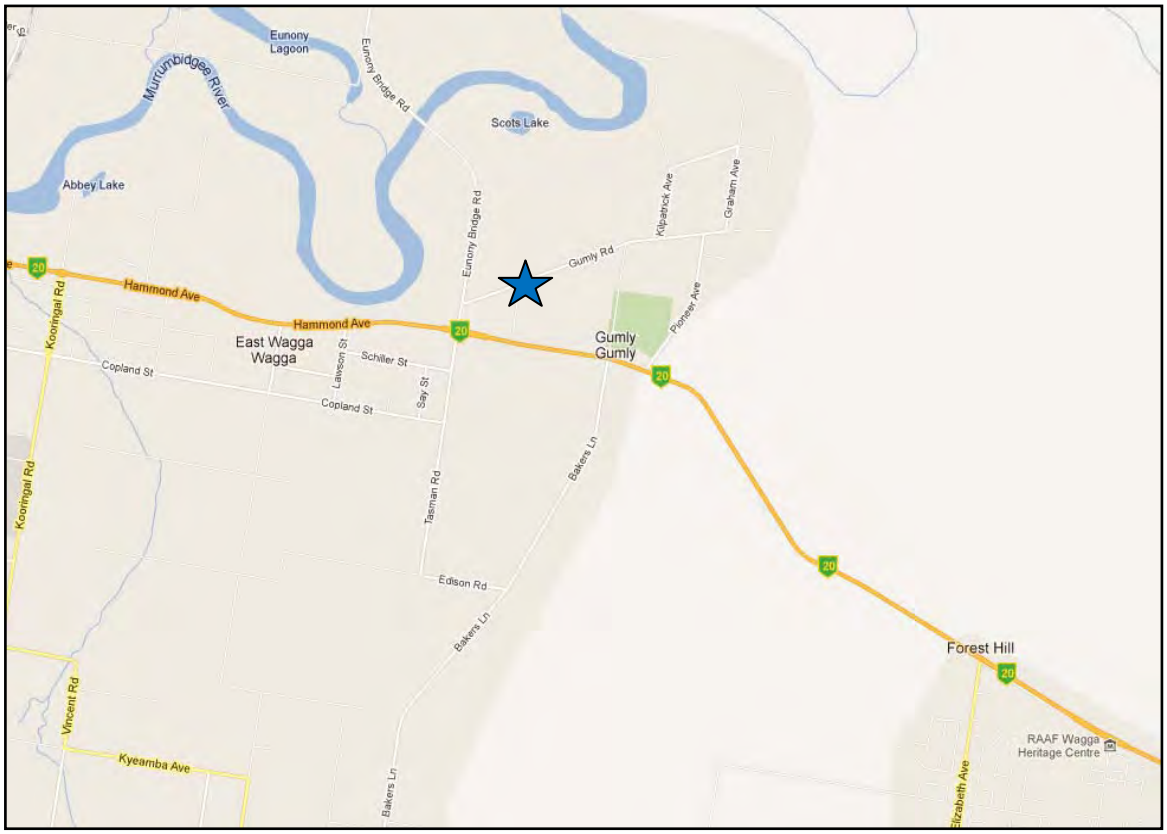
- **Option B**: Create 4th leg of intersection opposite Bakers Lane to industrial road standard (no kerb & gutter) but with channelisation to prevent right turn movements to and from Sturt Highway as well as preventing through traffic from north to south. Effectively left turn entry with deceleration lane and left turn only onto Sturt Highway. Other capacity measures include:

  - Upgrade of Sturt Highway with 100m eastbound shared through & left lane plus 30m shared through / left in Tasman road & 30m taper in Eunony Bridge Road downstream of roundabout & 30m shared through / left in Eunony Bridge Road & 30m taper in Tasman Road downstream of roundabout.

- **Option C**: Create "T" intersection control at least 200m to the west of the Bakers Lane junction to industrial road standard (no kerb & gutter) under traffic signal control.

The extent of necessary roadworks will be the subject of more detailed traffic studies at future DA stages.

In the short term involving up to 40% of the developable land, OPTION B access could be implemented at the Bakers Lane junction with all other measures subject to a s94 plan for the proposed Gumly Gumly Estate.



THE SITE

Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 1a
SITE LOCATION

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD

BY: M[C]LAREN TRAFFIC ENGINEERING

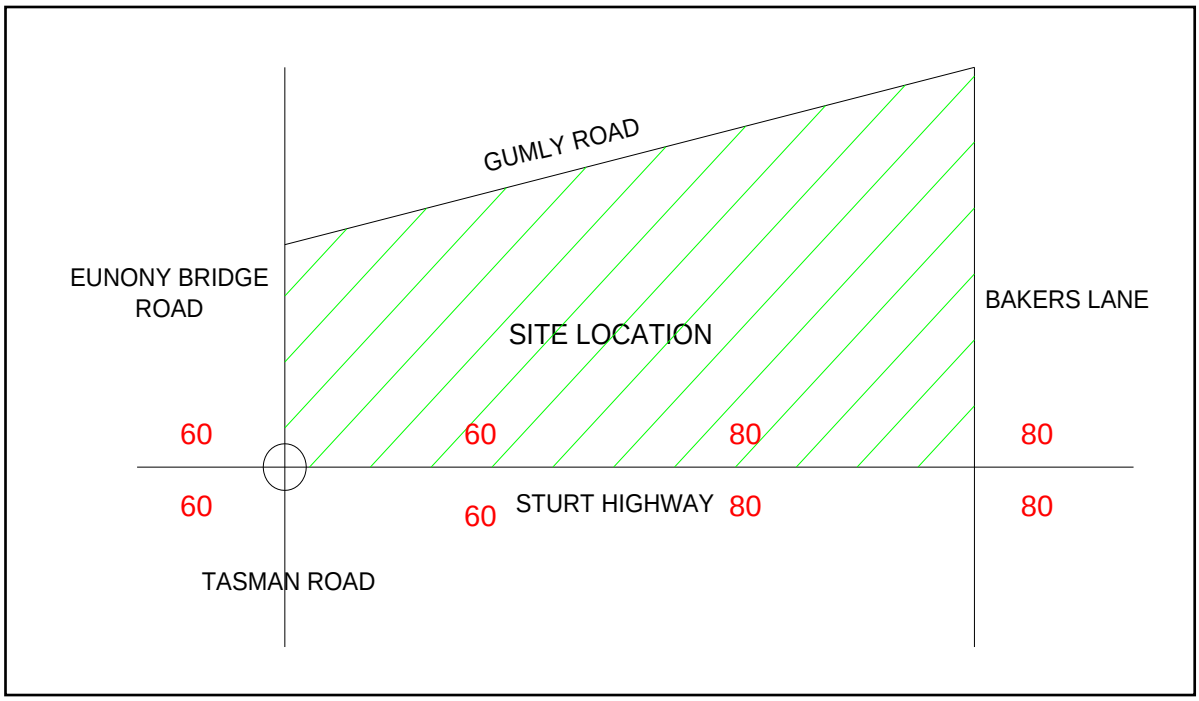
THE SITE

Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 1b
SITE LOCATION

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD

BY: M^CLAREN TRAFFIC ENGINEERING

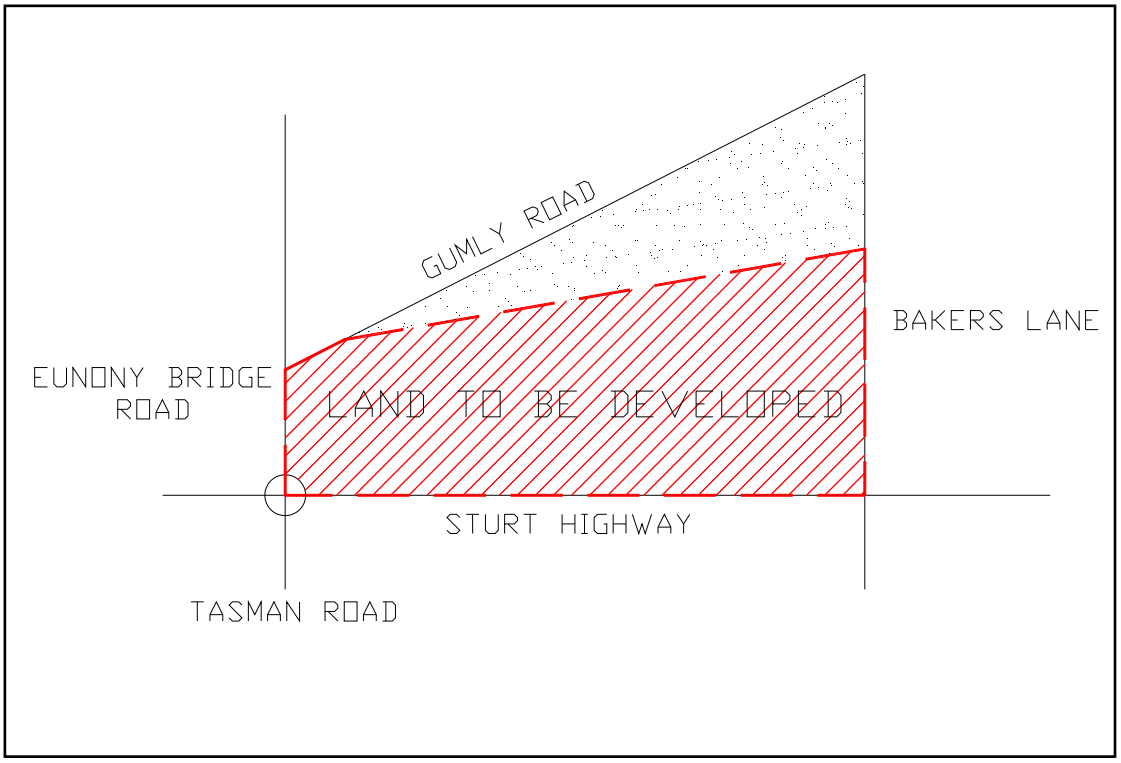


Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 1c
SITE LOCATION & SPEED LIMIT

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD

BY: M^CLAREN TRAFFIC ENGINEERING



$Area_{Site}$ = 307 727m^2

$Area_{Flood}$ = 125 188m^2

Less 20% for subdivisional roads
=0.8 x 307 727 = 246 182m^2

FSR = 0.5:1 ⟶ 50% = 123 091m^2

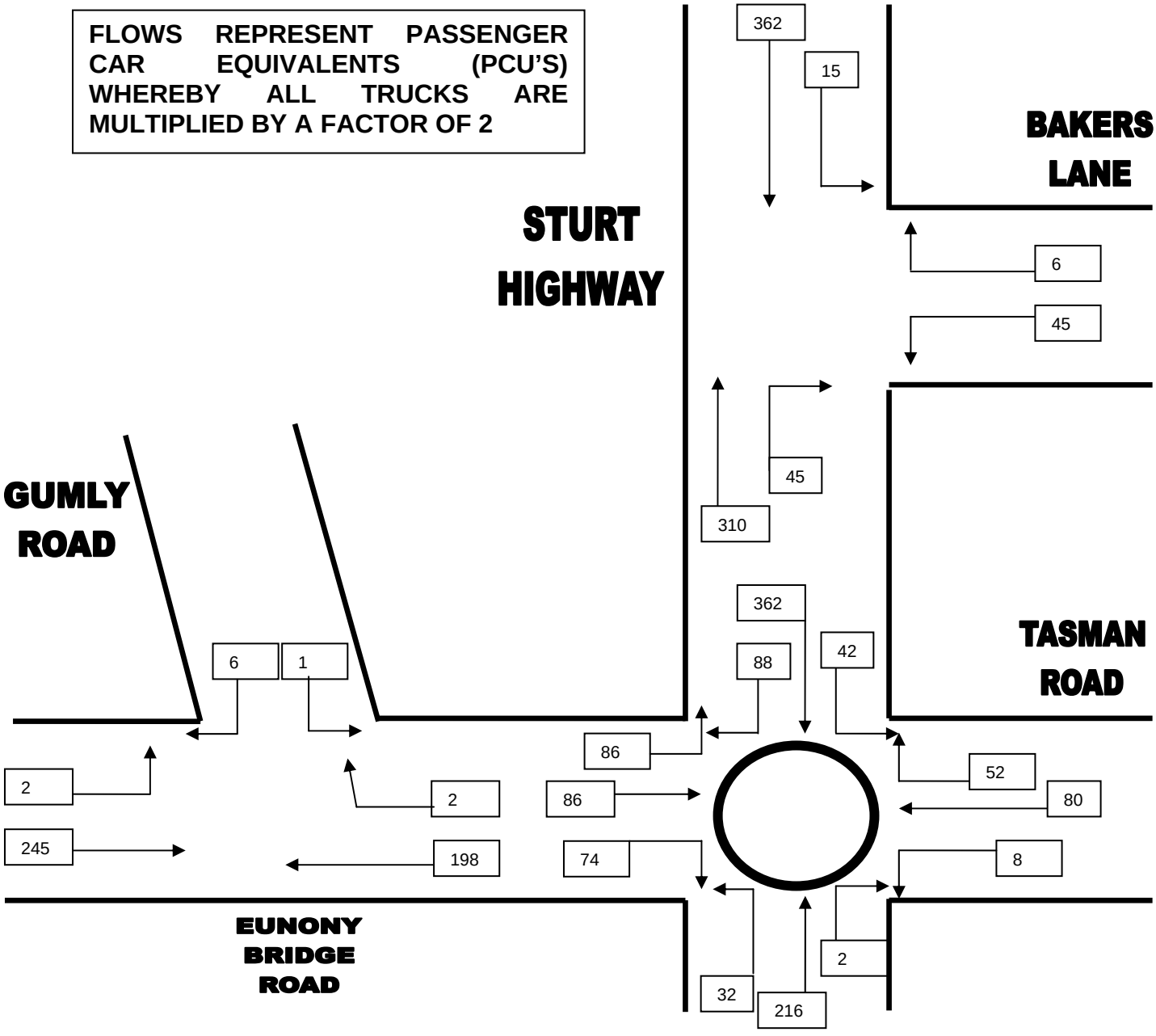
Therefore, 1.1 veh/100m^2 = 1,354 vehicle trips

Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 2: Land to be Developed

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD

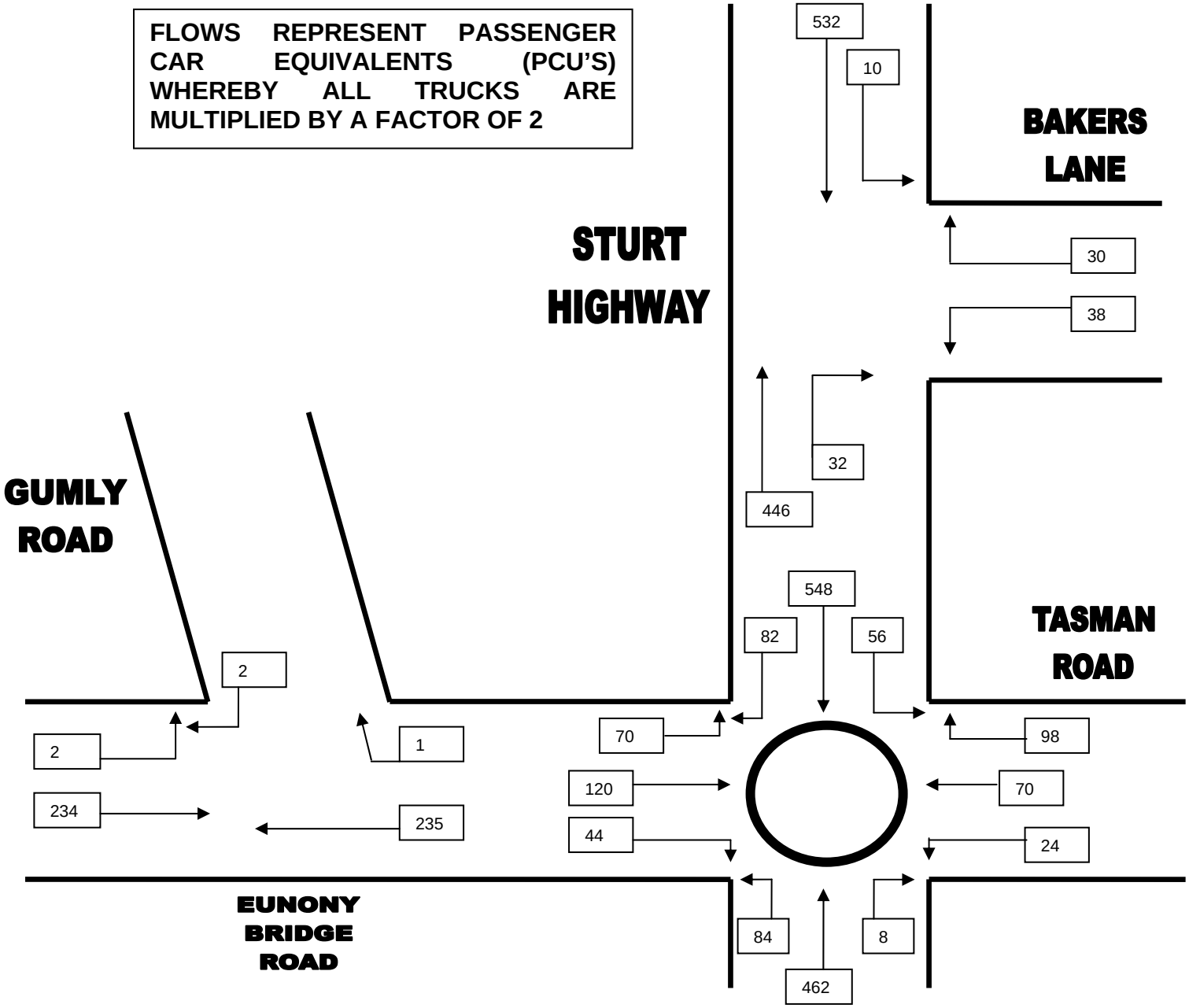
BY: M^CLAREN TRAFFIC ENGINEERING



Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 3: AM PEAK TRAFFIC FLOWS (8-9AM)

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD
BY: M^CLAREN TRAFFIC ENGINEERING



Proposed Industrial Estate, Gumly Road Gumly Gumly

FIGURE 4: PM PEAK TRAFFIC FLOWS (5:30-6:30PM)

PREPARED FOR: Mr R ALLSOPP & Mr J HOWARD
BY: M^CLAREN TRAFFIC ENGINEERING

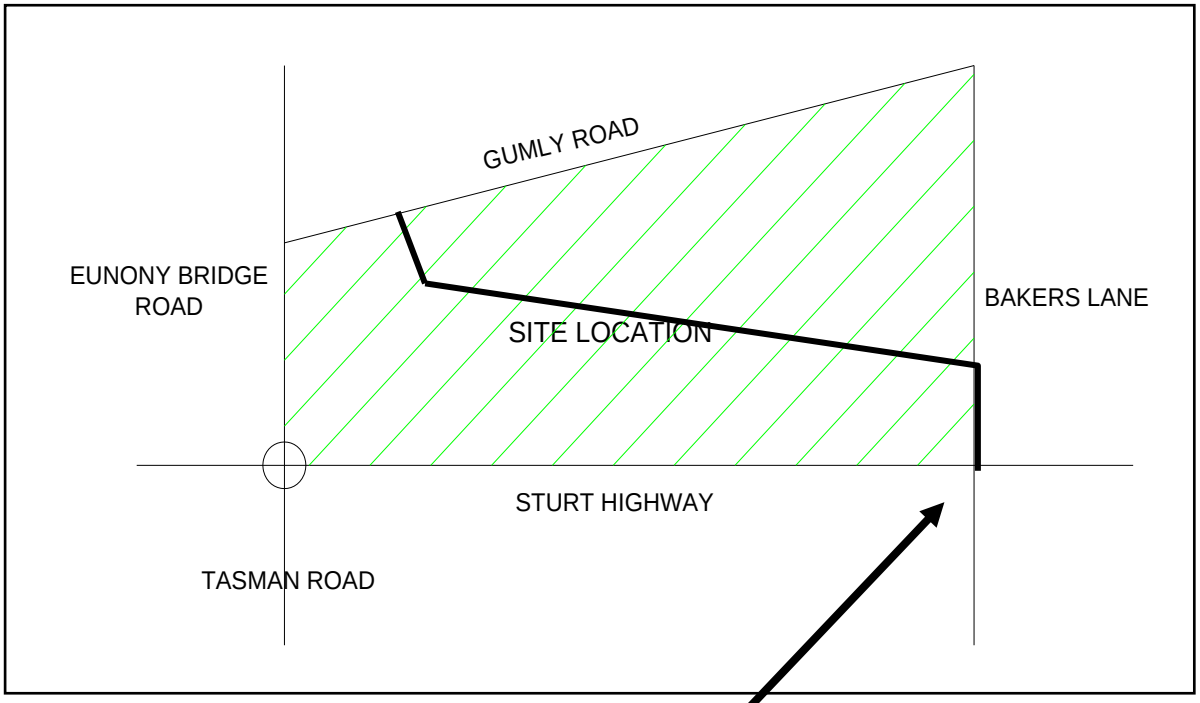
ANNEXURE A: LEVEL OF SERVICE CRITERIA

Level of Service	Ave Delay per Vehicle (sec/veh)	Traffic Signals & Roundabouts	Give Way & Stop Signs
A	< 14	Good Operation	Good Operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	over 70	Extra capacity required	Extreme delay, traffic signals or other major treatment required

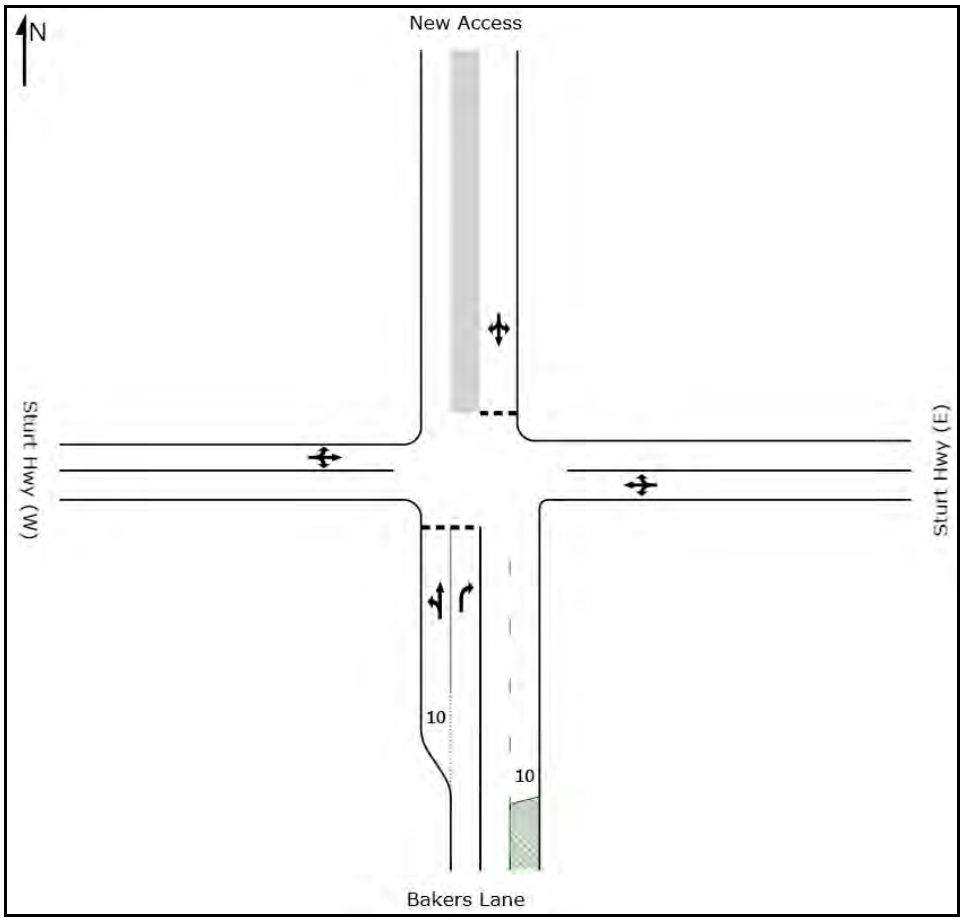
Adapted from RTA Guide to Traffic Generating Developments, December 2002

ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED

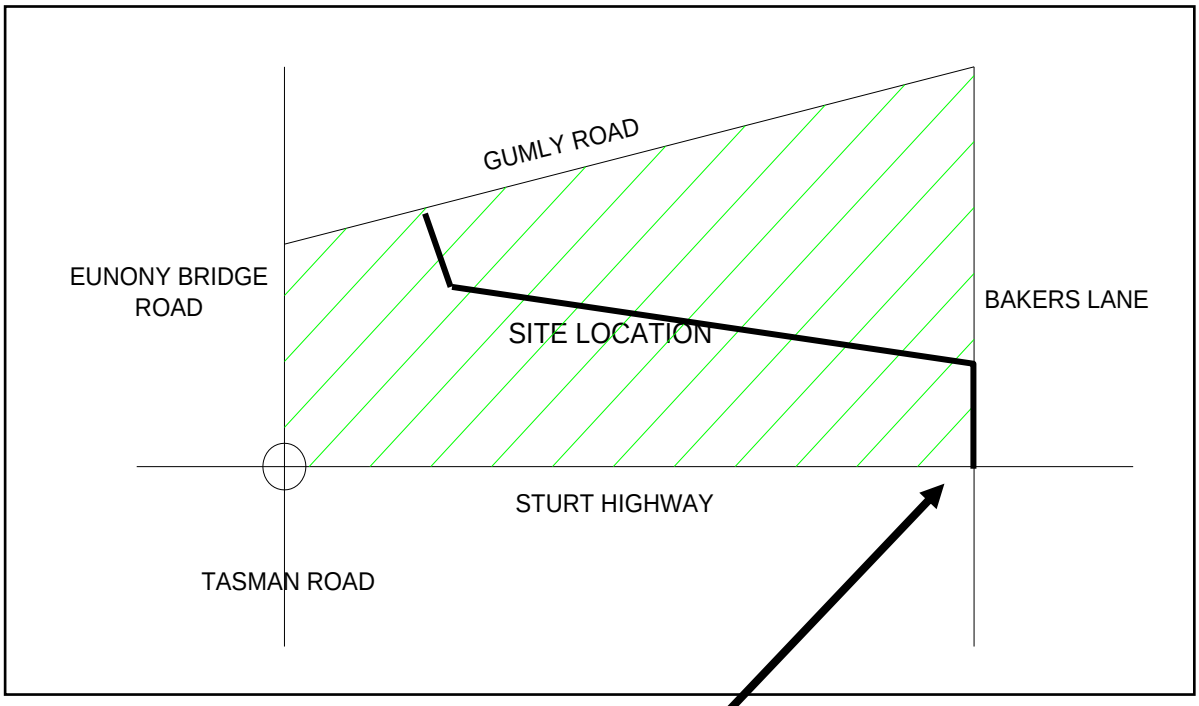
(Sheet 1 of 7)



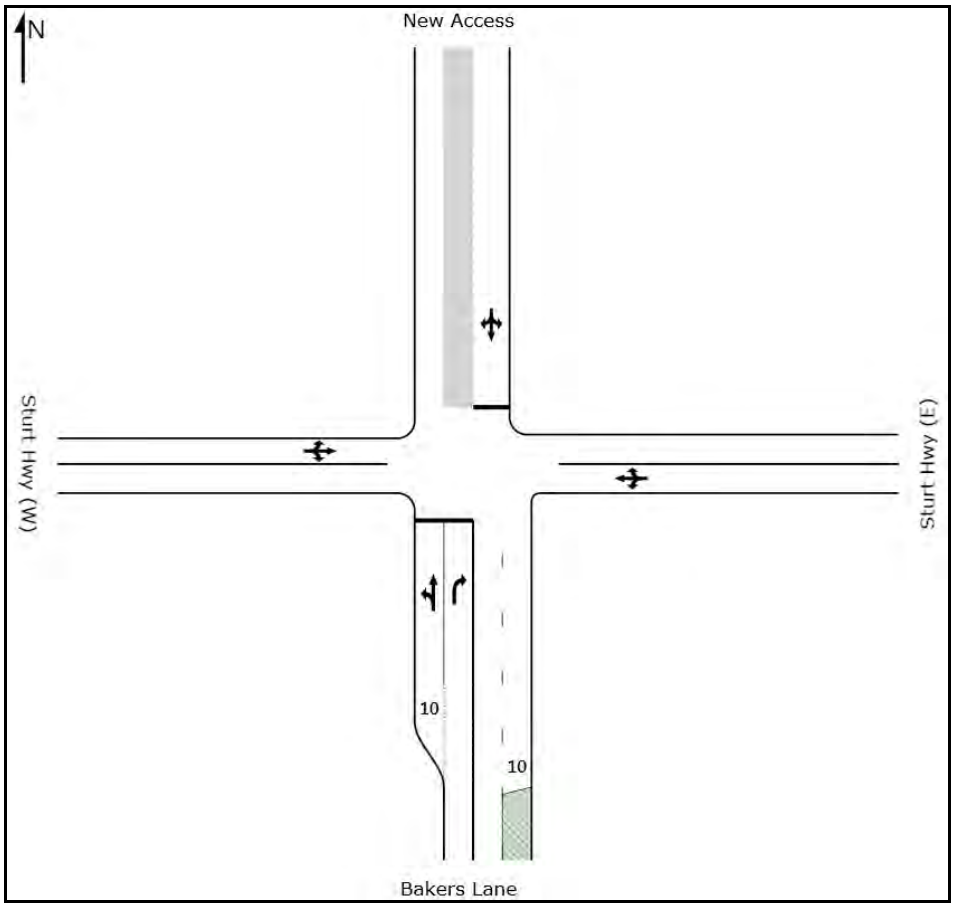
OPTION A - GIVEWAY



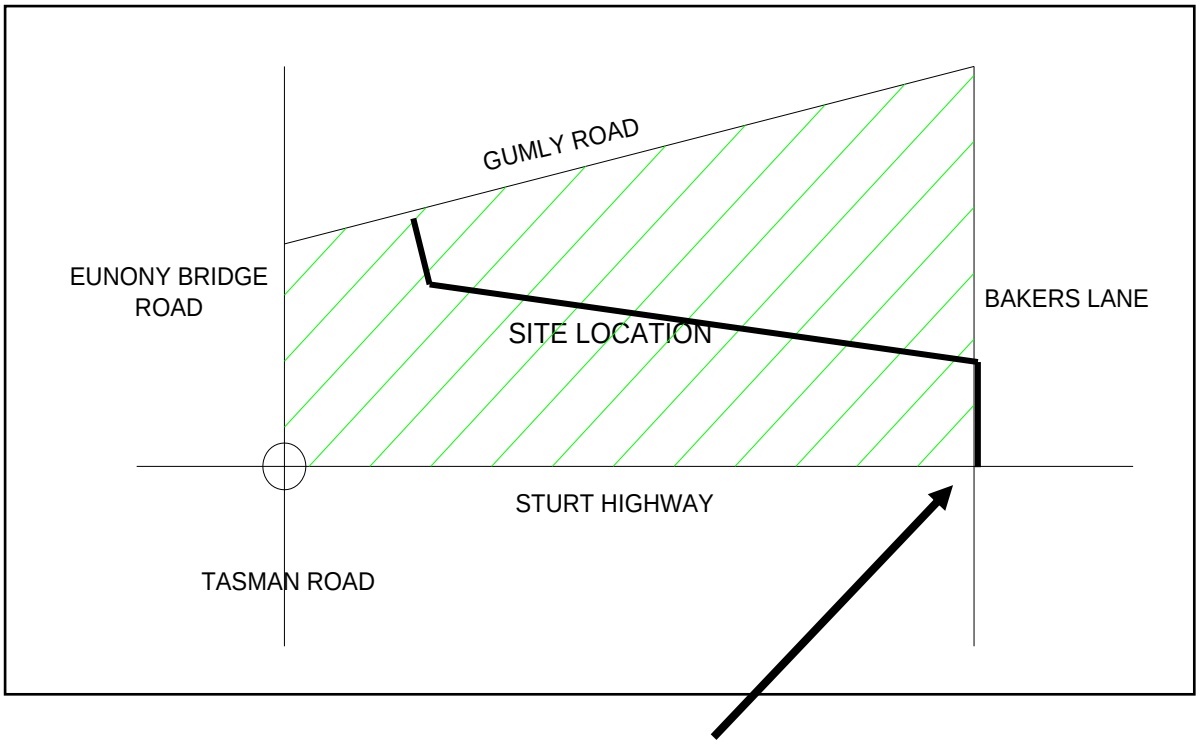
ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 2 of 7)



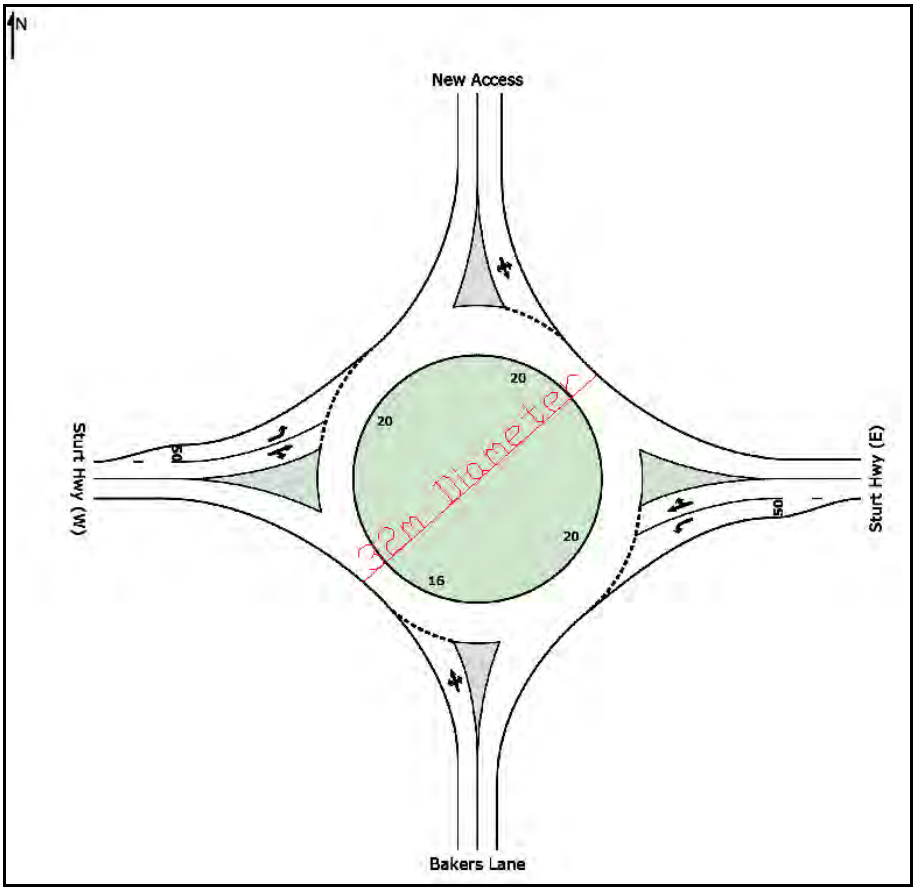
OPTION A – STOP



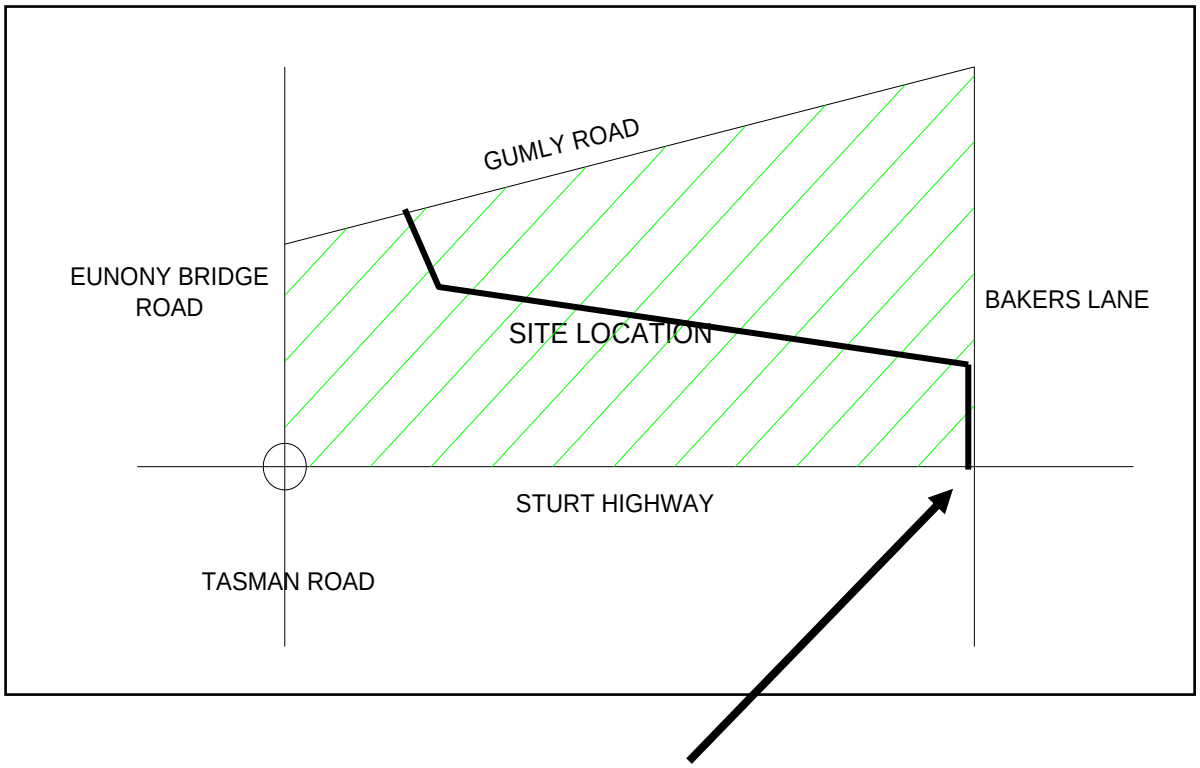
ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 3 of 7)



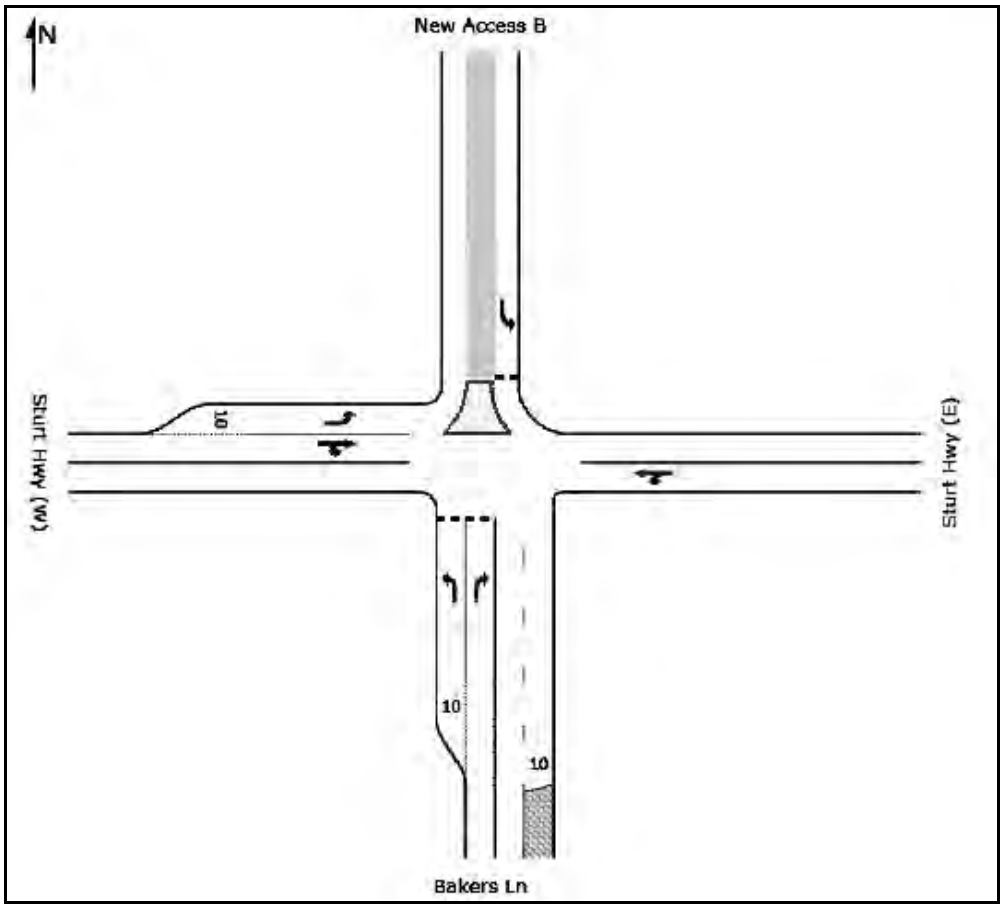
OPTION A - ROUNDABOUT



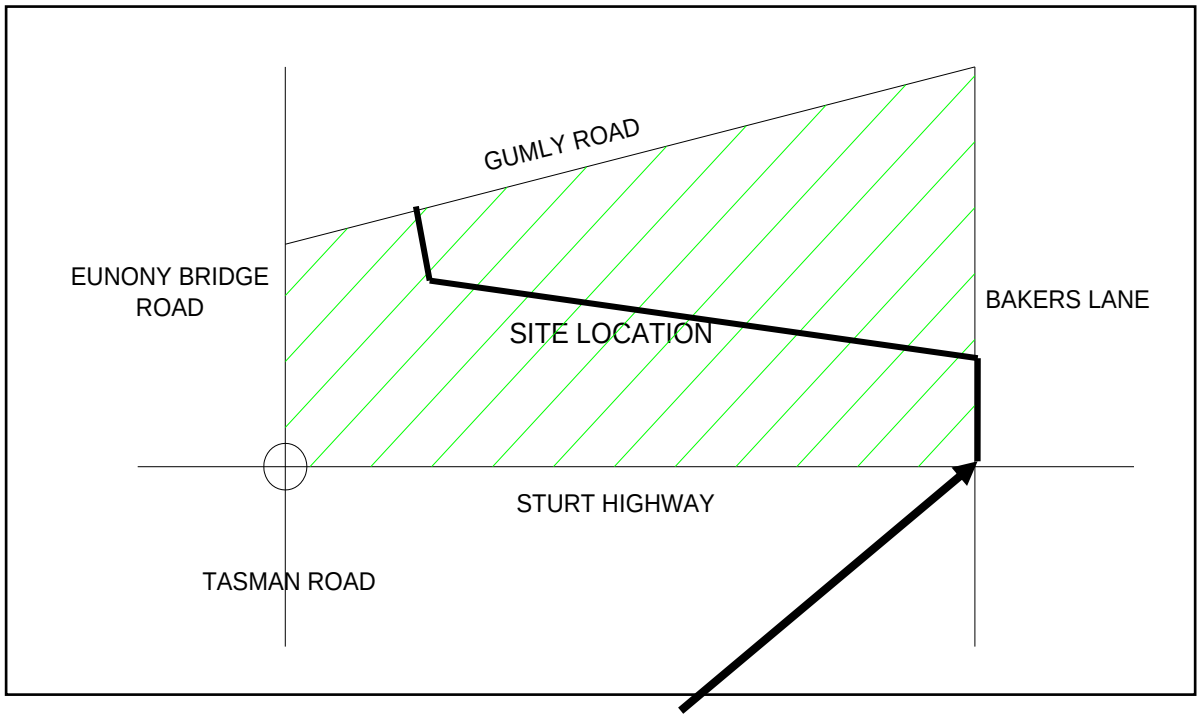
ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 4 of 7)



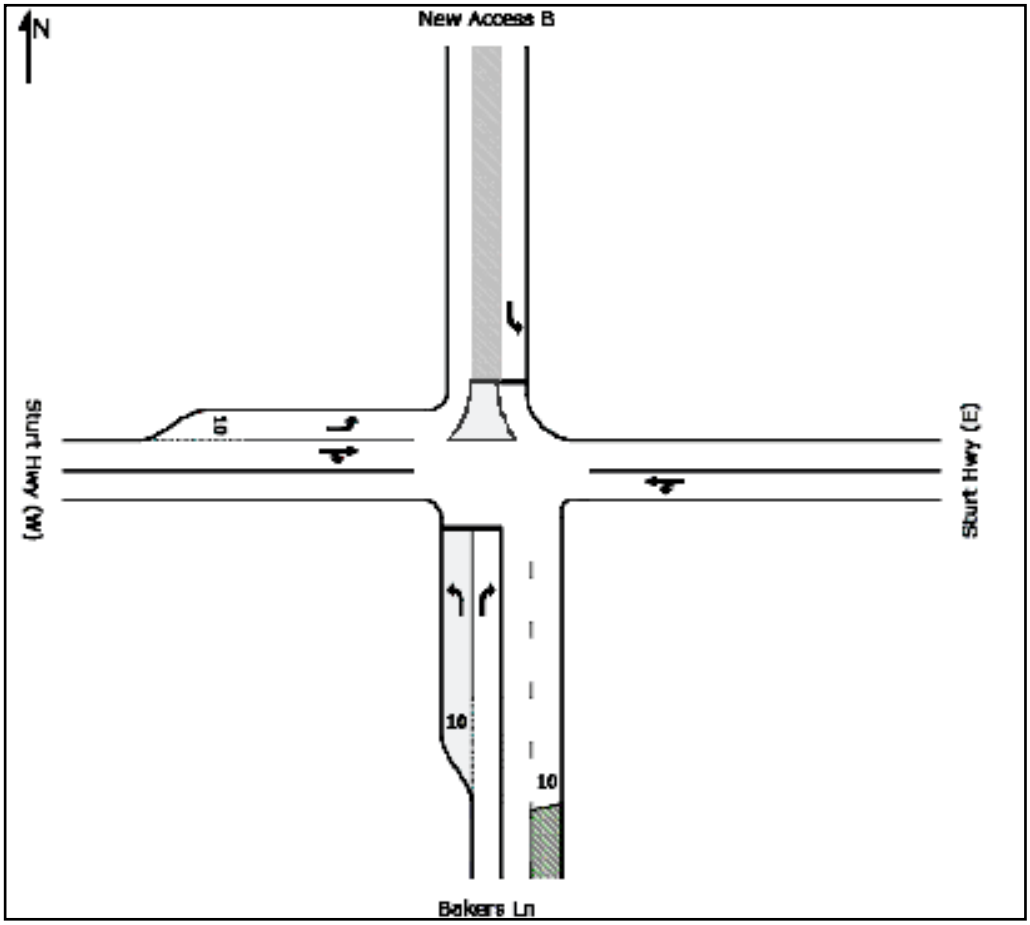
OPTION B – GIVE WAY



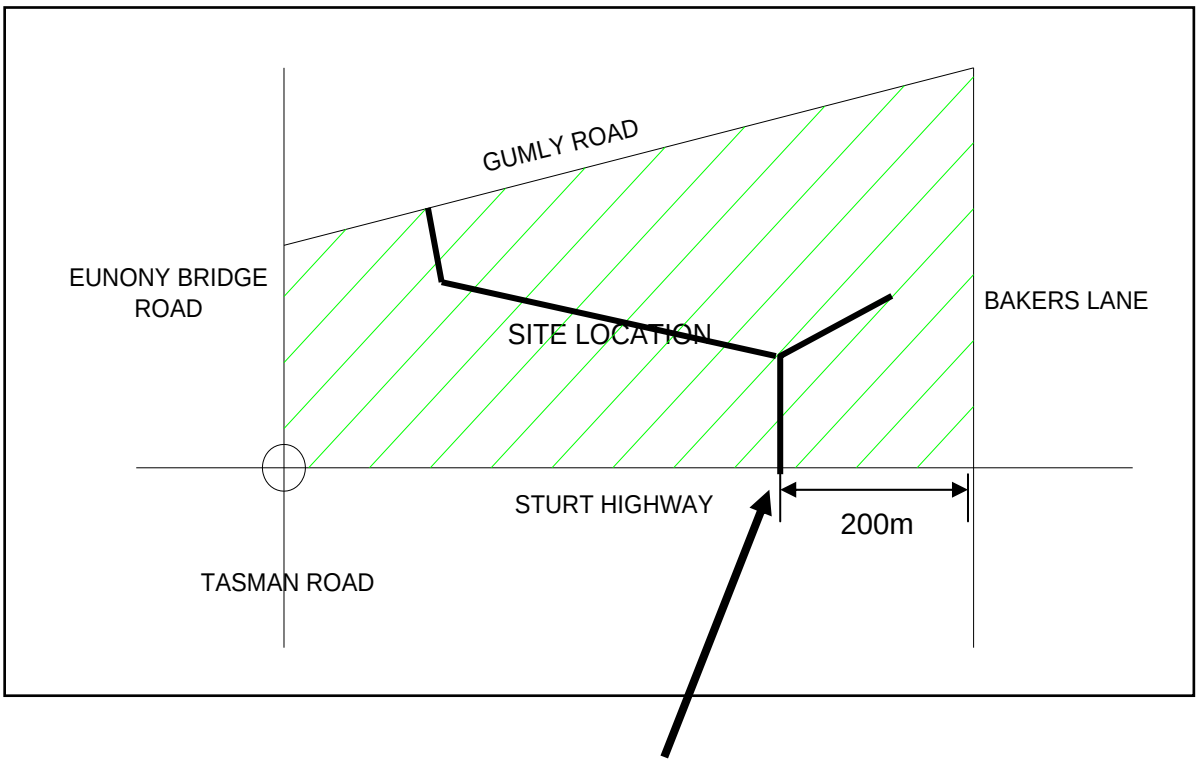
ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 5 of 7)



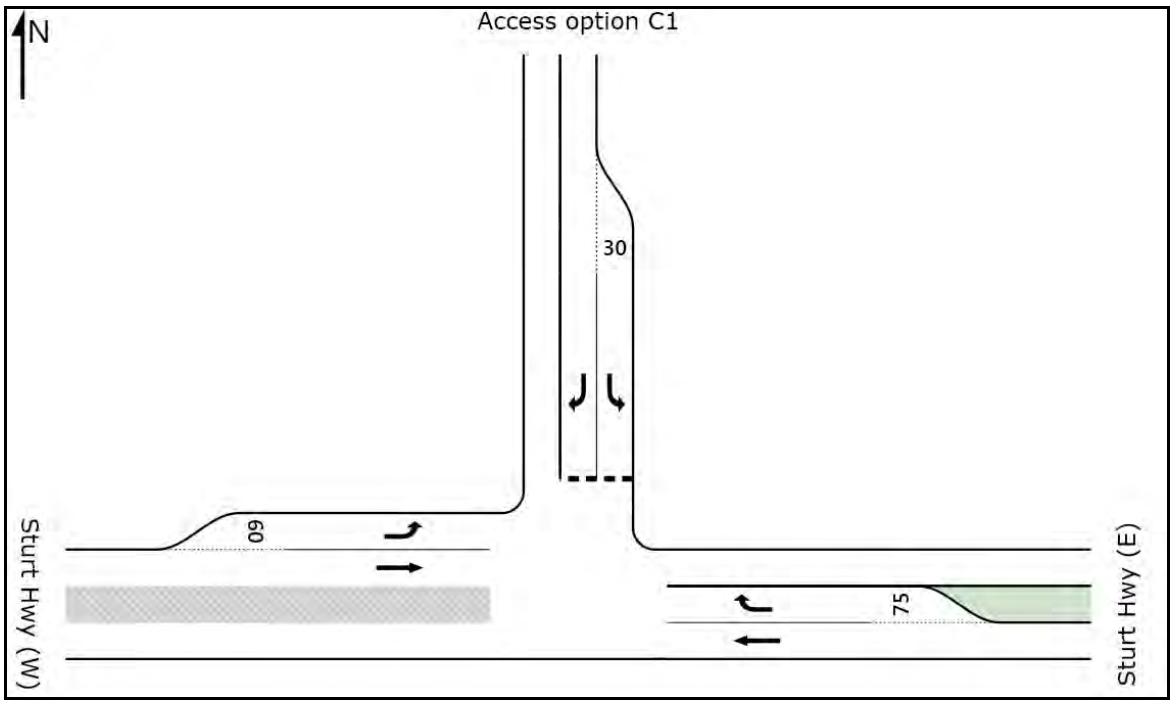
OPTION B - STOP



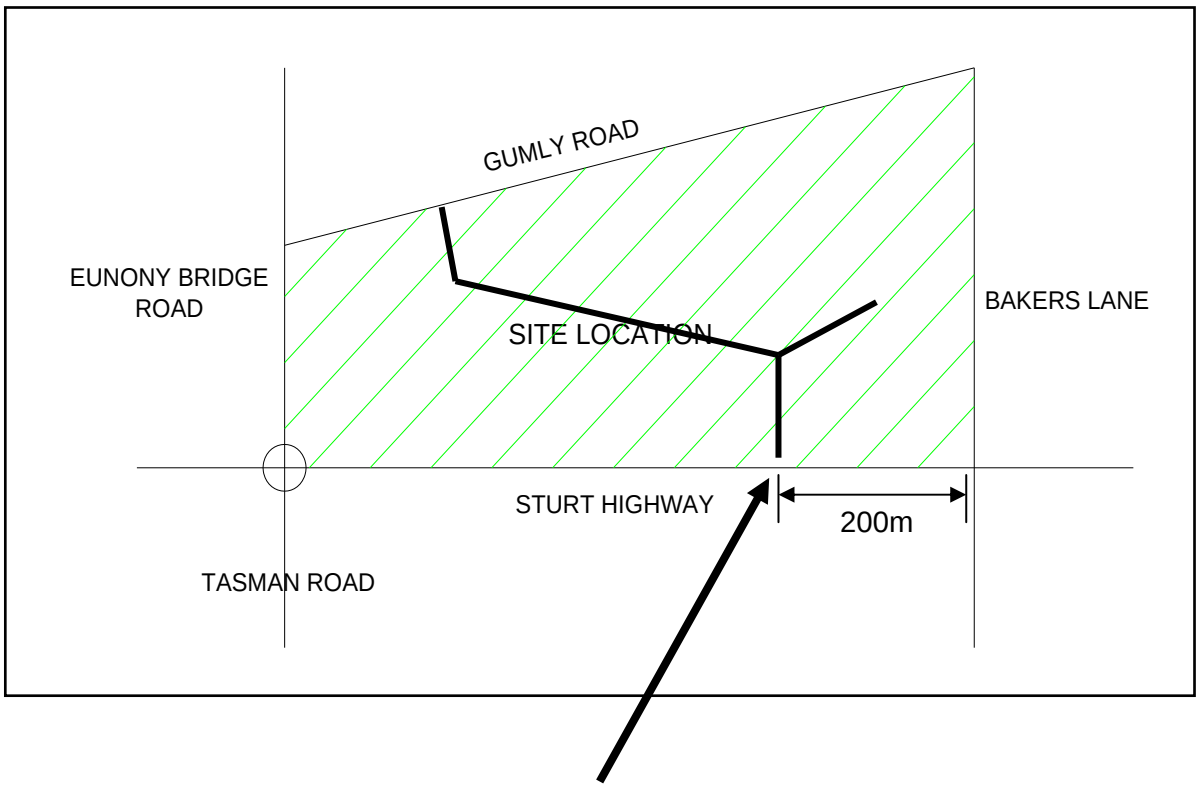
ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 6 of 7)



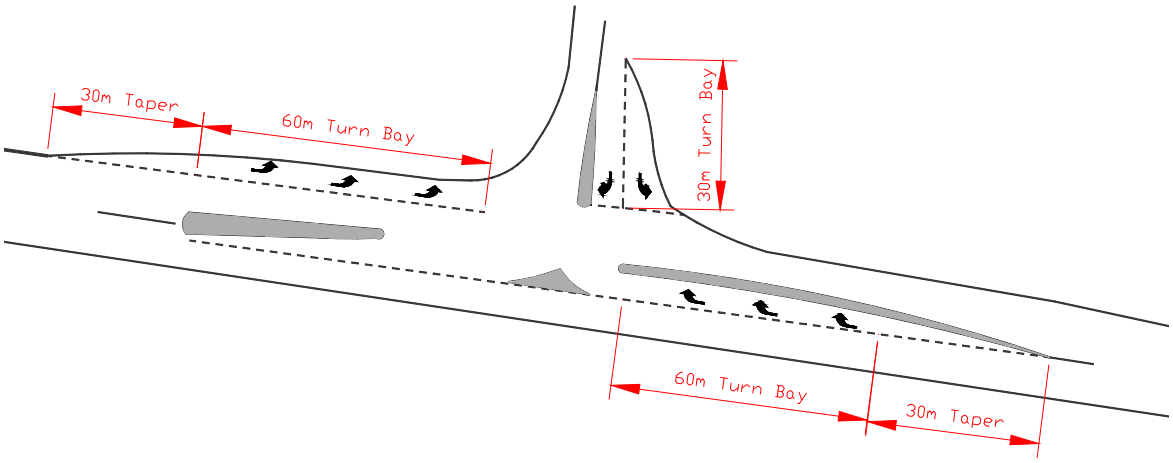
OPTION C1 – NEW ACCESS



ANNEXURE B: VEHICULAR ACCESS OPTIONS EVALUATED (Sheet 7 of 7)



OPTION C2 – SEAGULL



ANNEXURE C: SIDRA RESULTS (Sheet 1 of 9)

EXISTING ANALYSIS

TABLE 1: EXISTING INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
EXISTING PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	0.29	3.1 (22.0)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.21	2.5 (16.3)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	PM	0.44	11.6 (19.1)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.32	11.4 (17.7)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Eunony Bridge Rd / Gumly Road	PM	0.05	1.0 (2.5)	**A** (Worst: A)	Giveway / Yield	Right turn onto Eunony Bridge Rd
Eunony Bridge Rd / Gumly Road	AM	0.06	1.1 (2.6)	**A** (Worst: A)	Giveway / Yield	Right turn onto Eunony Bridge Rd

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

ANNEXURE C: SIDRA RESULTS (Sheet 2 of 9)

TABLE 2: EXISTING + 10 year growth INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	0.38	4.7 (27.3)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.24	3.7 (17.6)	**A** (Worst: B)	Giveway / Yield	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	PM	0.49	11.8 (19.8)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.34	11.4 (18.0)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

ANNEXURE C: SIDRA RESULTS (Sheet 3 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION A- GIVEWAY

TABLE 3: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	>1.00	>70 (>70)	**F** (Worst: F)	Giveway	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	>1.00	>70 (>70)	**F** (Worst: F)	Giveway	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	PM	>1.00	>70 (>70)	**F** (Worst: F)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.60	13.7 (23.3)	**A** (Worst: B)	Round-about	Right turn from Eunony Bridge Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

ANNEXURE C: SIDRA RESULTS (Sheet 4 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION A- STOP

TABLE 4: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	>1.00	>70 (>70)	**F** (Worst: F)	Stop	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	>1.00	>70 (>70)	**F** (Worst: F)	Stop	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	PM	>70	>70 (>70)	**F** (Worst: F)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.60	13.7 (23.3)	**A** (Worst: B)	Round-about	Right turn from Eunony Bridge Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

ANNEXURE C: SIDRA RESULTS (Sheet 5 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION A- ROUNDABOUT

TABLE 5: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	0.64	14.1 (21.1)	**A** (Worst: B)	Round-about	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.35	10.1 (15.2)	**A** (Worst: B)	Round-about	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd*	PM	0.96	31.9 (152)	**C** (Worst: F)	Round-about	Right turn from Tasman Rd onto Sturt Hwy**
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.60	13.7 (23.3)	**A** (Worst: B)	Round-about	Right turn from Eunony Bridge Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

*** ASSUMES UPGRADE OF STURT HIGHWAY WITH 100M EASTBOUND SHARED THROUGH & LEFT LANE PLUS 30M SHARED THROUGH / LEFT IN TASMAN ROAD & 30M TAPER IN EUNONY BRIDGE ROAD DOWNSTREAM OF ROUNDABOUT.**

**** WITH FUTURE ROUNDABOUT AT STURT HIGHWAY BAKERS LANE TRAFFIC FROM SOUTHERN REGION OF TASMAN ROAD CAN UTILISE EDISON ROAD TO GAIN ACCESS TO BAKERS LANE FOR RIGHT TURN ONTO STURT HIGHWAY**

ANNEXURE C: SIDRA RESULTS (Sheet 6 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION B- GIVEWAY

TABLE 6: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	0.38	5.3 (22.9)	**A** (Worst: B)	Give Way / Yield	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.39	5.8 (19.3)	**A** (Worst: B)	Give Way / Yield	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd*	PM	0.98	40.3 (90.9)	**C** (Worst: F)	Round-about	Right turn from Tasman Rd onto Sturt Hwy**
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.75	15.8 (28.2)	**A** (Worst: B)	Round-about	Right turn from Eunony Bridge Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

*** ASSUMES UPGRADE OF STURT HIGHWAY WITH 100M EASTBOUND SHARED THROUGH & LEFT LANE PLUS 30M SHARED THROUGH / LEFT IN TASMAN ROAD & 30M TAPER IN EUNONY BRIDGE ROAD DOWNSTREAM OF ROUNDABOUT & 30M SHARED THROUGH / LEFT IN EUNONY BRIDGE ROAD & 30M TAPER IN TASMAN ROAD DOWNSTREAM OF ROUNDABOUT.**

**** WITH FUTURE ROUNDABOUT AT STURT HIGHWAY BAKERS LANE TRAFFIC FROM SOUTHERN REGION OF TASMAN ROAD CAN UTILISE EDISON ROAD TO GAIN ACCESS TO BAKERS LANE FOR RIGHT TURN ONTO STURT HIGHWAY.**

ANNEXURE C: SIDRA RESULTS (Sheet 7 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION B- STOP SIGN

TABLE 7: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Bakers Lane / Sturt Hwy	PM	0.42	7.6 (69.9)	**A** (Worst: E)	Give Way / Yield	Right turn from Bakers Ln onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.39	6.8 (32.8)	**A** (Worst: B)	Give Way / Yield	Right turn from Bakers Ln onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd*	PM	0.98	40.3 (90.9)	**C** (Worst: F)	Round-about	Right turn from Tasman Rd onto Sturt Hwy**
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.75	15.8 (28.2)	**A** (Worst: B)	Round-about	Right turn from Eunony Bridge Rd onto Sturt Hwy

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

*** ASSUMES UPGRADE OF STURT HIGHWAY WITH 100M EASTBOUND SHARED THROUGH & LEFT LANE PLUS 30M SHARED THROUGH / LEFT IN TASMAN ROAD & 30M TAPER IN EUNONY BRIDGE ROAD DOWNSTREAM OF ROUNDABOUT & 30M SHARED THROUGH / LEFT IN EUNONY BRIDGE ROAD & 30M TAPER IN TASMAN ROAD DOWNSTREAM OF ROUNDABOUT.**

**** WITH FUTURE ROUNDABOUT AT STURT HIGHWAY BAKERS LANE TRAFFIC FROM SOUTHERN REGION OF TASMAN ROAD CAN UTILISE EDISON ROAD TO GAIN ACCESS TO BAKERS LANE FOR RIGHT TURN ONTO STURT HIGHWAY.**

ANNEXURE C: SIDRA RESULTS (Sheet 8 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION C1- GIVEWAY

TABLE 8: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Access option / Sturt Hwy	PM	>1.00	>70 (>70)	**F** (Worst: F)	Give Way / Yield	Right turn onto Sturt Hwy
Access option / Sturt Hwy	AM	0.68	8.3 (33.3)	**A** (Worst: B)	Give Way / Yield	Right turn onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	PM	0.49	11.8 (19.8)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
Tasman Rd / Sturt Hwy / Eunony Bridge Rd	AM	0.34	11.4 (18)	**A** (Worst: B)	Round-about	Right turn from Tasman Rd onto Sturt Hwy
RETEST WITH SIGNALS						
Access option / Sturt Hwy	PM	0.87	31.5	**C**	SIGNALS	N/a

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

ANNEXURE C: SIDRA RESULTS (Sheet 9 of 9)

10 year growth ANALYSIS + DEVELOPMENT

OPTION C2- SEAGULL

TABLE 9: FORECAST INTERSECTION PERFORMANCES (SIDRA INTERSECTION 5.1)

Intersection	Peak Hour	Degree of Saturation(1)	Average Delay(2) (sec/vehicle)	Level of Service(3)	Control Type	Worst Movement
FUTURE PERFORMANCE						
Access option / Sturt Hwy	PM	>1.00	>70 (>70)	**F** (Worst: F)	Give Way / Yield	Right turn onto Sturt Hwy
Access option / Sturt Hwy	AM	0.37	5.8 (15.0)	**A** (Worst: B)	Give Way / Yield	Right turn onto Sturt Hwy
Bakers Lane / Sturt Hwy	PM	0.38	4.7 (27.5)	**A** (Worst: B)	Give Way / Yield	Right turn from Tasman Rd onto Sturt Hwy
Bakers Lane / Sturt Hwy	AM	0.40	4.7 (20.3)	**A** (Worst: B)	Give Way / Yield	Right turn from Bakers Ln onto Sturt Hwy
RETEST WITH SIGNALS						
Access option / Sturt Hwy	PM	0.87	31.5	**C**	SIGNALS	N/a

NOTES:

(1) Degree of Saturation is the ratio of demand to capacity for the most disadvantaged movement.

(2) Average delay is the delay experienced on average by all vehicles. The value in brackets represents the delay to the most disadvantaged movement.

(3) Level of Service is a qualitative measure of performance describing operational conditions. There are six levels of service, designated from A to F, with A representing the best operational condition and level of service F the worst. The LoS of the intersection is shown in bold, and the LoS of the most disadvantaged movement is shown in brackets.

Appendix C

Infrastructure Assessment

MJM

CONSULTING ENGINEERS

STRUCTURAL • CIVIL • BUILDING DESIGN

Servicing Investigation Report

Future Industrial Development

Gumly Gumly Industrial Estate

Client: Joe Howard

Our Ref: 100248

1. Introduction

An investigation has been undertaken to determine the ability of existing service networks (sewer, stormwater, electricity, telecom, gas and water) to accommodate industrial development along the Sturt Highway, Gumly Gumly. The future Gumly Gumly Industrial Park is an area bounded by Gumly Road to the north, Eunony Bridge Road to the west, the Sturt Highway to the south and an extension of Bakers Lane to the east.

2. Sewer Servicing

The servicing of the proposed development site for industrial purposes is a complex issue given the existing sewer network and Eastern Industrial Sewer Trunk Main system.

It was found that the area can be successfully connected to the Council main using a combination of gravity and pressurised pipes as shown on the plan in Appendix A.

2.1 Methodology

The spreadsheet contained in Appendix B shows the grading and pipe diameter of lines associated with the Eastern Industrial Sewer Trunk Main system. That information was used in conjunction with sewer grading tables to determine the capacity of each gravity main in that system. It can be seen from the spreadsheet that Lines 44 to 60 are not designed to carry the current loading. A strategy to resolve that lack of capacity in the existing system will be addressed in Section 2.2 of this report.

It was also determined that an area of 177 hectares in the Eastern Industrial Estate is currently servicing 450 tenements at an effective rate of 2.5 ET's per hectare; substantially less than the requirement of 15 ET's per hectare being imposed on this development. The area of the site is 45 hectares and will therefore generate a maximum of 675 ET's at the design rate of 15ET's per hectare.

2.2 Sewer Strategy

The plan contained in Appendix A shows that the section of the Gumly Gumly Industrial Estate to the north of the Sturt Highway can be drained with a gravity system to a new pump station in the north eastern corner of the site. Sewage is pumped from this location to a new gravity main on the southern side of the Sturt Highway, where it is transported to the existing main in Tasman Road. This main travels west along Schiller Street servicing the Eastern Industrial area before connecting to the pressurised system which travels south to the treatment works in Vincent Road.

As this line is currently overloaded in the vicinity of Kooringal Road, it is proposed as part of this strategy that a new gravity main be constructed along Tasman Road from Schiller Street to a new pump station near the Copland Street intersection, where sewage from the whole of the Gumly Gumly Industrial Estate is pumped to the existing pump station SPS26 located in Edison Road and to the south of the go-kart track.

It is understood from Wagga Wagga City Council's Local Environment Study: Sewerage Services, May 2008 that a new rising main is proposed to be constructed from pump station SPS26 heading west to the existing rising main in Vincent Road.

It is also understood from this study that pump station SPS26 will service a 200 lot rural residential subdivision and this loading will take the pump station to its full capacity. It is therefore proposed that pump station SPS26 be upgraded as part of this strategy in order to add an additional 675 tenements from the Gumly Estate.

2.3 Summary

The Gumly Gumly Industrial Estate can be serviced with a combination of new rising mains, gravity mains and pump stations. However, the ability of this strategy to successfully sewer the proposed development depends on the future installation of a rising main from pump station SPS26 to Vincent Road as proposed in Michael Cuthbert's appendix to the Local Environment Study: Sewerage Services. This development at Gumly Gumly will generate significant Section 64 funds and it is anticipated that those funds could be used to upgrade the future extension of the Edison Road system.

The construction of this proposed sewer main connecting Gumly Gumly to the Edison Road pump station will divert 93 tenements from the existing main, which is currently overloaded in the vicinity of Kooringal Road. It can be seen from a comparison of the final column "Revised Cumulative Equivalent Tenements" with the "Line Capacity" in Appendix 2 that the removal of 93 tenements from the loading on the existing main will result in this line operating within its capacity for the full length.

Hence, it can be seen that not only will this development operate independently of an already overloaded system, it will relieve some of the pressure on the existing Eastern Industrial main by diverting the surplus loading to a new part of the sewer system.

3. Stormwater Servicing

An investigation has been carried out to determine the most practical method of providing satisfactory drainage to the above site so that future runoff rates can be maintained at pre-development levels.

It was initially hoped that stormwater drainage from the site could be controlled by constructing a single detention basin along the northern boundary of the property but this option was investigated and found to be impractical due to the flat, low lying nature of the topography.

It is therefore proposed that on-site detention be managed by constructing adequate storage at each industrial site using a combination of water tanks and paved areas which are designed to retain stormwater in localised shallow depressions (maximum depth of 150mm) and release it at pre-development flow rates.

4. Electrical Servicing

According to Essential Energy records, there is currently overhead electrical supply around the development site. There are overhead powerlines located on both sides of the Sturt Highway and along Eunony Bridge Road. According to Essential Energy, the network in this area would be capable of servicing industrial development as proposed, subject to additional works undertaken by the client. Underground or overhead services would be provided to each industrial allotment, depending on the direction from Essential Energy. We note that overhead electricity is preferable for industrial development.

Works required would include the installation of transformer/s. Works would be customer funded with Essential Energy funding the provision of transformers up to 30kVA capacity. Cost savings could obviously be achieved in constructing the development in fewer stages.

5. Telecom Servicing

There is a significant telecommunications (Telstra) presence available in the area. This could easily be extended to cater for additional development on the site. There are existing telecom cables located on both sides of the Sturt Highway, servicing every allotment in the vicinity. There are also cables located along Bakers Lane and Eunony Bridge Road.

Works would involve the supply of a shared electrical/telecom trench for the contractor to work in. Cost to supply additional industrial allotments could be approximately $1,000 per lot plus trenching costs of approximately $33 per metre.

We also note that there is an Optus fibre optic cable located in Telstra ducts on the southern side of the Sturt Highway. Extreme care must be taken in this regard.

6. Gas Servicing

The local gas provider is now known as APA Group. Their records indicate that there is gas located in the vicinity of the site, coming from Tasman Road and extending along the northern side of the Sturt Highway and then crossing to the southern side of the Sturt Highway approximately 280 metres from the Tasman Road/Hammond Avenue roundabout.

According to APA Group, the development could be accommodated within their network in the area.

7. Potable Water Servicing

There is potable water supply available in the vicinity. There is an existing 250mm diameter water main located on the northern side of the Sturt Highway, which crosses to the southern side approximately 200 metres from the Bakers Lane/Sturt Highway intersection. There is also an existing 150mm diameter main located on the southern side of the Sturt Highway alongside a redundant water main. There does not appear to be available supply along the Eunony Bridge Road boundary.

The proposed development could be serviced by Riverina Water on the proviso that no high water usage industrial activities, with water usage of more than 45kL per hectare per day, would locate on the allotments.

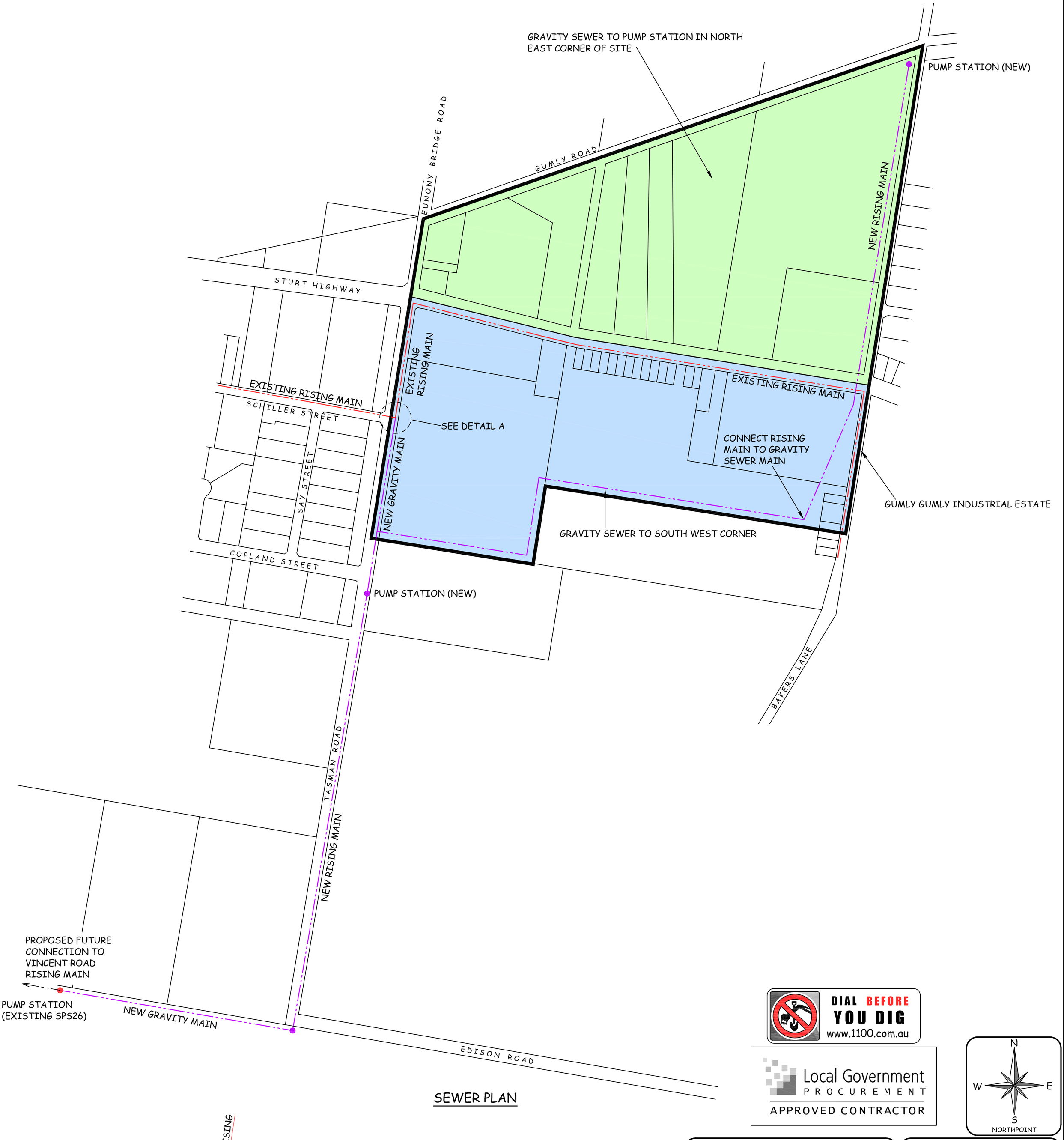
Generally, Developer Servicing Charges applied by RWCC are at the rate of 1ET/hectare payable upfront, although their Development Servicing Plan does not reflect this. Further fees may apply for the future purchaser once water demands for the industrial activity are confirmed.

8. References

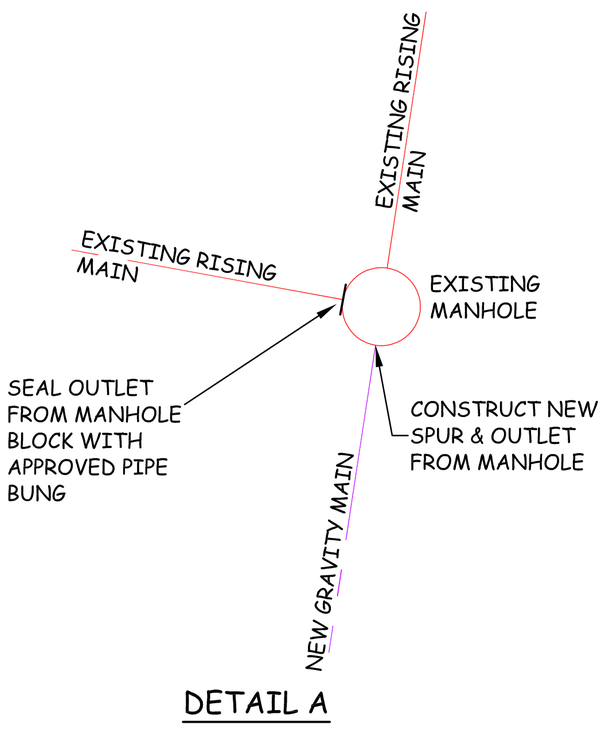
Local Environmental Study: Appendix E Sewerage Services, Michael Cuthbert, May 2008

APPENDIX 1

Strategy Plan



SEWER PLAN



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SHEET SUBJECT
SEWER PLAN

CLIENT
Joe Howard

No.	DATE	AMENDMENTS	BY
A	08/08/2011	ISSUED FOR APPROVAL	CB

DESIGNED M.McFeeters	SCALE 1:4000(A1) 1:8000(A3)		
CHECKED	DRAWN B. Shumack	DATE Date	
COUNCIL REF.	ISSUE A	PROJECT NO. 100248	SHEET NO. 1

JOB LOCATION: Z:/Jobs/100248

MJM
CONSULTING ENGINEERS
STRUCTURAL • CIVIL • BUILDING DESIGN

LEVEL 1, 25 TOMPSON STREET
WAGGA WAGGA NSW 2650
Telephone (02) 69 218 333
Facsimile (02) 69 218 179
E-mail admin@mjm-solutions.com
A.C.N. 107 158 350 A.B.N. 16 107 158 350
BOWTORT P/L TRADING AS MJM CONSULTING ENGINEERS

I HEREBY CERTIFY THAT ENGINEERING WORKS AS SHOWN ON THIS PLAN ARE WORK AS EXECUTED AND HAVE BEEN CONSTRUCTED GENERALLY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE DIRECTOR. IN ACCORDANCE WITH THE GENERAL REQUIREMENTS OF THE LOCAL COUNCIL

NAME: Michael J. McFeeters

SIGNATURE .....

CAPACITY: Director

DATE:

APPENDIX 2

Current Sewer Loadings and Line Capacities

EASTERN INDUSTRIAL SEWER TRUNK MAIN

Current Sewer Loadings

MAP ID OF LINE SEGMENT	MID	PUMP STATION	LENGTH	DIAMETER	GRADE (1 in…)	FLOWTYPE	USNODE	DSNODE	ORIGIANAL EQTENEMENT	ORIGINAL CUMUL_EQTE	ORIGINAL HYDLOAD	LINE CAPACITY	REVISED CUMUL EQTE
1	37865	18	257	63	0	PR	KE1002-Z108-1	KE1002-Z111-1	7	7	0		0
2	37861	18	948.1	125	0	PR	KE1002-Z111-1	KE1002-Z118-2	17	86	0		0
3	37856	18	9.5	125	0	PR	KE1002-Z118-2	KE1002-Z118-3	0	92	0		0
4	37855	18	165	125	0	PR	KE1002-Z118-3	KE1002-Z118-4	1	93	0		0
5	37854	18	112	125	0	PR	KE1002-Z118-4	KE1002-Z118-5	0	93	0		0
6	37853	18	0	125	0	PR	KE1002-Z118-5	K297-1-5	0	93	0		0
7	4015	18	11	225	138	GM	K297-1-5	K333-1-1	0	104	15.2	514	11
8	4014	18	80.8	225	449	GM	K333-1-1	K297-1-4	1	107	28.5	312	14
9	4013	18	92	225	383	GM	K297-1-4	K297-1-3	0	107	26.2	312	14
10	4012	18	3.5	225	350	GM	K297-1-3	K345-3-1	0	107	25.1	312	14
11	4011	18	32	225	291	GM	K345-3-1	K341-2-1	0	109	23.2	346	16
12	4010	18	50	225	357	GM	K341-2-1	K297-1-2	1	114	26.8	312	21
13	4009	18	51.5	225	286	GM	K297-1-2	K369-1-1	0	114	24	347	21
14	4008	18	30.5	225	610	GM	K369-1-1	K297-1-1	1	118	36.4	312	25
15	4007	18	82	225	357	GM	K297-1-1	K259A-8-7	3	121	28.3	312	28
16	3992	18	6.5	225	325	GM	K259A-8-7	K336-1-1	0	121	27	325	28
17	3991	18	68.5	225	343	GM	K336-1-1	K259A-8-6	1	123	28.2	315	30
18	3990	18	76.2	225	363	GM	K259A-8-6	K259A-8-5	0	123	29	312	30
19	3989	18	59.6	225	373	GM	K259A-8-5	K259A-8-4	1	129	30.7	312	36
20	3988	18	22.1	225	368	GM	K259A-8-4	K259A-8-3	1	132	31.1	312	39
21	3987	18	81.7	225	371	GM	K259A-8-3	K259A-8-2	3	135	31.9	312	42
22	3986	18	53.3	225	355	GM	K259A-8-2	K259A-8-1	1	214	47.5	312	121
23	3985	18	53.3	225	333	GM	K259A-8-1	J189-1-1	1	217	46.6	321	124
24	9036	18	8.8	225	176	GM	J189-1-1	PS-NO-18	0	261	39.9	450	168
25	8034	18	538	200	0	RM	PS-NO-18	K259A-2-14	0	261	0		168
26	3975	17	50.3	300	457	GM	K259A-2-14	K259A-2-13	1	273	31.6	603	180
27	3974	17	45.4	300	454	GM	K259A-2-13	K259A-2-12	0	273	31.5	607	180
28	3973	17	82.6	300	459	GM	K259A-2-12	K259A-2-11	3	284	32.8	602	191
29	3972	17	67.7	300	451	GM	K259A-2-11	K259A-2-10	1	285	32.6	608	192
30	3971	17	53.3	300	444	GM	K259A-2-10	K259A-2-9	1	286	32.5	612	193
31	3970	17	37.5	225	110	GM	K259A-2-9	K259A-2-8	1	287	34.4	580	194
32	3969	17	23.4	225	94	GM	K259A-2-8	K434-1-1	3	290	32	609	197
33	3968	17	32	300	457	GM	K259A-2-7	K259A-2-6	1	291	33.5	603	198
34	3967	17	54.3	300	453	GM	K259A-2-6	K259A-2-5	1	292	33.4	607	199
35	3966	17	12.1	300	202	GM	K259A-2-4a	K259A-2-4	1	301	22.8	931	208
36	3966	17	65	300	591	GM	K259A-2-5	K259A-2-4a	1	301	22.8	575	208
37	3965	17	78	300	459	GM	K259A-2-4	K259A-2-3	2	303	34.8	605	210
38	3964	17	74.4	300	438	GM	K259A-2-3	K259A-2-2	3	307	34.4	616	214
39	3963	17	43	300	430	GM	K259A-2-2	K259A-2-1	1	311	34.5	624	218
40	3692	15	47.9	190	48	GM	K236-1-22	K236-1-21	3	363	43.9	609	270
41	3962	17	6	300	600	GM	K259A-2-1A	PS-NO-17	0	348	45.4	575	255
42	8033	17	507.5	200	0	RM	PS-NO-17	K259A-1-6	0	348	0		255
44	3950	15	54.9	225	343	GM	K259A-1-6	K259A-1-5	0	350	73.5	316	257
45	3949	15	67.1	225	353	GM	K259A-1-5	K259A-1-4	0	350	74.6	312	257
46	3948	15	51.2	225	341	GM	K259A-1-4	K259A-1-3	2	352	73.6	317	259
47	3947	15	60.4	225	355	GM	K259A-1-3	K259A-1-2	0	352	75.2	312	259

LEGEND

Indicates the lines which are undersized and not able to carry the current loading

MAP ID OF LINE SEGMENT	MID	PUMP STATION	LENGTH	DIAMETER	GRADE (1 in…)	FLOWTYPE	USNODE	DSNODE	ORIGIANAL EQTENEMENT	ORIGINAL CUMUL_EQTE	ORIGINAL HYDLOAD	LINE CAPACITY	REVISED CUMUL EQTE
48	3946	15	76.2	225	346	GM	K259A-1-2	K259A-1-1	1	353	74.4	315	260
49	3945	15	73.2	225	349	GM	K259A-1-1	K243-1-14	1	359	75.9	312	266
50	3937	15	70.1	225	334	GM	K243-1-14	K243-1-13	0	364	75.2	319	271
51	3936	15	27.1	225	118	GM	K243-1-13	K243-1-12	0	373	45.3	556	280
52	3935	15	2.8	225	280	GM	K243-1-12	K368-1-1	0	373	70.3	353	280
53	3934	15	39.3	225	328	GM	K368-1-1	K243-1-11	2	376	76.7	325	283
54	3933	15	36.9	225	308	GM	K243-1-11	K243-1-10	2	378	74.7	336	285
55	3932	15	34.5	225	314	GM	K243-1-9A	K243-1-9	2	382	76.2	332	289
56	3931	15	57	225	317	GM	K243-1-9	K243-1-8	3	385	77.1	331	292
57	3930	15	58.1	225	306	GM	K243-1-8	K243-1-7	3	388	76.3	336	295
58	3929	15	23.9	225	398	GM	K243-1-7	K243-1-6	1	401	89.9	312	308
59	3928	15	28.5	225	356	GM	K243-1-6	K243-1-5	1	402	85.1	312	309
60	3927	15	91.8	225	278	GM	K243-1-5	K243-1-4	0	402	75.1	356	309
61	3926	15	20.9	300	174	GM	K379-1-1	K243-1-3	0	442	30.2	1001	349
62	3925	15	79.2	300	495	GM	K243-1-3	K243-1-2	5	447	51.9	578	354
63	3924	15	49.5	300	495	GM	K243-1-2	K243-1-1	0	451	52.3	578	358
64	7475	15	7.6	300	380	GM	K243-1-1	PS-NO-15	0	451	45.7	668	358
65	38097	15	0	300	0	RM	PS-NO-15	J168-CHAIN-135	0	1111	0		
66	38098	15	2147.3	300	0	RM	J168-CHAIN-9144	J168-CHAIN-209	0	1116	0		
67	38099	15	639.8	300	0	RM	J168-CHAIN-2099	KG-TP-2	0	1247	0		

Appendix D

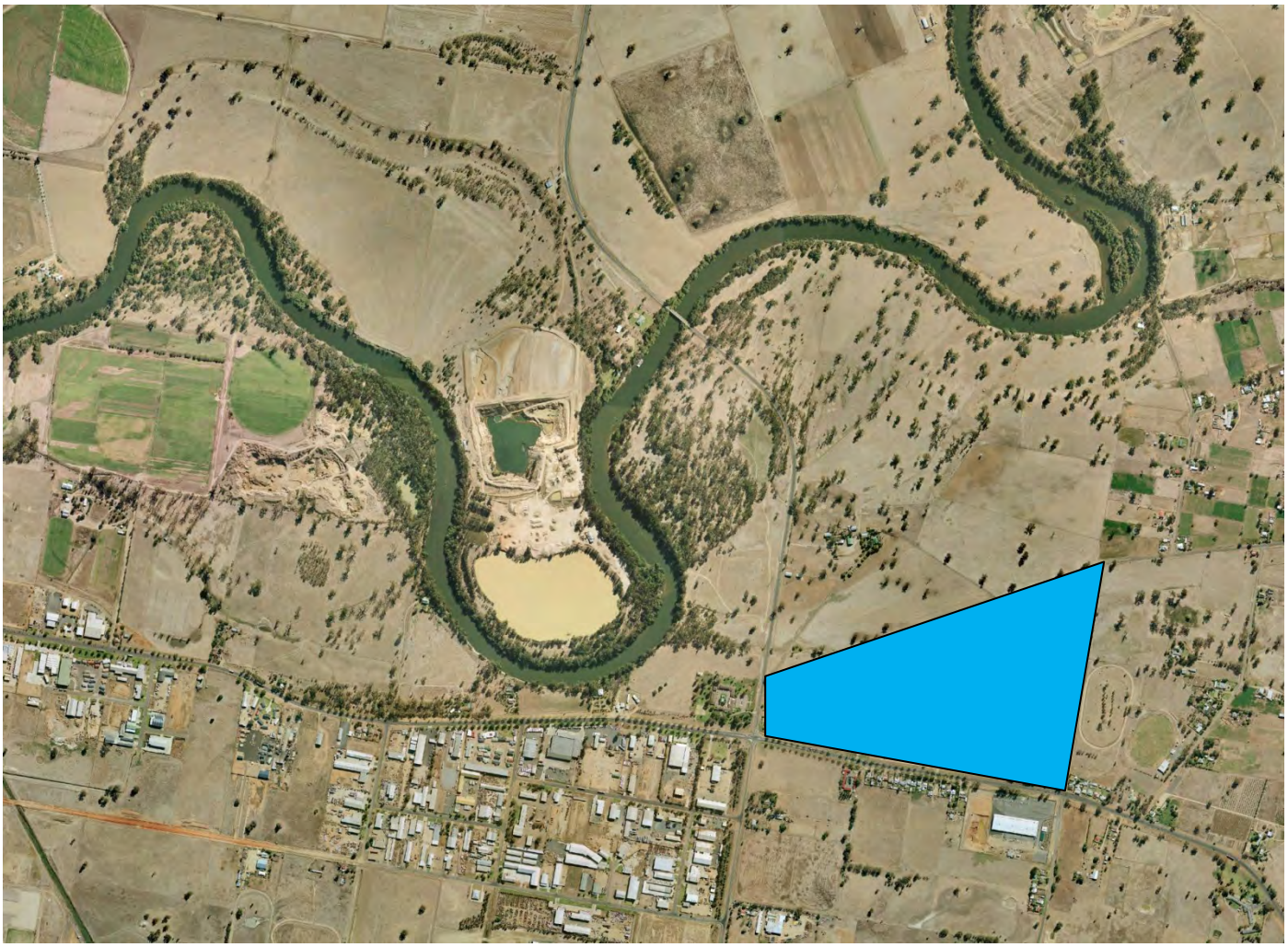
Flood Impact Study

J. HOWARD AND R. ALLSOPP

FLOOD IMPACTS ASSESSMENT

PROPOSED REZONING OF RURAL LAND AT GUMMLY GUMLY

FINAL REPORT



wma water

JANUARY 2012

Level 2, 160 Clarence Street
Sydney, NSW, 2000

Tel: 9299 2855
Fax: 9262 6208
Email: wma@wmawater.com.au
Web: www.wmawater.com.au

FLOOD IMPACT ASSESSMENT- PROPOSED REZONING OF RURAL LAND AT GUMLY GUMLY

FINAL REPORT

JANUARY 2012

Project Flood Impact Assessment- Proposed Rezoning of Rural Land at Gumly Gumly	**Project Number** 111007
Client Joe Howard	**Client's Representative** Nicole Lennon – RPS Group
Authors Erin Askew Ivan Varga	**Prepared by** 
Date 10 January 2012	**Verified by** 

Revision	Description	Date
3	Final Report v2	JAN 2012
2	Final Report	AUG 2011
1	Draft Report	AUG 2011

FLOOD IMPACT ASSESSMENT-
PROPOSED REZONING OF
RURAL LAND AT GUMLY GUMLY

TABLE OF CONTENTS

PAGE

LIST OF TABLES

LIST OF FIGURES

GLOSSARY OF TERMS

(Adapted from the 2005 Floodplain Development Manual, NSW Government)

Annual Exceedance Probability (AEP)	The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500 m^3/s has an AEP of 5%, it means that there is a 5% chance (that is one-in-20 chance) of a 500 m^3/s or larger event occurring in any one year (see ARI).
Average Recurrence Interval (ARI)	The long term average number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
effective warning time	The time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken. The effective warning time is typically used to move farm equipment, move stock, raise furniture, evacuate people and transport their possessions.
flood risk	Potential danger to personal safety and potential damage to property resulting from flooding. The degree of risk varies with circumstances across the full range of floods. Flood risk in this manual is divided into 3 types, existing, future and continuing risks. They are described below. existing flood risk: the risk a community is exposed to as a result of its location on the floodplain. future flood risk: the risk a community may be exposed to as a result of new development on the floodplain. continuing flood risk: the risk a community is exposed to after floodplain risk management measures have been implemented. For a town protected by levees, the continuing flood risk is the consequences of the levees being overtopped. For an area without any floodplain risk management measures, the continuing flood risk is simply the existence of its flood exposure.
Freeboard	Freeboard provides reasonable certainty that the risk exposure selected in deciding on a particular flood chosen as the basis for the FPL is actually provided. It is a factor of safety typically used in relation to the setting of floor levels, levee crest levels, etc. Freeboard is included in the flood planning level.
Hazard	A source of potential harm or a situation with a potential to cause loss. In relation to this manual the hazard is flooding which has the potential to cause damage to the community. Definitions of high and low hazard categories are provided in the Manual. Hazard as derived from the Manual is generally based on a combination of the velocity and depth of the flood and does not consider other factors that contribute to flood risk, such as land use, potential for damage and access to evacuation.
Risk	Chance of something happening that will have an impact. It is measured in terms of consequences and likelihood. In the context of the manual it is the likelihood of consequences arising from the interaction of floods, communities and the environment.

1. INTRODUCTION

WMAwater has been requested to undertake a Flood Impact Assessment for a proposed rezoning development at Gumly Gumly.

The sites of interest at Gumly Gumly are Lot 1 DP 305732 and Lot 1 DP 1085667 (Figure 1). In order to submit a planning proposal, the land owners require that the potential impact of the proposed development on design flood levels be assessed. The present report addresses that task.

In order to assess the potential impact of the proposed development the following tasks have been completed:

- Previous flood assessments in the area of interest have been refined together with the existing hydraulic 2D model;
- A range of alternative developed scenarios have been modelled using the 1% AEP design flood event to assess the potential impacts of the conceptual proposed development on design flood levels; and
- Once an optimum conceptual developed scenario has been assessed, two more design flood events have been modelled, namely the 5% AEP and the 0.2% AEP events.

WMAwater have completed a Floodplain Risk Management Plan (Reference 5) for Council, part of which reviewed flood risk on a floodplain wide scale based on hydraulic modelling coupled with among other things existing land use zones. The proposed development site fell under the High Flood Risk Rural Floodplain zone. The flood risk for the site considering its individual merits and based on its proposed land use has been reviewed as part of this report.

The Floodplain Risk Management Plan also formed the basis for some of the controls documented in the Wagga Wagga City Council (WWCC) Development Control Plan (DCP).

The assessment is based on the 1% AEP however a 5% AEP has also been considered as the WWCC DCP establishes that industrial development within the East Wagga Wagga area adjacent to the site requires development floor levels to be at the 5% AEP flood level plus freeboard. In order to determine the impacts of the proposed development on the flood immunity of this adjacent industrial area, the 5% AEP design event has also been assessed and impacts determined. The 0.2% AEP design flood event has also been modelled in order to assess safety and evacuation issues at the site.

The proposed development site has been classified within varying degrees of provisional hydraulic hazard (low and high) as part of previous hydraulic assessments (Reference 2). Hazard across the site under the proposed conceptual layout has been assessed as part of this report.

1.1. Objectives

The main objective of this work is to assess the potential impact of the proposed development on design flood levels during the 1% AEP event. Based on the proposed development, secondary objectives are to:

- Define provisional hydraulic hazard and flood risk categories for the site considering the individual merits of the proposed development (see Reference 3); and
- Show how the site is impacted by floods larger than the 1% AEP design event for evacuation planning purposes
- Show how the development impacts flood levels during the 5% AEP design event.

.

2. BACKGROUND

The owners of Lot 1 DP 305732 and Lot 1 DP 1085667 at Gumly Gumly are seeking to rezone their land for the purposes of commercial/industrial development.

The site has been classified as flood prone during a mainstream Murrumbidgee River 1% AEP flood event with various degrees of provisional hydraulic hazard (Figure 2). Flood risk was determined as part of Reference 5 and formed the basis of the classifications presented in the WWCC DCP 2010. The site has also been classified with high flood risk under Reference 5 and the WWCC DCP 2010.

In order to submit a planning proposal, the owners require that the potential impact of the proposed development on design flood levels be assessed.

2.1. Study Area

The parcel of land of interest to this study fronts the Sturt Highway at Gumly Gumly (see Figure 1). The site is bounded by Gumly Road to the north, Bakers Lane to the East, Sturt Highway to the south and Eunony Bridge Road to the west.

The site is currently zoned as Rural (Rural Living Area). Existing residential and commercial/industrial development are adjacent to the site of interest.

2.2. Flooding Behaviour

During a mainstream flood event, the Murrumbidgee River first spills from the river bend to the east. Out of bank flows then spread towards the proposed development site, however, without reaching peak flood levels. Secondly, the Murrumbidge River spills near Braehour through a flood runner to the north of the property combining with the other flow to inundate most of the proposed development site.

At site, modelled peak flood levels during the 1% AEP flood event generally reach 183.1 mAHD, whilst for the 5% AEP flood event are generally 181.6 mAHD.

2.3. Previous Studies

2.3.1. Murrumbidgee River Conversion Model (Reference 2)

This report is used by WWCC to define design flood behaviour in Wagga Wagga. The study superseded modelling undertaken in the Wagga Wagga Flood Study 2004 and Wagga Wagga Floodplain Risk Management Study 2009. A variety of information and data has been sourced from this study, including the 2D hydraulic model. Details of the information and data sourced from this study are further explained in Section 3. The report also contains information from previous studies undertaken in the Murrumbidgee River at Wagga Wagga.

The study area of this report covers an extent of approximately 87 km^2. It extends from Braehour to Kullaroo. The flood event of August 1974 was used for calibration purposes and later floods in 1975 and 1976 for validation purposes. Design flood information was developed for the 10%, 5%, 2% and 1% AEP events as well as the PMF. Provisional hydraulic hazard for the 5% and 1% AEP events was also derived from the depth and velocity metrics produced by the hydraulic model.

The model was also utilised to define levee heights in North Wagga and along the main city levee and also to assess the plausibility of reducing flood levels by undertaking some vegetation management options.

2.4. Council Planning Documents

Wagga Wagga City Council DCP guidelines establish minimum construction floor levels in flood liable areas for different types of land use (i.e. industrial, commercial, residential). These requirements are based on the level of risk previously established under the Wagga Wagga Floodplain Risk Management Study 2009 (Reference 5). Risk precinct areas and their controls were derived as part of the Floodplain Risk Management Study and were initially based on the results from the Wagga Wagga Flood Study, which used a 1-dimensional hydraulic model, in addition to the existing land use zone. The risk precinct areas were refined following the completion of the 2D model conversion project.

Under Council's Flood Precinct Risk map, the site is classified as High Flood Risk Rural Floodplain, this is consistent with the classification in Reference 5. New low impact commercial developments located in this zone must comply with the following:

- Floor levels must be greater than the 5% AEP flood level plus freeboard (at least 0.5 m);
- New development should be consistent with flood hazard and evacuation needs;
- Engineers report should certify that the development will not increase flood effects elsewhere;
- Fencing construction and materials are to allow flood waters to equalise on the other side;
- A Flood Plan is required in order to provide safe evacuation of employees, and;
- Goods should be stored above the 1% AEP flood level.

Both the WWCC DCP and Reference 5 consider industrial and high impact commercial uses to be unsuitable for the High Flood Risk Rural Floodplain zone.

The site of interest is located on rural floodplain east of the East Wagga Wagga Industrial area. Under Council's Flood Precinct Risk map the East Wagga Wagga Industrial area is classified with Medium Flood Risk. This is based on the classification determined in Reference 5, which considers a reduction in risk due to site filling and the commercial/industrial nature of the use. Extensive impact analysis was undertaken as part of Reference 5, which determined that the filling of individual lots within this zone to the 5% AEP flood level was likely to result in minimum flood level impacts over the wider floodplain.

The following controls apply to new industrial development within this zone.

- Floor levels must be greater than the 5% AEP flood level plus freeboard (at least 0.5 m);
- New development should be consistent with flood hazard and evacuation needs;
- Fencing construction and materials are to allow flood waters to equalise on the other side;
- A Flood Plan is required in order to provide safe evacuation of employees, and;
- Goods should be stored above the 1% AEP flood level.

3. AVAILABLE DATA

Various forms of data were sourced from Reference 2 in order to assess a range of development options. The following data was utilised in this assessment:

- Aerial imagery;
- Airborne Laser Scanning Data (ALS). Flown in 2008 by Fugro Spatial Systems Pty Ltd. The data was provided at 1m raster resolution with an accuracy of ± 0.15 m on clean hard surfaces; and
- Inflow hydrographs for the hydraulic model, namely the 5%, 1% and 0.2%[1] AEP events.

[1] The 0.2% AEP event hydrograph was sourced from Reference 4 as it was not modelled in Reference 2.

4. HYDRAULIC MODELLING

The hydraulic model utilised in the present work was sourced from Reference 2.

4.1. Model details

The modelling package utilised in Reference 2 was TUFLOW. TUFLOW is a 1D/2D hydrodynamic modelling package which is widely used in Australia and internationally. It has shown to produce high quality results of inundation extent, depth and velocity. The model for Wagga Wagga uses a 20 m x 20 m finite difference grid. The Murrumbidgee riverbed cross section data was sourced from a 1D RUBICON model from a previous study (Reference 4).

A number of features, such as breaklines and polygons are included in the hydrodynamic model to represent flow constrictions caused by bridges, man-made levees and bed resistance.

The model has been extracted from archive and re-run to assure the validity of the 1% AEP flood event results are as per Council's expectations. The results of the model re-run were found to be satisfactory.

4.2. Scenarios run

In order to assess the potential flood impacts of the proposed concept development, a range of scenarios were run.

1. **Base case**: Model as per archive. This model is used by WWCC to estimate existing design flood behaviour at Wagga Wagga. This scenario was run for the 5%, 1% and 0.2% AEP events.
2. **Developed case - Option A**: Modelling of this scenario has included the conceptual proposed development. The majority of the site (refer to Figure 1) was raised to the 5% AEP plus 0.5 m freeboard. The southern portion of the site, fronting the Sturt Highway is already elevated above the 5% AEP event plus freeboard. This ground level is consistent with that of the surrounding industrial/commercial development. This scenario gives an estimate of the maximum or "worst case" flood level impacts that could result from the development.
3. **Developed case - Option B**: Under this scenario the northern portion of the site remained at the existing ground level. The portion of the site raised to the 5% AEP level plus 0.5 m freeboard was reduced so as not to obstruct and impact on the flood runner flowing through the north of the site. The reduced portion of the site also better aligns with the area subject to low provisional hydraulic hazard under existing conditions (Figure 2). The southern most part of the precinct, which faces the Sturt Highway and is not inundated during the 5% AEP event, was raised by 0.3 m. This scenario was run for the 5%, 1% and 0.2% AEP events.

5. RESULTS

The results of the modelling work are presented on Figures 3 to 9 and in Table 1.

Figure 3 shows peak flood level impacts for the 1% AEP design flood event for the Developed Case - Option A. Raising the majority of the site to the 5% AEP level plus freeboard generally results in flood level impacts (increase in flood level) of less than 0.05 m during the 1% AEP event. A small isolated portion immediately to the east of the site experiences the highest peak flood level impact with an increase in flood level of up to 0.2 m. This area extends for less than 500 m to the east of the site and results from obstructing the flood runner through the north of the property. This option also results in a slight increase in the inundation extent south of the rail line. Under this scenario, the northern portion of the site remains classified as high provisional hydraulic hazard (see Figure 4).

Option A gives an indication of the maximum or "worst case" impacts for the proposed development with the entire site remaining flood free in the 5% AEP event.

Reducing the fill extent to optimise the useable land while reducing flood impacts, Developed Option B, results in a maximum peak flood level impacts of 0.02 m in the areas to the east of the proposed development site. Figure 5 shows peak flood level impacts for the 5% AEP design event under the Developed Case Option B. Figure 7 shows peak flood level impacts for the 1% AEP design flood event for the Developed Case - Option B. The greatest benefit of this scenario is that it improves significantly flood level impacts at the aforementioned adjacent property, with increases in peak flood levels now reduced to a maximum of 0.02 m. Under this scenario the raised portion of the site experiences low provisional hydraulic hazard during the 1% AEP event with the northern flood runner portion remaining in the high zone (Figure 8). Raising the lesser portion of the site results in flood level impacts of, generally, up to 0.05 m, however, to a lesser extent than Developed Option B.

The East Wagga Wagga Industrial Area is shown not to be affected by flood level impacts resulting from the proposed development under either developed scenario.

During the 0.2% AEP flood event, peak flood level impacts are a maximum of 0.05 m to the east of the proposed developed site (see Figure 9). During this event access to flood free land is within 4 km along the Sturt Highway.

Table 1 shows modelled peak flood levels and depths for the various scenarios run.

Table 1: Peak flood levels and depths at the eastern portion of proposed development site for the modelled design events.

Design event	Base case		Option A		Option B	
	Level (mAHD)	Depth(m)	Level (mAHD)	Depth(m)	Level (mAHD)	Depth(m)
5% AEP	181.6	0.8	*	*	181.6	0.8
1% AEP	183.1	2.3	183.2	0.9	183.1	2.3
0.2% AEP	184.6	3.8	#	#	184.6	3.8

* No longer flooded.

Not modelled.

The required fill volume to raise the proposed development site to the 5% AEP level plus 500 mm freeboard as per Option A is approximately 297,000 m^3. In contrast, under the proposed development Option B, the approximate fill volume is reduced to 43,000 m^3. The amount of land fill was estimated utilising the ALS data and flood levels determined as part of this assessment. It is noteworthy to indicate that this amount is only approximate and will have a higher degree of accuracy when a topographic survey is undertaken.

5.1. Site Access

During the 5% AEP event, peak flood levels near to the site are approximately 181.6 mAHD. Under development Option A, the entire site would remain dry. Nonetheless, under Option B, only the area fronting Gumly Road would be inundated. The southern raised portion of the site remains dry during the 5% AEP event. Flood free access is available via Stuart Highway/Hammond Avenue to the east and Tasman Road and Bakers Lane to the south. To the west there is likely to be some shallow depth flooding (approximately 0.3 m) on Hammond Avenue, near the junction with Blaxland Road. Localised flooding could also occur where Marshalls Creek crosses Blaxland Road and Hammond Avenue.

During the 1% AEP event, peak flood levels fronting the site on Sturt Highway/Hammond Avenue are approximately 183.1 mAHD. Under Option B peak flood depth at the site (fronting the Sturt Highway) will be approximately 0.3 m increasing to in excess of 2 m in the north of the site. Sturt Highway/Hammond Avenue is likely to be flooded with a depth of approximately 0.6 m. Available warning time for evacuation is in excess of 2 days. Afterwards, the site becomes inaccessible for more than 2 days (during the design event flood; times can vary depending on the duration of the event). The available warning time is considered suitable for the implementation of a Flood Plan allowing strategies to reduce damages to property and allow for evacuation of employees.

The surrounding areas are generally identified as high hazard with the exception of the industrial area of East Wagga Wagga.

5.2. Flood Hazard

During the 5% AEP event under existing conditions the site is subject to varying degrees of provisional hydraulic hazard. Under Option A, the site is no longer flooded and therefore not subject to provisional hydraulic hazard during the 5% AEP event. Under Option B, the northern most portion of the site is subject to both low and high provisional hydraulic hazard, whilst the southern portion is flood free.

During the 1% AEP event under existing conditions and Option A, low and high provisional hydraulic hazard is shown to occur across the site. Adopting Option B reduces the provisional hydraulic hazard to low within the filled zone.

Figure 4, 6 and 8 show peak provisional hydraulic hazard as determined based on Reference 3. Under this method, a rating of low or high hazard is given based on a function of velocities and depths.

6. FLOOD RISK AND APPROPRIATE DEVELOPMENT

Provisional hydraulic hazard is assigned to a location on the floodplain based on a value determined from the product of depth and velocity and gives no consideration to other factors that contribute to flood risk. Under the existing scenario the provisional hydraulic hazard at the site during the 1% AEP event ranges from low, for the areas fronting the Sturt Highway, to high for those areas fronting Gumly Road. Developed Option B maximises use of the low provisional hydraulic hazard land while minimising flood impacts on the high provisional hydraulic hazard areas through the north of the site and the surrounding area.

Wagga Wagga City Council DCP details controls for various risk precincts. Each risk precinct was established under the Wagga Wagga Floodplain Risk Management Study 2009 and considered provisional hydraulic hazard in addition to, among others, existing land use. Other factors such as access to evacuation and risk to person or property also contribute to an analysis of flood risk. The site of interest is located on rural floodplain east of the East Wagga Wagga Industrial area. Under Council's Flood Precinct Risk map, the site is currently classified as High Flood Risk Rural Floodplain. Various restrictions are imposed within this flood risk zone including high impact commercial and industrial land uses being unsuitable.

The East Wagga Wagga industrial area to the west of the site is classified with Medium Flood Risk. This area is raised to the 5% AEP flood level plus freeboard which contributes to a classification of low provisional hydraulic hazard. In addition commercial/industrial land use is considered a less vulnerable land use when compared to residential development when considering flood risk. In addition, flood plans for evacuation and relocation of stock can be more effectively enforced within a business, reducing flood damages that occur and subsequently reducing flood risk.

Adopting Development Option B where the southern (low hazard) portion of the site is raised to the 5% AEP flood level plus freeboard results in minimal flood level impacts and assurance that the raised portion remains within the low provisional hydraulic hazard zone.

Considering the minimal flood level impacts, proximity to the East Wagga Wagga industrial area and rezoning of the site to commercial/industrial land use and associated filling, these factors would warrant reclassification of the site to medium flood risk, consistent with the adjacent East Wagga Wagga industrial area.

The northern high hazard portion of the site could still be utilised for what is considered to be a lower risk usage, such as car parking. Car parking at existing ground levels would not result in adverse flood level impacts and given the length of warning time available is would be likely that evacuation of vehicles would have taken place prior to peak flood levels occurring.

7. CONCLUSIONS

WMAwater has carried out a flood impact assessment for a proposed development at Gumly Gumly.

A range of conceptual proposed development scenarios, for various flood events, have been modelled for Lot 1 DP 305732 and Lot 1 DP 1085667 at Gumly Gumly. After assessing various scenarios, Option B was found to have the least negative impacts on adjacent areas during large flood events. Moreover, this option offers floodwaters a natural flowpath, to the north of the site, resulting in lesser impacts on adjacent properties. Although this northern area is still inundated during the 5% AEP event, it could be utilised as car parking or similar.

Option B represents the conceptual area of the site that could be filled and result in minimal impacts on flood behaviour in the wider floodplain. It is recommended that the final layout of the site should be developed around the conceptual Option B and raised to the 5% AEP level plus 0.5 m freeboard. When finalised it is recommended that the site layout be assessed for confirmation of minimal flood level impacts.

Despite the identified constraints, rezoning the site to a commercial/industrial land use, undertaking the associated filling under Option B, the minimal flood level impacts and proximity to the East Wagga Wagga industrial area would warrant reclassification of the site to medium flood risk.

It is also recommended that a Flood Plan is prepared for the operation of the site. The flood plan should contain operations to evacuate employees and reduce flood damage to property.

8. REFERENCES

1. Pilgrim DH (Editor in Chief)

Australian Rainfall and Runoff – A Guide to Flood Estimation
Institution of Engineers, Australia, 1987.

2. Wagga Wagga City Council

Murrumbidgee River Model Conversion Project
WMAwater, 2010.

3. NSW Government

Floodplain Development Manual (2005)
April, 2005.

4. Wagga Wagga City Council

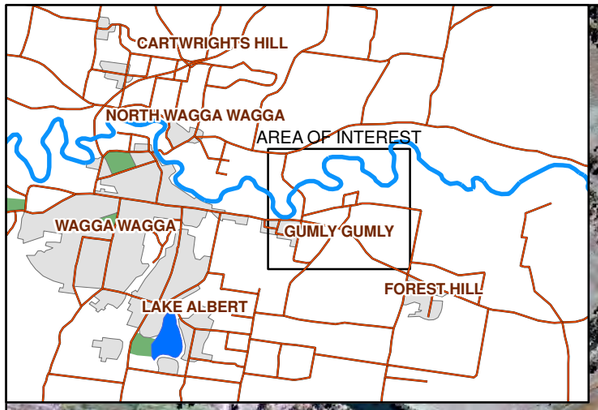
Murrumbidgee River Wagga Wagga Flood Study
Webb, McKeown & Associates Pty Ltd, September 2004.

5. Wagga Wagga City Council

Murrumbidgee River Wagga Wagga Floodplain Risk Management Plan
WMAwater, May 2009.

Figures

FIGURE 1
STUDY AREA



EUNONY BRIDGE
MURRUMBIDGEE RIVER
EUNONY BRIDGE ROAD
GUMLY ROAD
182.3
182
182.3
182.7
182.8
182.8
182.8
182.8
STURT HWY
HAMMOND AVENUE
BAKERS LANE
TASMAN ROAD

N
0 250 500 1,000 m

- Design development levels for Option A (mAHD)
- Design development levels for Option B (mAHD)
- Proposed Development Option A
- Proposed Development Option B

J:/Jobs/111007/ArcView/ArcMaps/Impact Assessment/Figure 01 Study Area.mxd

FIGURE 2
PROVISIONAL HYDRAULIC HAZARD
1% AEP DESIGN EVENT
EXISTING CONDITIONS

EUNONY BRIDGE
MURRUMBIDGEE RIVER
HAMMOND AVENUE
EUNONY BRIDGE ROAD
GUMLY ROAD
STURT HWY
KOONINGAL ROAD
TASMAN ROAD
BAKERS LANE

N

Proposed Development Site

Provisional Hydraulic Hazard

Low Hazard

High Hazard

Hazard classification shown on this figure has been determined based on the NSW Floodplain Development Manual given Velocity and Depth. Other factors that contribute to flood risk have not been considered in preparing this figure.

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact Assessment/Figure_02_1aep_OptB_haz.mxd

FIGURE 3

PEAK FLOOD LEVEL IMPACT
1% AEP DESIGN EVENT
OPTION A

EUNONY BRIDGE

MURRUMBIDGEE RIVER

EUNONY BRIDGE ROAD

GUMLY ROAD

STURT HWY

INSET

INSET

KOONINGAL ROAD

TASMAN ROAD

BAKERS LANE

N

Proposed Development Option A

Impact Contours

Peak Flood Level Impact (m)

No Longer Flooded

-0.20 - -0.10

-0.10 - -0.01

-0.01 - 0.01 (Not Shown)

0.01 - 0.05

0.05 - 0.10

0.10 - 0.20

Newly Flooded

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact_Assessment/Figure_03_1aep_impacts.mxd

FIGURE 4

PROVISIONAL HYDRAULIC HAZARD
1% AEP DESIGN EVENT
OPTION A

EUNONY BRIDGE

MURRUMBIDGEE RIVER

HAMMOND AVENUE

EUNONY BRIDGE ROAD

GUMLY ROAD

STURT HWY

KOONINGAL ROAD

TASMAN ROAD

BAKERS LANE

N

Proposed Development Site

Provisional Hydraulic Hazard

Low Hazard

High Hazard

Hazard classification shown on this figure has been determined based on the NSW Floodplain Development Manual given Velocity and Depth. Other factors that contribute to flood risk have not been considered in preparing this figure.

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact Assessment/Figure 04 1aep haz.mxd

FIGURE 5

PEAK FLOOD LEVEL IMPACT
5% AEP DESIGN EVENT
OPTION B

EUNONY BRIDGE

MURRUMBIDGEE RIVER

EUNONY BRIDGE ROAD

GUMLY ROAD

0.01

0.02

0.02

0.03

STURT HWY

N

Impact Contours

Proposed Development Option B

Velocity Vectors (m/s)

- 0.025 - 0.5
- 0.5 - 1
- 1 - 2.5
- > 2.5

Peak Flood Level Impact (m)

- No Longer Flooded
- -0.20 - -0.10
- -0.10 - -0.01
- -0.01 - 0.01 (Not Shown)
- 0.01 - 0.05
- 0.05 - 0.20
- 0.20 - 0.50
- Newly Flooded

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact_Assessment/Figure_05_5aep_OptB_impacts.mxd

FIGURE 6

PROVISIONAL HYDRAULIC HAZARD
5% AEP DESIGN EVENT
OPTION B

EUNONY BRIDGE

MURRUMBIDGEE RIVER

EUNONY BRIDGE ROAD

GUMLY ROAD

STURT HWY

TASMAN ROAD

BAKERS LANE

N

Proposed Development Option B

Provisional Hydraulic Hazard

Low Hazard

High Hazard

0 250 500 1,000 m

Hazard classification shown on this figure has been determined based on the NSW Floodplain Development Manual given Velocity and Depth. Other factors that contribute to flood risk have not been considered in preparing this figure.

J:/Jobs/111007/ArcView/ArcMaps/Impact_Assessment/Figure_06_5aep_OptB_haz.mxd

FIGURE 7
PEAK FLOOD LEVEL IMPACT
1% AEP DESIGN EVENT
OPTION B

HAMMOND AVENUE
KOONINGAL ROAD
EUNONY BRIDGE ROAD
GUMLY ROAD
STURT HWY
TASMAN ROAD
BAKERS LANE
0.02
0.03
0.04
0.05

N

Impact Contours
Proposed Development Option B

Velocity Vectors (m/s)
0.025 - 0.5
0.5 - 1
1 - 2.5
> 2.5

Peak Flood Level Impact (m)
No Longer Flooded
-0.21 - -0.10
-0.10 - -0.01
-0.01 - 0.01 (Not Shown)
0.01 - 0.05
0.05 - 0.20
Newly Flooded

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact_Assessment/Figure_07_1aep_OptB_impacts.mxd

FIGURE 8
PROVISIONAL HYDRAULIC HAZARD
1% AEP DESIGN EVENT
OPTION B

EUNONY BRIDGE
MURRUMBIDGEE RIVER
HAMMOND AVENUE
EUNONY BRIDGE ROAD
GUMLY ROAD
STURT HWY
KOONINGAL ROAD
TASMAN ROAD
BAKERS LANE

N

Proposed Development Option B

Provisional Hydraulic Hazard

Low Hazard

High Hazard

Hazard classification shown on this figure has been determined based on the NSW Floodplain Development Manual given Velocity and Depth. Other factors that contribute to flood risk have not been considered in preparing this figure.

0 250 500 1,000 m

J:/Jobs/111007/ArcView/ArcMaps/Impact Assessment/Figure_08_1aep_OptB_haz.mxd

FIGURE 9

PEAK FLOOD LEVEL IMPACT
0.2% AEP DESIGN EVENT
OPTION B

EUNONY BRIDGE

MURRUMBIDGEE RIVER

HAMMOND AVENUE

EUNONY BRIDGE ROAD

GUMLY ROAD

STURT HWY

100

001

KOONINGAL ROAD

TASMAN ROAD

BAKERS LANE

N

Impact Contours

Proposed Development Option B

Peak Flood Extent

Peak Flood Level Impact (m)

No Longer Flooded

-0.20 - -0.10

-0.10 - -0.01

-0.01 - 0.01 (Not Shown)

0.01 - 0.05

0.05 - 0.10

0.10 - 0.20

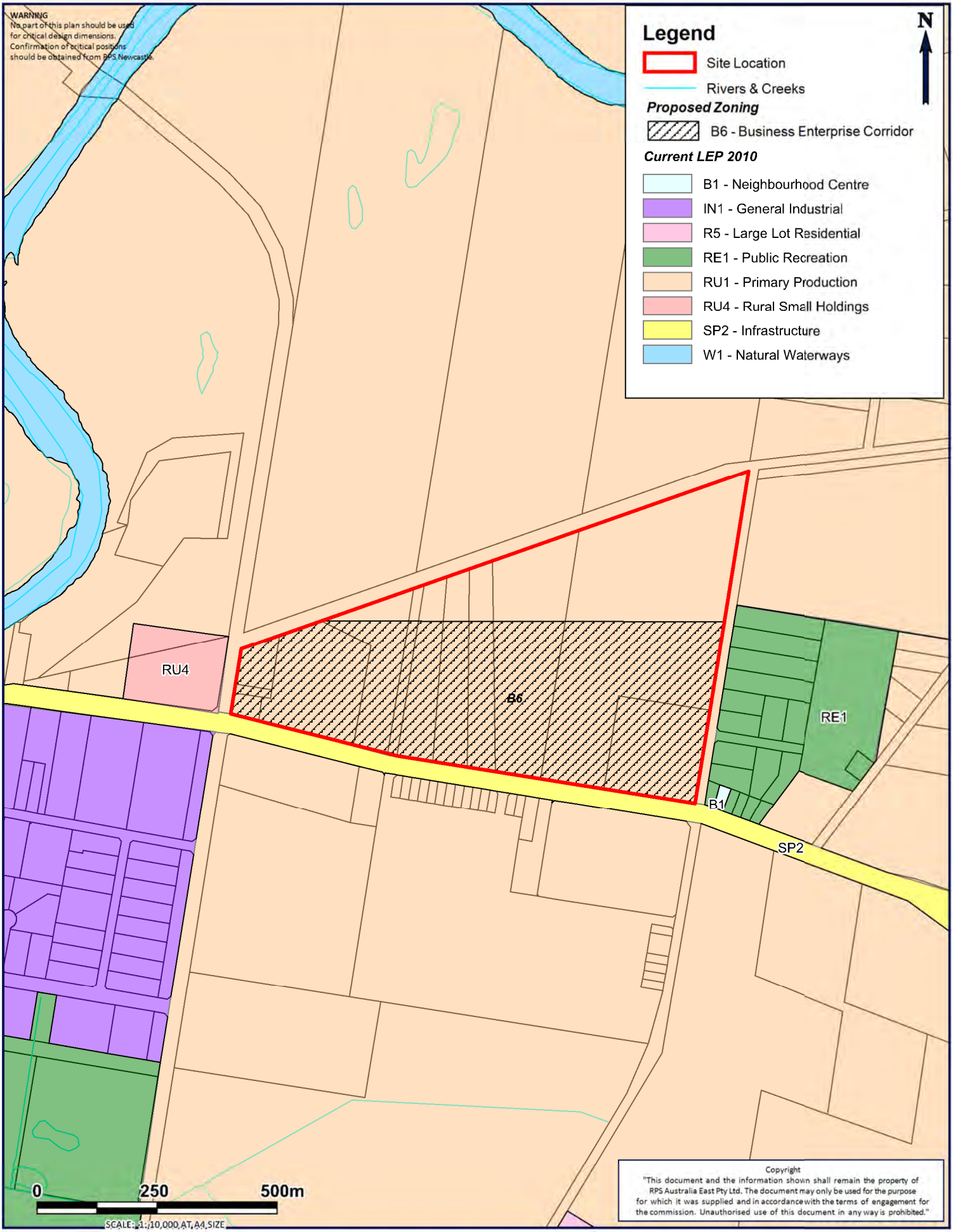
Newly Flooded

0 250 500 1,000 m

J:/Jobs/2700/ArcView/ArcMaps/Impact Assessment/Figure_09_Peak_Flood_Impacts.mxd

Appendix E

Proposed Rezoning Plan



TITLE: LOCAL ENVIRONMENTAL PLAN 2010 DRAFT AMENDMENT NO1

LOCATION: GUMLY GUMLY INDUSTRIAL PARK

DATUM: (GDA 94)
PROJECTION: MGA ZONE 55

DATE: 26/10/2011
PURPOSE: REZONNING

LAYOUT REF: C:\\Documents\Mapinfo\ 106517-2 Wagga Wagga
VERSION (PLAN BY): A A4 (NL-NW)

CLIENT:
JOB REF: 106517-2

RPS AUSTRALIA EAST PTY LTD (ABN 44 140 292 762)
241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4940 4200 F: 02 4961 6794 www.rpsgroup.com.au

RPS

Appendix F

Macroplan Economic Report

MacroPlan Australia
Setting New Standards

Gumly Gumly Industrial Estate | Market Needs Assessment | Final Report

Final Report

April 2009

PREPARED FOR Lennon Salvestro Planning

MACROPLAN AUSTRALIA PTY LTD
SYDNEY | MELBOURNE | BRISBANE | PERTH

Contact Information

PROJECT DIRECTOR
Wayne Gersbach (NSW, Manager)
SYDNEY

REPORT CONTACT/S
James Turnbull (Senior Consultant, Economics)
SYDNEY
Wayne Gersbach (NSW, Manager)
SYDNEY

Signed[+]

.....
Dated 9/4/09

SYDNEY
Suite 1002
Level 10, 45 Clarence Street,
Sydney, NSW. 2000
t. 02 9299 8988
f. 02 9299 5664

MELBOURNE
Level 4, 356 Collins Street
Melbourne, Vic. 3000
t. 03 9600 0500
f. 03 9600 1477

BRISBANE
Suite 28, Level 7
320 Adelaide Street
Brisbane QLD 4000
t. 07 3010 9240
f. 07 3010 9640

PERTH
Suite 5, Level 2
28 Ord Street
West Perth WA 6005
t. 08 9321 8004
f. 08 9324 2006

e. info@macroplan.com.au
w. www.macroplan.com.au

[+] This document has been reviewed by the General Manager of NSW, MacroPlan Australia.
This document is for discussion purposes only unless signed and dated by the person(s) identified.

Disclaimer

Contents

1 Executive Summary

MacroPlan Australia has been commissioned by Lenon Salvestro Planning on behalf of landowners in Wagga Wagga to prepare a submission to the City of Wagga Wagga Council in relation to the new comprehensive Wagga Wagga Local Environmental Plan (LEP) 2008 currently on exhibition.

The submission seeks the inclusion of the lands located at Lot 1 DP 305732 and Lot 1 DP 1085667, 3870 Sturt Highway, Gumly Gumly in the Wagga Wagga LEP 2008 as IN2 – Light Industrial zoned land. The subject lands are about 5km from the Wagga Wagga city centre and total approximately 20ha.

The rezoning of the subject lands at Gumly Gumly has the potential to provide numerous benefits to the City of Wagga Wagga, provide diversity in the industrial lands market and provide Gumly Gumly Village with a key activity generating node that will become a gateway to Wagga Wagga. The subject site is currently owned by several landowners who have expressed a collective interest in developing the land. Therefore the ideals can be achieved through a well designed, high amenity master planned estate which can be brought to fruition through a clear site specific DCP. This would also address any site specific access or flood mitigation issues. While the subject lands are slightly flood prone many industrial land precincts in the major capital cities also exhibit these characteristics and they are able to be mitigated through flooding procedures outlined in the relevant planning controls.

The Gumly Gumly estate has the potential to service a niche market of industrial users similar to those that have already begun to develop or have approval to develop in the locality, such as the Riverina Marine Centre and the approved Liverpool exhaust factory. Furthermore, Hutcheon and Pearce are intending to relocate their John Deere premises in Moorong Street to this location and Rundles Auctions are intending to develop an auction house, while other applications have recently been considered by Council for sales and service of agricultural machinery on and within the vicinity of the site. This demonstrates the market attractiveness of these lands for larger scale or agricultural machine and equipment sales and servicing. These types of industrial users are not necessarily willing to locate within existing industrial land precincts or at the proposed Bomen industrial precinct, as they operate most effectively when located upon major roads with quality visual appeal and easy access.

The Wagga Wagga Industrial Land Study demonstrated that there was a significant shortage of industrial land supply within Wagga Wagga. Only two of the three existing industrial precincts have vacant lands for development and the study identified several other parcels for investigation to absorb future industrial land demand. The Draft Wagga Wagga LEP 2008 has indicated an intention to rezone well over 1500ha of land for industrial purposes and this land bank is more than capable of servicing the long term future needs of Wagga Wagga. However the medium term (5-10yrs) land supply outside of the massive Bomen precinct as well as the short term and readily available supply is very limited. Any delays in servicing the medium term land means that there is a risk of a 'gap' in the supply of suitable industrial land for development. This could potentially stagnate the growth of some industry sectors within Wagga Wagga and result in leakage of investment and employment, as well as ensuring industrial land prices remain competitive.

Therefore when considered in the context of current and proposed industrial land supplies, it is clear that the subject lands could:

- Fulfil an important short term need for Wagga Wagga by satisfying 2-3 years worth of growth (based upon take up rates of 8-10 ha per year)

- Free up room in other industrial land precincts which may have limited short to medium term supply and;

- Allow other precincts to intensify development according to their existing profiles eg. Bulky precincts, auto-motive repairs, food & beverage manufacturing, agri-business or transport and distribution.

The Gumly Gumly village served an important role in the Wagga Wagga landscape in years past but as with many semi-rural areas there has been a gradual decline in the housing stock and community facilities as Wagga Wagga has intensified. The recent closure of the local school is another example of this change. The reality is that the subject lands will remain as they are unless they experience a change in their potential uses and the decline in the area will become more apparent. A modern, high amenity industrial estate has the potential to revitalise the Gumly Gumly village and reshape its character. The employment generating uses should provide a catalyst for development within the broader area and benefit local residents by providing uplifts in residential land prices and furthermore, there could be broader intensification of these niche uses in the area.

Therefore when considered in the context of identifying those potential industrial locations that will strategically drive Wagga Wagga's competitiveness, MacroPlan considers that the subject lands at Gumly Gumly will:

- Act as a catalyst for further activity around the Gumly Gumly area.

- Create flow on benefits for the Wagga Wagga community through job creation on site, in construction and along the economic supply chain.

- Allow immediate investment in the short term to flourish in Wagga Wagga, as one developer has already expressed desire to build an auction house and another (John Deere) intends to construct a large purpose designed and built agricultural machinery display and sales centre (the first of its kind in the country).

- Provide a master planned solution which will create critical mass and efficiencies of operation and resource usage and provide a gateway development to Wagga Wagga.

- Facilitate movement and utilise quality infrastructure afforded by the Sturt Highway.

- Provide synergies with the existing uses such as the marine retailer to the south of the Sturt Highway and the East Wagga Wagga Industrial precinct.

- Form a natural extension and limit to the East Wagga Wagga industrial precinct.

- Positively impact upon the residential community by providing uplift in residential land prices.

- Achieve quality Triple Bottom Line Outcomes.

    - Economic: Efficiencies of operation, job generation, job containment, increased Council revenue streams, increased local investment and development catalyst.

    - Social: Benefits to the public realm, increased community expenditure, health and safety, job generation and employment opportunities.

    - Environmental: Visual Impacts/Amenity (direct), Integration with existing land use environment (direct), mitigation of environmental impacts (indirect).

Therefore based upon these findings of the assessment above, MacroPlan consider the subject lands should be rezoned from RU1 – Primary Production to IN2 – Light Industrial in the gazetted Wagga Wagga LEP 2008.

2 Introduction

2.1 Scope of Report

MacroPlan Australia has been commissioned by Lenon Salvestro Planning on behalf of several landowners in Wagga Wagga to prepare a submission to the City of Wagga Wagga Council in relation to the new comprehensive Wagga Wagga Local Environmental Plan (LEP) 2008 currently on exhibition.

The submission seeks the inclusion of the lands located at Lot 1 DP 305732 and Lot 1 DP 1085667, 3870 Sturt Highway, Gumly Gumly in the Wagga Wagga LEP 2008 as IN2 – Light Industrial zoned land.

The subject lands are about 5km from the Wagga Wagga city centre and total approximately 20ha. The subject lands are shown in the figure below:

Figure 1. Subject Lands

Source: Lennon Salvestro Planning (2008)

2.2 Methodology

This submission aims to demonstrate to Council that the subject lands should be considered for rezoning from RU1 – Primary Production to IN2 – Light Industrial. MacroPlan's investigations will consider potential economic advantages, market demand and both current and proposed supply capacities to determine the net benefits associated with rezoning the land for the Master planned outcomes to be delivered.

2.3 Information Sources

The following information sources have been referred to in this report:

- 2006 Wagga Wagga Industrial Land Study – Hill PDA (WWILS)
- 2007 Wagga Wagga Spatial Plan – City of Wagga Wagga Council (Spatial Plan)
- 2008 Draft Wagga Wagga Local Environmental Plan (LEP)
- 2008 Wagga Wagga Economic Profile, AEC Group
- Australian Bureau of Statistics
- Savills Research

2.4 Abbreviations

ABS – Australian Bureau of Statistics

ACT – Australian Capital Territory

LEP – Local Environmental Plan

LGA – Local Government Area

NSW – New South Wales

SLA – Statistical Local Area

2.5 Report Limitations

The information in this report has been obtained from, and opinions herein are based on, sources believed to be reliable. Although great care has been taken to ensure accuracy and completeness in this report, MacroPlan Australia Pty Ltd has not independently verified and does not accept responsibility for its completeness and accuracy of the factual information on which its opinions and assumptions are based.

Further, as the report involves future forecasts, it can be affected by a number of unforeseen variables. It represents for the party to whom or which it is addressed the best estimates of MacroPlan Australia Pty Ltd, but MacroPlan Australia Pty Ltd can give no assurance that any forecasts will be achieved.

- 2006 Wagga Wagga Industrial Land Study – Hill PDA (WWILS)
- 2007 Wagga Wagga Spatial Plan – City of Wagga Wagga Council (Spatial Plan)
- 2008 Draft Wagga Wagga Local Environmental Plan (LEP)

3 Background & Literature Review

MacroPlan has addressed the findings of three key documents in terms of their potential influence on the amount and type of land zoned for industrial purposes under the Draft Wagga Wagga LEP 2008. The documents are:

- 2006 Wagga Wagga Industrial Land Study – Hill PDA (WWILS)
- 2007 Wagga Wagga Spatial Plan – City of Wagga Wagga Council (Spatial Plan)
- 2008 Draft Wagga Wagga Local Environmental Plan (LEP)

The WWILS was undertaken by Hill PDA to allow Council to plan for future industrial land growth across the Wagga Wagga LGA. This study informed both:

- The Spatial Plan – which contains guiding principles, a structure plan outlining the spatial nature of development and an infrastructure strategy outlining future infrastructure needs for Wagga Wagga.
- The LEP – the legislated planning document through which future development is controlled and encouraged

The Spatial Plan is a guiding document while the LEP, once gazetted, will direct development within the Wagga Wagga LGA for the medium term to long term.

MacroPlan note that the Hill PDA study has several limitations and therefore the implications for the LEP need to be considered.

3.1 Wagga Wagga Industrial Land Study

The Wagga Wagga Industrial Land Study (WWILS) was prepared for Council in 2006 by Hill PDA. The report was commissioned to examine the implications of the following:

- *The existing land bank for small lot development and light industry is limited and much of it is subject to flooding from the Murrumbidgee River;*
- *The existing industrial land bank for lots between 2 and 5 hectares is also limited and much of it is subject to flooding;*
- *The existing land bank for large multi-hectare sites is not compatible to some industries due to the undulating landform;*
- *The Council does not have a comprehensive strategy for the provision of industrial lands beyond those existing;*
- *The Council wishes to support local industry and attract new employment generators to strengthen the local and regional economy.*

The report acknowledges that the City of Wagga Wagga has limited reserves of industrial land for future development. It considers the existing supply and realistic supply of vacant land in these precincts. The WWILS identifies three existing industrial areas - Dobney Avenue, East Wagga Wagga and Bomen.

- Dobney Avenue is centred on highway frontage and is the oldest industrial area in Wagga Wagga. The area is basically fully developed; any new development would involve the demolition of existing buildings and the potential intensification of land at this stage.
- East Wagga Wagga has a number of locational advantages, however, *despite these benefits there is a considerable area that is flood affected.*
- Bomen is the newest and largest of the existing industrial precincts in Wagga Wagga and still has large areas available for subdivision and development. Generally, the report found these areas in private ownershioep, although it was unclear when, or even if, they would be developed. The service capacity of Bomen was also unclear.

The WWILS also identified a number of sites within 15kms of the Wagga Wagga town centre for future consideration as industrial lands. These include Copland Street south side, Sturt Highway north side (Forest Hill), Riverina FARM (Bomen), Elizabeth Avenue near the airport and Uranquinty.

- Copland Street south side is a 30ha site that is already zoned industrial. The site is 'generally flood free' with infrastructure available. While the bulk of the site is in single ownership, it is uncertain if the owner has any intention of developing the site in the short to medium term.
- Sturt Highway north side is next to the subject site in Gumly Gumly. Again, the site is 'generally flood free'. The site would need to be rezoned for industrial use and it is unclear whether the site is or able to be serviced.
- Riverina FARM is part of the existing Bomen industrial estate and has approximately 100ha of undeveloped land. Again the land is generally flood free with a rezoning required for industrial uses. The land currently has one owner, however it is unclear when or if the land will be subdivide and developed. It is also unclear if the land is serviced.
- Elizabeth Avenue is approximately 400ha of generally flood free land. A rezoning will be required and the land is unserviced with servicing costs requiring further investigation.
- Uranquinty is just over 10kms from Wagga Wagga. While the land is flat and cleared with power and gas available, the site will need to be rezoned and given the relative distance from Wagga Wagga, this site may be less attractive than other options.

All of the sites identified as potential industrial land share a common issue that could impact the timing and delivery. The WWILS notes that Council is unable to compulsorily acquire land for commercial purposes and existing owners may not be motivated to develop their land. One potential solution listed in the WWILS is to *ensure a strong supply of vacant industrial zoned land and hope that sufficient competition between multiple land owners will maintain a healthy supply.*

Notably, the WWILS report identifies, "*an inability to provide an objective basis for estimating 'wildcard' demand for industrial land, which points to the need for a flexible approach to industrial land planning. In particular, there should be a capacity to respond to individual proposals, particularly for a 'base industry' that can provide significant employment either directly or indirectly through multiplier impacts."*

The WWILS also states that industrial land prices have risen significantly in the Wagga Wagga area in recent years, indicating strong demand for and the potential undersupply of industrial lands. The report notes, "*a large 'surplus' of industrial zoned land is necessary to ensure adequate competition between land owners and developers in order to keep a check on price rises. Recent rises in values is partially attributable to the lack of options for development."*

MacroPlan considers that rezoning of the subject site to industrial purposes will help address these supply shortfalls identified by the WWILS.

Whilst the WWILS made use of the most appropriate population projections and up-to-date population data at the time, new data from the 2006 Census have shown that the projections in the WWILS have in the short-term, and maybe over the medium to longer term, underestimate the need for industrial land.

The WWILS has based its forecasts upon population projections from the Transport and Data Centre of the NSW Department of Planning (DoP) (2004 release). While these forecasts were appropriate at the time of the study, more recent actual population estimates are available, from the 2006 Census and more recent population projections from the ABS 2008 publication 3222.0. In short the WWILS underestimated actual population growth between 2001 and 2006 by about 2,000 persons, and underestimated the growth rate by almost 60%.

Furthermore, when transforming employment growth into an estimate of future demand Hill PDA have used metropolitan benchmarks that are not necessarily accurate for Wagga Wagga. The WWILS estimates demand is 146ha in 2006, while occupied industrial land amounts to 276ha. While Hill PDA acknowledge this discrepancy, they simply dismiss it and just rely on the projected growth to estimate the future requirement for industrial lands, which in itself has been underestimated. Thus, clearly the demand modelling undertaken is significant underestimating the on-ground realities with Wagga Wagga and therefore the conclusions drawn need to be reconsidered. These issues are elaborated upon in further detail in section 4.2 of this report.

3.2 Wagga Wagga Spatial Plan 2007

The Wagga Wagga Spatial Plan 2007 (Spatial Plan) outlines the key directions for the future development of Wagga Wagga. The Spatial Plan contains guiding principles, a structure plan outlining the spatial nature of development, and an infrastructure strategy outlining future infrastructure needs for Wagga Wagga.

Relating to industrial development, the Spatial Plan identified approximately 60ha of vacant developable industrial land and 20ha of underdeveloped or underutilised land in Wagga Wagga (excluding Bomen). Some of this land is constrained in terms of fragmented land ownership or environmental issues. The Spatial Plan identified an annual take of 4-5ha of industrial land within Wagga Wagga, noting that growing demand has not been accompanied by increases in supply.

The Spatial Plan identifies several areas as having potential for new industrial development. These included Bomen, Edison Road, Copland Street South, Hammond Avenue North, and Airport East/Elizabeth Avenue. These areas were selected on the basis of specific selection criteria including criteria for different industry types; strategic clustering opportunities; servicing capacity and fiscal responsibility; and environmental constraints (e.g. flooding, bushfire).

Although the Spatial Plan did not identity the subject lands as having industrial potential, MacroPlan believes the site does satisfy a number of selection criteria:

- It is approximately 6km east of Wagga Wagga Town Centre;
- It is located on a main highway, providing excellent road access and rail access, given the relative proximity to rail
- The site is close to the airport, which is about 6km to the south-east of the site, thus affording possible synergies.
- It will form a logical extension of existing industrial zoned land to the west along the Sturt Highway, enabling a clustering opportunity of existing industrial uses;

- It provides relatively flat land and sufficient land area for a number of potential industrial uses, including light manufacturing, transport/warehousing, office park/bio-tech, and bulky goods retail;
- It is already serviced by electricity, gas and telecommunications, whilst augmentation may be needed for existing water and sewer services;
- The site does not contain sensitive vegetation or cultural values, and is not located on bush fire prone land;
- Although the site is located within the Murrumbidgee River floodplain, effective flood-mitigation measures can allow development to occur; as has occurred elsewhere in the City of Wagga Wagga and;
- Effective buffering will ensure potential land use conflicts are minimised.

Importantly, the subject lands adjoin the small village of Gumly Gumly. The development for employment uses would provide a significant opportunity to build upon the existing village and assist in its long term future.

Given that the subject site is approximately half way between the airport and Wagga Wagga CBD, it is viewed as an appropriate location to provide further employment land within the LGA, especially since it is adjacent to existing industrial zoned land along the Sturt Highway.

In MacroPlan's view the subject lands meets the selection criteria utilised by the spatial plan to identify potential industrial land.

3.3 Draft Wagga Wagga Local Environmental Plan 2008

The *draft Wagga Wagga Local Environmental Plan 2008 (draft Wagga Wagga LEP 2008)* is currently on public exhibition until April 2009. Subject to NSW Department of Planning approval, the document will be in force later this year.

Proposed Industrial Zoning for Wagga Wagga

An analysis of the *draft Wagga Wagga LEP 2008* indicates that the identified areas (under the Spatial Plan 2007) of Bomen, Edison Road, Copland Street North and Hammond Avenue North have been rezoned to either IN1 or IN2. However the identified potential areas of Airport East and Elizabeth Avenue have not been rezoned under the *draft Wagga Wagga LEP 2008.*

The proposed industrial zones under the *draft Wagga Wagga LEP 2008* are IN1General Industrial and IN2 Light Industrial. These land zonings are generally located within the bounds of Wagga Town Centre, along the Sturt Highway (in proximity to the subject site), and the proposed Bomen Business Park.

The IN1 General Industrial zone permits a range of industrial and warehouse land uses, subject to consent from Council. These include Depots; Freight transport facilities; Light industries; Neighbourhood shops; Take away food and drink premises; Warehouse or distribution centres.

The IN2 Light Industrial zone permits a range of light industrial, warehouse and related land uses, subject to consent from Council. These include Depots; Light industries; Neighbourhood shops; Take away food and drink premises; Warehouse or distribution centres.

Proposed Zoning for Subject Site

The proposed zoning for the subject site under the Draft LEP is RU1 Primary Production (refer to the figure below). The main purpose of this zone is to encourage primary production and associated industries. Permissible uses within the RU1 Primary Production zone include Environmental protection works; Extensive agriculture; Home businesses; Home occupations; Roads, Bed and breakfast accommodation; Cellar door premises; Dwelling houses; Extractive industries; Farm buildings; Farm stay accommodation; Home industries; Kiosks; Markets; Mining; Roadside stalls; and Rural industries. The proposed industrial uses for the Gumly Industrial Estate would therefore require a site rezoning to either IN1 General Industrial or IN2 Light Industrial.

Figure 2. Draft LEP Zoning – Subject Site

Source: Wagga Wagga City Council 2008

Water Sensitive and Flood Liable Land

The subject site is classified as being within a water sensitive area. Clauses 7.5 and 7.6 of the *draft Wagga Wagga LEP 2008* require that development of such land must demonstrate that t will not have an adverse impact upon existing waterways and ground water extraction.

Further, Clause 7.2(4) of the *draft Wagga Wagga LEP 2008* outlines provisions relating to development on flood prone land (1:100ARI). The site is considered to be within a 1:100 flood prone area (the Murrumbidgee River floodplain). Council will not consent to a proposal unless it is satisfied that the development will not adversely affect existing flood behaviour, flow distributions, and the floodplain environment.

It should be noted that industrial uses are generally considered low-risk development on flood-prone land. Ensuring development is 500mm above the flood level will conform to Council's requirements. In addition, effective flood mitigation measures and adequate flood alert and evacuation routes may allow industrial development to occur on flood prone land. These may also include measures relating to controlling overland flows and appropriate road and drainage design.

While the subject lands are slightly flood prone many industrial land precincts in the major capital cities also exhibit these issues which are able to be mitigated through flooding procedures outlined in the relevant planning controls above. The subject site is also low hazard.

4 Market Assessment

4.1 Demand Drivers

While the Wagga Wagga industrial market does not have the level of critical mass of capital cities such as Brisbane, Sydney, Melbourne or Canberra/ACT, similar drivers and trends will be applicable to the Wagga Wagga market. Industrial markets are generally driven by population growth and macro economic conditions including industry structure, as well local area idiosyncrasies such as local labour force structure and infrastructure.

4.1.1 Economic & Industrial Land Trends

Notwithstanding the current economic downturn, there are several drivers of current industrial land demand across Australia's cities and regional centres. These drivers vary across locations and industrial precincts. MacroPlan has reviewed indicators related to these drivers including:

- Regional economic structure;
- Accessibility to major access routes such as the Sturt Highway
- Land values (across Wagga Wagga LGA and in comparison to the rest of NSW);
- Potential to accommodate a mix of industrial uses;
- Access to relevant labour forces;
- Changes in industrial structure which have for example have resulted in the growth of freight and logistics distribution centres, resulting in larger floor area requirements;
- Population growth driving demand for local services including auto repairs, building supplies, hardware, nurseries etc.
- Economic restructuring resulting in the relative decline in manufacturing and growth of business parks integrating production, research, administration, distribution and sales.

The current drivers of industrial activity have resulted in new product submarkets and geographic submarkets which in turn have resulted in new industrial land requirements. Some of the implications of theses submarkets can be summarised as:-

- Increased demand for industrial land in particular lot sizes
- Industrial production driving requirements for large land areas (with expansion potential) which are often effectively not available (i.e. no land supply, uncompetitive price),
- demand for access to infrastructure (road or rail)
- demand for integrated industry/office/warehouse land which is not accessible to relevant (white and blue collar) labour forces;
- A shift towards a service sector economy resulting in conversion of existing industrial land to service industrial sector;
- A lack of supply of modern rental space for small, medium and large users;
- The new importance of key infrastructure, such as possible future rail developments

- Land opportunities on existing zoned sites to accommodate company restructure and generate new agglomerations and business linkages.

While Sydney and Melbourne are the major markets in Australia, growing regional centres such as Wagga Wagga have the potential to provide industrial solutions in comparative advantage sectors. With significant investment in defence, education and the proposed intermodal terminal at Bomen facilitating distribution towards the major capital cities of southern Australia, Wagga Wagga is reaching a critical mass of population that should drive a broader more traditional industrial development base.

4.1.2 Current Economic Downturn

The trends identified above have prevailed across Australia's industrial land markets over the past 5-10 years. Despite strong evidence of economic downturn generally across overseas countries and Australia certain sectors of the national economy remain fundamentally strong. The return of the Australian dollar, for example, back to a more 'stable' levels of between 60 and 70 US cents has buoyed the competitiveness of Australia's export driven agricultural and food manufacturing sectors, coinciding with more favourable weather and environmental conditions.

Essentially, current economic circumstances point to strong opportunities for the significantly sized and fast growing regional economies such as Wagga Wagga to capitalise upon forecast growth in sectors such as agriculture, service sector industrial (such as the sale of equipment servicing the local agricultural sector) and transport and distribution.

While the downturn is only expected to worsen over the coming year and job losses are expected to mount, there is evidence that Wagga Wagga is pushing through the current downturn. Notably, one-third of the Wagga Wagga workforce are employed in the somewhat 'recession-proof' industries of public administration/government (12%), education (10%) and healthcare (12%).

In essence, if there are parties interested in bringing a particular site to development, they should be encouraged to do so and any investment in local industry at this point in the cycle can only place Wagga Wagga in as strong position coming out of the downturn.

4.1.3 Key Strengths of Wagga Wagga

Wagga Wagga is well placed to ride through the economic downturn, given the strength of the employment base in its economy. There are several other key comparative advantages that Wagga Wagga provides, which has implications for the demand for industrial lands. These include:

- Attractive industrial land prices ($70-90/m2 for smaller lots, $20-50/m2 for larger lots). Although these have been increasing on the back of shortages of supply and a prospective land bank. An indication of good demand as well.

- Strategic Location & Quality Infrastructure

    - Road – Wagga is strategically located to service the Melbourne, Sydney, Canberra and South Australian markets, and is located on the intersection of the Sturt and Olympic Highways

    - Rail – Wagga is currently serviced by the main southern rail link in NSW, with linkages to the Port of Melbourne. The proposed intermodal facility at Bomen will only serve to increase the strategic importance of Wagga in the national supply distribution chain. The industrial lands around Bomen should be accodoate businesses requiring access to this network

- Agriculture (especially sheep, cattle and grain farming sectors) has long been a backbone of the economy
- Defence plays a significant role, with Kapooka army recruit training facility and RAAF training base both located in the area
- Manufacturing (specifically food and beverage) manufacturing plays an important part in the local economy, being a significantly contributor to regional GDP and a major employer
- Skilled workforce and relatively low unemployment compared with rest of NSW

All of these factors will serve to drive industrial land demand and investment in Wagga Wagga in ways that are not necessarily quantifiable through standard employment growth or GDP growth modelling.

The following section estimates the demand for industrial lands based upon growth in employment of industrial land users.

4.2 Demand Assessment

This section of the report assesses recent trends in industrial land demand within Wagga Wagga and the size of the market. MacroPlan has used a labour force need approach to determine the future requirement for industrial land within Wagga Wagga. This approach assesses the forecast growth in population, labour force and changes in the composition of labour force and equates it to a land requirement. MacroPlan also considers key national benchmarks including averages of industrial land per worker.

The estimates of population and employment growth, and subsequently, demand for industrial land from the WWILS are compared with estimates generated by MacroPlan. This step has been undertaken to highlight that there may be more significant demand for industrial land than anticipated within the WWILS.

4.2.1 Population Growth

The WWILS has based its forecasts upon population projections from the Transport and Data Centre of the NSW Department of Planning (DoP) (2004 release). While these forecasts were appropriate at the time of the study, more recent actual population estimates are available, from the 2006 Census and more recent population projections are available, from the ABS 2008 publication 3222.0.

To demonstrate that the population projections used by Hill PDA may significantly underestimate future population, and therefore employment growth, an assessment of their projected growth between 2001 and 2006 has been undertaken. This has been compared with actual ABS Census Estimated Resident Population (ERP) over the same period.

Based upon the NSW DoP (Hill PDA) population projections the Wagga Wagga population was forecast to grow by 54,852 persons to 57,920 persons over the period 2001 to 2006, or by 3,068 persons (1.1% per annum). According actual ABS Census data, the population grew at almost 1.5 times this rate at about 1.8% per annum, increasing from 54,852 persons in 2001 to 59,908 persons in 2006, or by 5,056 persons, thus resulting in a discrepancy of some 2,000 persons.

The projected growth in population for the Wagga Wagga LGA is highlighted in the following table.

Table 1. Population Growth Estimates

	2006	2011	2016	2021	2026	Increase	Average Annual Growth Rate
WWILS	57,920	59,110	60,430	61,950	63,520	5,600	0.46%
MacroPlan (ABS Forecasts)	59,908	63,757	67,514	71,300	75,099	15,191	1.14%

Source: WWILS, ABS

4.2.2 Employment Growth by Occupation

Growth in employment will be driven primarily by projected growth in population. Obviously if the population increases and the participation rate and unemployment rate remain relatively consistent, then employment will grow. The table below highlights the growth in labour force, assumes a consistent participation rate and translates this to estimated growth in full-time equivalent jobs.

In order to understand the growth in employment for industrial land users, the growth of blue collar jobs has also been estimated. See table below.

Table 2. Blue Collar Employment Growth

	2006	2011	2016	2021
Population	59,908	63,757	67,514	71,300
Population aged 15+	46,685	49,685	52,613	55,563
Participation rate	65%	65%	65%	65%
Labour force	30,528	32,490	34,404	36,333
Worker population (FTE) to Labour force ratio	76%	76%	76%	76%
Total Jobs (FTE)	23,087	24,571	26,019	27,478
Blue collar jobs	**7,652**	**8,986**	**9,515**	**10,991**

Source: ABS

The WWILS (Hill PDA) used a slightly different methodology to estimate demand for industrial land based upon growth in particular industries and estimates total jobs, not total full-time equivalent jobs. The two methodologies are both acceptable and if anything, the Hill PDA methodology should over-estimate demand for industrial land. The two methods cannot be compared at this point due their different units of measure however the following section highlights their implications when employment yields are applied to transform job growth into industrial land demand.

4.2.3 Demand For Industrial Land

When calculating the future demand for industrial lands, the general methodology is to transform the employment growth into a land requirement using employment yield per hectare. The Hill PDA methodology of using metropolitan benchmarks by industry type, by their own admission, may lead to some erroneous estimations of industrial land demand. The employment densities in metropolitan industrial business can be much higher than in regional centres due to the higher land prices requiring more intense and efficient land uses.

The table overleaf shows that the WWILS underestimates demand as at 2006 by approximately 130 ha. Occupied industrial land is estimated to be 276 ha while their demand estimate shows a demand for 146ha. The WWILS acknowledges this shortfall of their methodology but then estimates future take up of industrial land based upon this same methodology, combined with lower than actual population/employment growth projections.

MacroPlan, on the other hand, has translated estimated growth in blue collar employment into an estimate of demand for industrial land using benchmarks of employment yield across Australia.[1] MacroPlan consider a ratio of 25-30 full-time equivalent jobs per hectare to be appropriate for the regional centre of Wagga Wagga.

While not all 'blue collar' workers (e.g. labourers, transport and storage, machinery operators) work on industrial land, there will also be workers in white collar and service sector employment who will work on industrial land. There is increasing evidence of businesses combining many of their activities in one location (ie. office and production facilities), often in land zoned for industrial purposes.

The growth in demand for industrial land is highlighted in the table below and is compared with the WWILS estimates of demand for industrial land. MacroPlan note that their estimate of demand as at 2006 of 288 ha is much closer to the actual supply of occupied industrial land of 276ha.

Table 3. Industrial Land Requirement

	2006	2011	2016	2021
Blue collar jobs	7652	8986	9515	10991
Demand for Industrial Land (ha)				
On site	260	306	324	374
No Fixed Address	28	32	34	40
Total Demand (ha)	**288**	**338**	**358**	**413**
Hill PDA (WWILS)	**146**	**161**	**177**	**n/a**

Source: WWILS, ABS, MacroPlan

MacroPlan estimate the demand for industrial land to increase by over 100ha from 2008, or at a rate of about 8-9ha per year. This is compared with the WWILS estimates which imply a take-up rate of 3 ha per year, "factored up" to 4-5 ha per year.

The discrepancy in these estimates is quite significant. Given that MacroPlan's estimates accurately reflect the current supply on the ground and the growth estimates are cognisant of actual ABS growth between 2001 and 2006. MacroPlan considers that its projections of the demand for industrial land should be given strong consideration and are more likely to occur.

[1] Savills, ABS, MacroPlan

5 Locational Supply Assessment

Suitable land for industrial development generally needs to exhibit several key attributes for it to serve its most effective purpose for the local industrial sector and local economic production. While some industries require land near freight rail linkages, or heavily buffered/isolated land for more intensive purposes, generally industrial land should be located in proximity to major road infrastructure and near a resident labour force and geographically suitable land.

The existing supply of industrial zoned land and the proposed industrial land identified within the Draft Wagga Wagga LEP 2008 are discussed in this section of the report. This is to provide some contextual background to the realistic capabilities of each precinct in terms of supply, but also to provide an understanding of the role these precincts may play in the Wagga Wagga economic framework.

5.1 Existing Supply

There are three main industrial land precincts in Wagga Wagga and a pseudo-industrial precinct in the Riverina FARM precinct. These are discussed below:

- Dobney Avenue is centred on highway frontage and is the oldest industrial area in Wagga Wagga. The area is basically fully developed; any new development would involve the demolition of existing buildings and the potential intensification of land at this stage. The parcel of land is approximately 80ha of which the majority is built out. The amount of vacant land is thus assumed negligible.

- East Wagga Wagga (Copland St) is predominantly used for light industrial, transport & service, wholesaling & storage purposes. The precinct is very well located upon the Sturt Highway and affords good access to the CBD and Airport. While there are still significant amounts of undeveloped land, most of it is flood prone. The precinct totals an area of 224 ha, of which only 42ha in 2005 were deemed vacant and not flood prone.

- Bomen is the newest and largest of the existing industrial precincts in Wagga Wagga and still has large areas available for subdivision and development. The lands will be located adjacent to the proposed intermodal terminal and afford easy access to the Olympic Highway. The industrial zoned part of the precinct totalled 40ha of which only 20 ha were vacant in 2005.

- Riverina FARM is part of the existing Bomen industrial estate. Although it is not actually zoned for industrial purposes, the precinct operates in a quasi-industrial function accommodating agri-business on the developed part of the precinct. Approximately 100ha of the land is undeveloped. The land currently has one owner, however it is unclear when or if the land will be subdivided and developed. It is also unclear if the land is serviced and has. Again the land is generally flood free with a rezoning required for industrial uses.

5.2 Proposed Supply (Draft Wagga Wagga LEP 2008)

While the WWILS was undertaken to inform the Draft Wagga Wagga LEP 2008, three of the four recommended parcels of land identified for investigation have not been included as proposed industrial zoned land. The draft LEP incorporates parcels identified through other Council initiatives though. (ie. Spatial Plan, WISDOM)

The draft LEP essentially identifies further industrial zoned land as extensions of existing industrial precincts in Wagga Wagga. The extensions have been identified at Bomen and East Wagga Wagga.

- Extensions to Bomen: The total amount of industrial zoned land identified by the Draft Wagga Wagga LEP totals 1714ha.[2] Of this 1550ha are IN1 – General Industrial and 164ha are IN2 – Light Industrial. This precinct incorporates the existing 40ha Bomen industrial precinct and Riverina FARM lands.

- While this massive precinct can theoretically supply the Wagga Wagga industrial market for several decades, not all of the land will necessarily be able to be used for industrial development and will service longer term and regional demand. Clearly the lands are earmarked for a very significant regional distribution role based around the Bomen Intermodal terminal. These lands should accommodate businesses directly requiring or supporting this terminal or agri-businesses intensifying the FARM lands.

- Extensions to East Wagga Wagga: The Draft Wagga Wagga LEP also indicates extensions to the East Wagga Wagga precinct, north of the Sturt Highway at Hammond Road.

- The total size of the industrial lands around East Wagga Wagga comprises 368ha. Of this 255ha are intended to be zoned IN1- General Industrial and 133ha are intended to be zoned IN2 – Light Industrial. Of the IN2 lands, 76ha are located at the Edison Road precinct.

5.3 Supply versus Demand

MacroPlan acknowledge that the current supply of industrial land is quite limited across the LGA, with the three main precincts at Dobney[3] Avenue, East Wagga Wagga and Bomen having approximately only 40-50 ha of vacant land supply, which dependent upon take-up rate estimates (ie. 4-5 ha per year from Hill PDA and 8-10 ha per year from MacroPlan) means there are between 4-10 years worth of industrial land supply

An industrial land buffer of 15-20 years is considered to be appropriate to ensure land prices do not increase significantly or constrain investment driven growth. Furthermore, this buffer needs to be sufficient to provide industrial lands at appropriate timeframes.

While the Draft Wagga Wagga LEP 2008 has indicated an intention to rezone well over 1500ha of land for industrial purposes the reality is that not all of this will be developable and servicing of the lands may only occur in the longer term. The table below highlights the supply situation over the short, medium and longer term within Wagga Wagga.

[2] MacroPlan GIS estimate based upon Draft Wagga Wagga LEP 2008 zoning maps

[3] 62ha in 2005 adjusted for take-up rate of 8-10 per year by 2008

Table 4. Industrial Land – Supply

Supply	Total ha	Estimated vacant	Timeframe	Serviced	Notes	Types of uses
Current Supply	**386**	**62**	**n/a**	**n/a**		
Dobney Avenue	80	0	built out	built out	Built out - no supply	Car yards, auto repairs, trades, business services & bulky
East Wagga Wagga	224	42	immediate	Yes	Only 10-15 lots left. Good location/access	Light industrial, transport & service, wholesaling, storage & bulky
Bomen	40	20	immediate	Yes	Good location/access.	Transport & Distribution, manufacturing (food, wool)
Elsewhere	42	0	built out	built out		
Proposed Supply (Draft LEP)	**1,858**	**1,072**	**n/a**	**n/a**		
Bomen	1,714	1,000	Medium & long	No	Will serve long-term and regional role	Transport & Distribution, Warehouse & Storage, Agri-business
Hammond Ave	68	34	medium	Unsure	May need servicing, medium-term	General Industry
Edison Road	76	38	medium to long	Unsure	May need servicing, medium-term	Light Industry
Subject Lands	20	15	short	Yes	Good locatioin/development interest	Auction house/agricultural machinery display/exhaust factory and other agri service and sales

Source: WWILS, MacroPlan, Draft LEP 2008

As can be seen in the table above, the long term land bank of industrial land is more than capable of servicing the future needs of Wagga Wagga, with some 1700 ha of theoretical land supply. The medium term land supply, apart from the massive Bomen precinct is somewhat limited, while the immediate and short term supply is very limited.

As at 2005 when the WWILS was undertaken there were about 62 ha of vacant unaffected industrial lands ready for development. Given growth in the market over the last 3 years, this could have reduced to around 40 ha, which essentially means there is only 4-5 years of short term industrial land. Any delays in servicing the medium term land means that there is a risk of a 'gap' in the supply of suitable industrial land for development.

Therefore when considered in the context of current and proposed industrial land supplies, it is clear that the subject lands could:

- Fulfil an important short term need for Wagga Wagga by satisfying 2-3 years worth of growth (based upon take up rates of 8-10 ha per year)
- Free up room in other industrial land precincts which may have limited short to medium term supply and;
- Allow other precincts to intensify development according to their existing profiles eg. Bulky precincts, auto-motive repairs, food & beverage manufacturing agri-business or transport and distribution.

5.4 Strategic Considerations

When considered in the context of identifying those potential industrial locations that will strategically drive Wagga Wagga's competitiveness, MacroPlan considers that the subject lands at Gumly Gumly will:

- Act as a catalyst for further activity around the Gumly Gumly area.
- Create flow on benefits for the Wagga Wagga community through job creation on site, in construction and along the economic supply chain.
- Allow immediate investment in the short term to flourish in Wagga Wagga, as one developer has already expressed desire to build an auction house and another (John Deere) intends to construct a large purpose designed and built agricultural machinery display and sales centre (the first of its kind in the country).
- Master planned solution which will create critical mass and efficiencies of operation and resource usage and provide a gateway development to Wagga Wagga.
- Facilitate movement and utilise quality infrastructure afforded by the Sturt Highway.
- Provide synergies with the existing uses such as the marine retailer to the south of the Sturt Highway and the East Wagga Wagga Industrial precinct.
- Form a natural extension and limit to the East Wagga Wagga industrial precinct. This aligns with the strategic intentions of Council, who through their proposed zonings of industrial land in the Draft LEP implicitly indicate a desire to expand existing industrial precincts rather than create new precincts. Therefore, this aligns with the principles of preventing ribbon development by collocating with existing industrial lands and similar complementary uses.
- Positively impact upon the residential community. The development for employment uses would provide a significant opportunity to build upon the existing village and assist in its long term viability as a village in the Wagga Wagga hierarchy. A strong employment centre should provide uplift in residential land prices which will be of benefit to local residents. As the ageing stock deteriorates local residents will have an opportunity to benefit from the sale of property. The area could then undergo a natural transformation to higher density housing or provide further employment generating opportunities.

Furthermore, if Council has concerns about the loss of lands for housing purposes, the Spatial Plan (2007) and Draft Wagga Wagga LEP 2008 both indicated significant urban release areas to accommodate future residential growth. It should be noted, Gumly Gumly has not been earmarked as one of the urban growth areas.

The Spatial Plan identifies three release areas for potential residential development – Boorooma East (estimated 544 lots), Estella West (estimated 1,615 lots) and Lloyd (estimated 1,817 lots). These three areas would make up the majority of Wagga Wagga's future residential zoned land. The Spatial Plan does however indicate that the lot yields in the new release areas of Lloyd, Estella West, Boorooma East are indicative only. Site investigations may reveal significant constraints which reduce yields substantially.

While the draft Wagga Wagga LEP 2008 has generally reflected the Spatial Plan's recommendations for new residential release areas at Lloyd, Estella West, Boorooma. However the amount of land rezoned to residential has been reduced, given site constraints. The Estella West release area has been rezoned to R1 General Residential; the Boorooma East area has been partially rezoned to R1 General Residential, with a large portion zoned E4 Environmental Living; and the Estella West area has been partially rezoned to R1 General Residential, with a significant portion rezoned E2 Environmental Conservation.

6 Triple Bottom Line Assessment

In order to understand the net benefits to the community of the proposed Masterplan at 3870 Sturt Highway, as triple bottom line assessment (TBL) has been undertaken. A list of key performance indicators have been selected to conduct this assessment. These indicators are described below and provide the basis for an assessment of the comparative benefits associated with the Masterplan against the base case scenario, where the land zoning remains unchanged.

The proposed development as indicated by the Masterplan is considered to have either direct or indirect impacts on the economy, the community and the environment. Therefore each indicator has been categorised according to whether it is considered to be impacted directly or indirectly by the proposed development.

The aim of the analysis is to identify the overall economic, social and environmental impacts of the development and provide a clear assessment of the sustainability outcomes resulting from the development versus a base case scenario.

With consideration of the City of Wagga Wagga Council and community, the proposed Masterplanned development upon the subject lands was evaluated using several indicators at each bottom line. These indicators are assessed below.

6.1 Economic

Economic efficiencies in operation (direct): The proposed development will offer effective uses of the land. The increased land use density is more economically efficient and the mixture of lot sizes and configurations will provide a diversity that will allow inter-relationships between businesses. All of these factors mean that the proposed Masterplanned development will actively contribute to the regional GDP of Wagga Wagga. The base case scenario, where the land remains unchanged will contribute very little to the economy of Wagga Wagga given the low intensity uses that could realistically be delivered upon the land.

Job generation / job self containment (direct): The land at 3870 Sturt Highway has the potential to support between 400 to 600 direct jobs based upon the expected types of industrial uses that could be delivered upon the lands. Furthermore, the developers of this estate have expressed a keen interest to begin development. Given the current economic climate, this would appear to be a very desirable situation for the Wagga Wagga economy.

The construction phase of the project will also create a significant number of full-time equivalent jobs across the broader community and throughout the economic chain. In general, for every $1 million worth of capital works approximately 9 direct full-time equivalent jobs are created through the construction phase of the project so a $10 million project would create 90 direct jobs per year in construction, plus there would be indirect jobs created along the supply chain and on-going maintenance jobs over the life of the building.

The development will also act as a catalyst for further employment generation within the Wagga Wagga as the regional centre builds its critical mass and intensity. The base case scenario is considered to have a neutral impact upon jobs within the Wagga Wagga community.

Increased local investment and development catalyst (direct): The proposed Masterplanned development will not only attract investment dollars and jobs to Wagga Wagga, but will also become a catalyst for further investment and development. The impacts of industrial land development and strong take-up rates flow through into investor perceptions and other market participants.

Tenants and developers alike looking for industrial premises in an area of strong growth, with quality distribution networks facilitating movement between Melbourne and Sydney would be highly interested to locate to Wagga Wagga if the industrial land take-up rates maintain strength. The base case will not result in improvements in investment and or stimulate economic development within Wagga Wagga.

Increased Rates Revenue (direct): The increased rates revenue that could be generated for the City of Wagga Wagga as a result of the improved zoning of the land would result in increased funds available for distribution. The distribution of these funds is discussed from a social benefit perspective, but from an economic perspective the money could be put towards road and infrastructure projects elsewhere in Wagga or put aside for community programs. The base case scenario would not yield further revenue to the Council and therefore no net additional benefit to the community.

6.2 Social

Benefits to the public realm (indirect): The proposed development has significant potential to provide a modern, well designed gateway employment precinct that could welcome visitors and residents alike into the City of Wagga Wagga. Although these persons may not utilise the precinct, the benefits of a signature entry point to the town should not be underestimated. The base case has a neutral impact upon the public realm.

Increased Rates Revenue (indirect): Not only is the increased in rates revenue as a result of a rezoning an economic benefit, but the extra revenue in the Wagga Wagga Council coffers means there is potential for this money to be redistributed through targeted community improvement programs. The base case scenario would not yield further revenue to the Council and therefore no net additional benefit to the community.

Health and safety (indirect): The proposed development will should result in increased activity in the area, with possible security at night-time. Therefore this should result in improved or perceived safety within the area. The base case scenario creates a neutral health and safety impact.

Job Generation and Employment Opportunities (indirect): While also an economic bottom line improvement, the creation of jobs, or more importantly, the creation of work opportunities has many positive social impacts. Extra jobs means lower unemployment and thus lower welfare costs, more spending throughout the local economy, thus improving the vitality and viability of other small businesses within Wagga and creates a better sense of community as more persons are contributing to society.

6.3 Environmental

Visual Impacts/Amenity (direct): The subject lands in their current form (the base case) could be considered to provide neutral impacts in this regard. While the proposed Master planned development has the potential to deliver quality urban design outcomes, with land and internal street scaping. New modern building stock and a co-ordinated approach will also contribute to this bottom line indicator.

Integration with existing environment (direct): Both the proposed Master plan and the base case scenario integrate effectively with the surrounding uses. The vacant parcel does not conflict with any of the surrounding residential or businesses premises, while the proposed development will have synergies with the marine retailer across Sturt Highway, will be buffered from the residential fronting the Sturt Highway with an access road and can be landscaped and designed to integrate with the existing environment.

Environmental Impacts (indirect): The base case scenario does not have a negative impact on the environment in terms of pollution or waste. The proposed Master plan may not have a neutral impact upon the environment, but modern sustainable industrial facilities made to quality standards can have minimal impacts upon the environment, especially if compared to older industrial stock.

Overall, from a Triple Bottom Line perspective, a rezoning of the subject site to allow the ideals of the Master plan to come to fruition, will have significant positive impacts for the community of Wagga Wagga.

In all likelihood if the land remains as it is currently zoned, it will remain an unused parcel of land as it has for the last 15 years. Given the lot sizings across the site, it is unrealistic that primary production or agricultural activities will eventuate upon the lands, while other uses would be permitted upon the lands, the market realities are that sellers will not be willing to sell and private investment will be almost impossible to attract to these lands. Thus the lands will contribute very little towards achieving any of the goals or intentions of economic growth as outlined in the strategic plans and policies of City of Wagga Wagga Council.

7 Key Findings & Recommendations

There are several key reasons why rezoning of the subject lands for industrial uses would be in the best interests of the Wagga Wagga Council. These are highlighted below:

- Act as a catalyst for further activity around the Gumly Gumly area.
- Create flow on benefits for the Wagga Wagga community through job creation on site, in construction and along the economic supply chain.
- Allow immediate investment in the short term to flourish in Wagga Wagga, as one developer has already expressed desire to build an auction house and another (John Deere) intends to construct a large purpose designed and built agricultural machinery display and sales centre (the first of its kind in the country).
- Master planned solution which will create critical mass and efficiencies of operation and resource usage and provide a gateway development to Wagga Wagga.
- Facilitate movement and utilise quality infrastructure afforded by the Sturt Highway.
- Provide synergies with the existing uses such as the marine retailer to the south of the Sturt Highway and the East Wagga Wagga Industrial precinct.
- Form a natural extension and limit to the East Wagga Wagga industrial precinct.
- Positively impact upon the residential community by providing uplift in residential land prices.
- Achieve Quality Triple Bottom Line Outcomes.
    - Economic: Efficiencies of operation, job generation, job containment, increased Council revenue streams, increased local investment and development catalyst.
    - Social: Benefits to the public realm, increased community expenditure, health and safety, job generation and employment opportunities.
    - Environmental: Visual Impacts/Amenity (direct), Integration with existing land use environment (direct), mitigation of environmental impacts (indirect).

Therefore based upon these findings of the assessment above, MacroPlan consider the subject lands should be rezoned from RU1 – Primary Production to IN12 – Light Industrial in the gazetted Wagga Wagga LEP 2008.

Appendix G

AHIMS Search Results

AHIMS Web Services (AWS)
Search Result

Your Ref Number : 106517

Client Service ID : 53199

Deborah Farina

Date: 11 October 2011

Accounts Payable Fortitude Valley PO Box 237
Brisbane New South Wales 4006

Attention: Deborah Farina

Email: deborah.farina@rpsgroup.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 537457 - 539457, Northings : 6112025 - 6114025 with a Buffer of 200 meters. conducted by Deborah Farina on 11 October 2011

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

PO BOX 1967 Hurstville NSW 2220
43 BridgeStreet HURSTVILLE NSW 2220
Tel: (02)9585 6345 (02)9585 6741 Fax: (02)9585 6094

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au

Appendix H

Previous LEP submission

STURT HIGHWAY, GUMLY GUMLY, WAGGA WAGGA, NSW, 2650

SUBMISSION REPORT

Lot 1 DP 305732 & Lot 1 DP 1085667

Prepared for Mssrs R Allsopp and J Howard
December 2008

LENNON SALVESTRO planning

Report prepared by
Lennon Salvestro Planning
16 Fitzmaurice Street
PO Box 215
WAGGA WAGGA NSW 2650

Telephone: (02) 6971 7799
Facsimile: (02) 6921 1155
Email: admin@lennonsalvestroplanning.com.au
Website: www.lennonsalvestroplanning.com.au

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TABLE OF CONTENTS

1. INTRODUCTION

This submission seeks the Council to consider within the context of the new comprehensive Local Environmental Plan for Wagga Wagga the inclusion of the proposed land (Lot 1 DP 305732 and Lot 1 DP 1085667, 3870 Sturt Highway, Gumly Gumly) as industrially zoned land.

This proposal follows on from the Councils decision to approve an exhaust factory in proximity to the above site. Although our client is only concerned with the above land, our firm presents a strategic plan for the entire precinct which will provide the following benefits:

- The plan itself is more strategic in its approach, looking at the broader area and not just lots on and ad hoc basis.
- Allow land holders the ability to develop their land to its highest and best use.
- Appropriately manage traffic, transport access and parking issues.
- Offer opportunity for a Development Control Plan to be prepared that will ensure any development is compatible with and compliments the streetscape and the character / amenity of the area.
- Bestow an appropriate and attractive gateway to the City of Wagga Wagga.

2. BACKGROUND DATA

2.1 Description of site

2.1.1 Location

The subject site is described as Lot 1 DP 305732 and Lot 1 DP 1085667, 3870 Sturt Highway, Gumly Gumly and is approximately 5km east of the Central Business District of Wagga Wagga as illustrated in the figure below. The site is approximately 20 hectares in area. It fronts the Sturt Highway to the south and Gumly Road to the north. The site houses two small clusters of buildings.

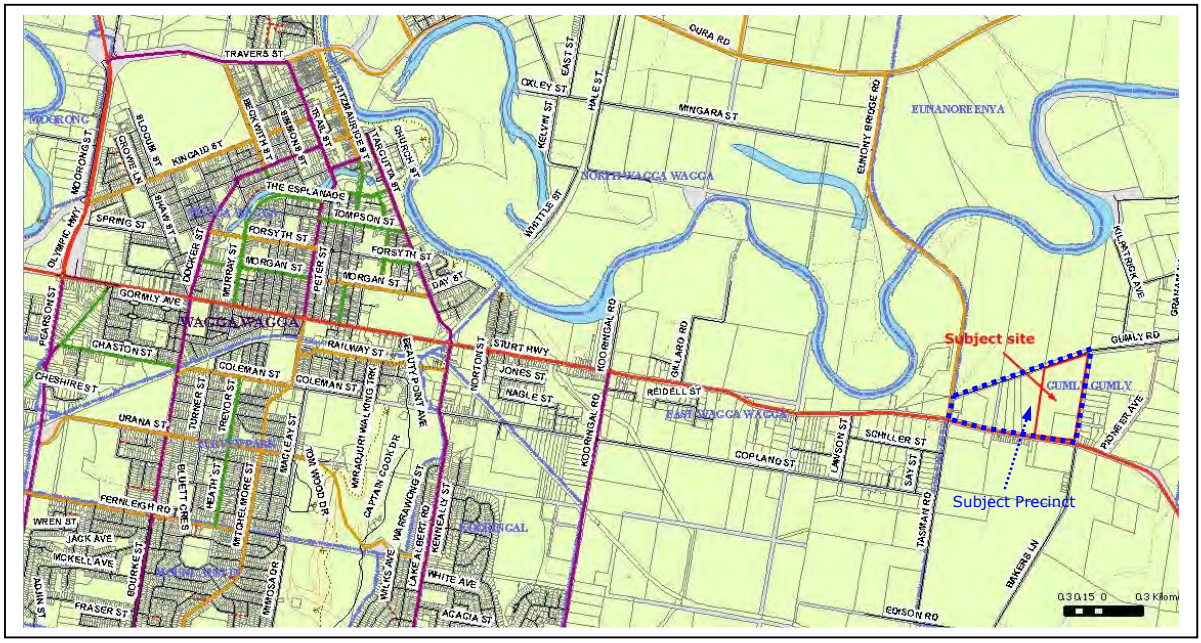

Figure 1: Location of site

2.1.2 Statistics

The Wagga Wagga Industrial Lands Study prepared in 2006 reports that demand for industrial land in the city is around 4 to 5 hectares per annum. At that time there was reportedly around 60 hectares of vacant developable land available and an additional 20 hectares of under – developed or under utilised land. This represented approximately 15 years supply, but it was noted that much of this land was not readily available for development for a number of reasons including:

- Limited potential due to topography
- The land is owned by owner occupiers
- There was only 6ha of land left in Council ownership
- Much of the east Wagga is owned by private owners who aren't necessarily motivated to sell or develop.

The study went on to suggest four areas which were deemed appropriate for development as industrial land, these included:

1. Copland Street South between Kooringal and Lake Albert Road – a 30 hectare site which was thought suitable for small lot subdivision within the short term
2. Sturt Highway Forest Hill – a 200 ha site suitable for varying lot sizes within the medium term
3. Elizabeth Avenue Forest Hill – a 400 ha site suitable for varying lot sizes within the medium term.
4. Riverina FARM (Bomen) – a 116 ha site suitable for agribusiness (otherwise rezoning required).

The following figure shows the location of these sites.

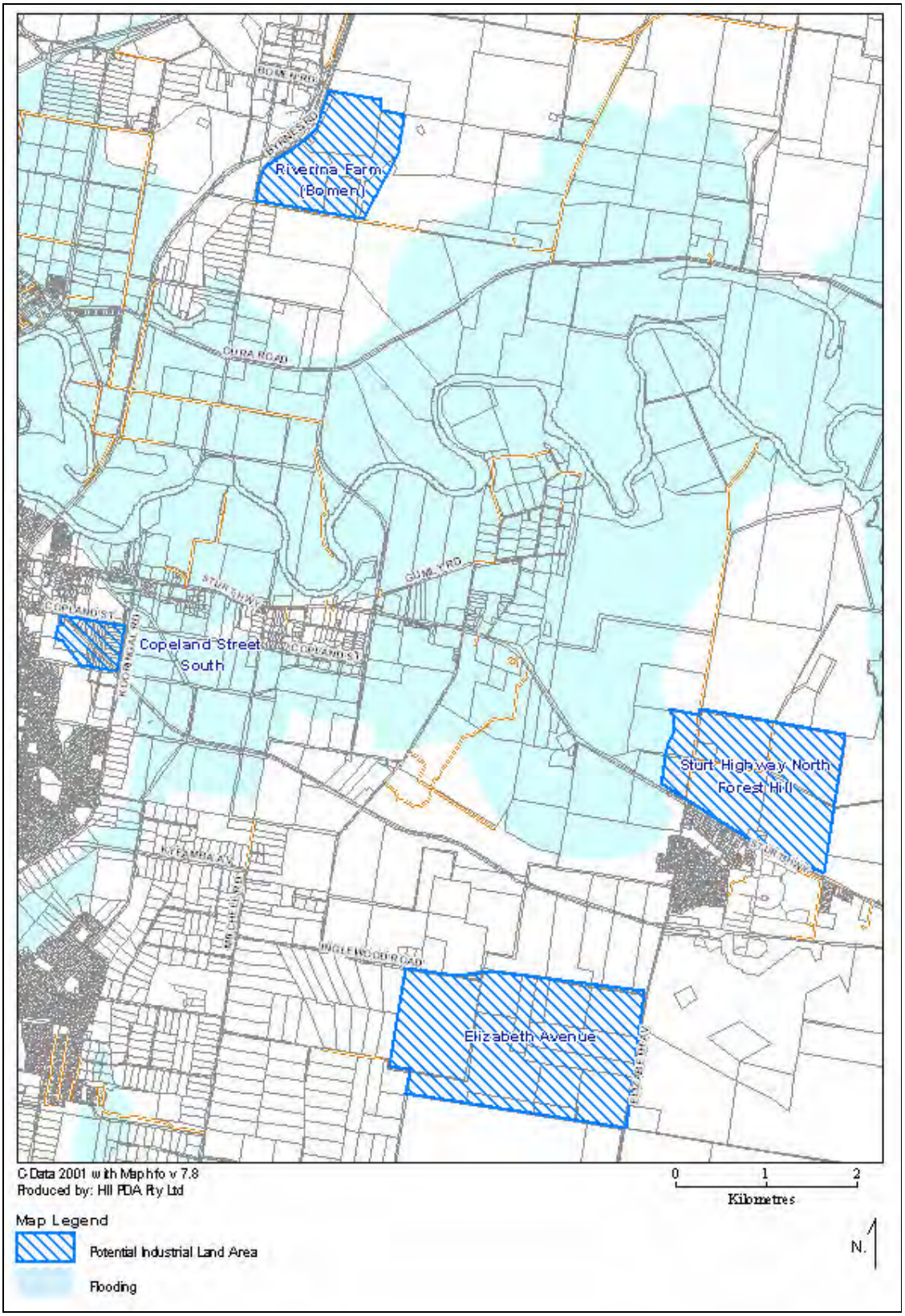

Figure 2: Location of sites nominated for investigation in the Wagga Wagga Industrial Lands Study.

2.1.3 Zoning

The site and nominated precinct is currently zoned for rural landuses however the size of the blocks severely limits their viability of agricultural uses. Four blocks within the precinct were subdivided for "hydroponics" in the mid 1990's, however this development was never pursued.

Under WWRLEP 1991 the zoning of the site is 1 General Rural, the subzoning of the land under WWDCP 1985 is Rural 1(a) General (Rural Living Area) and Rural 1(f) Arterial Road Frontage (Rural Living Area), as shown in the figure below.

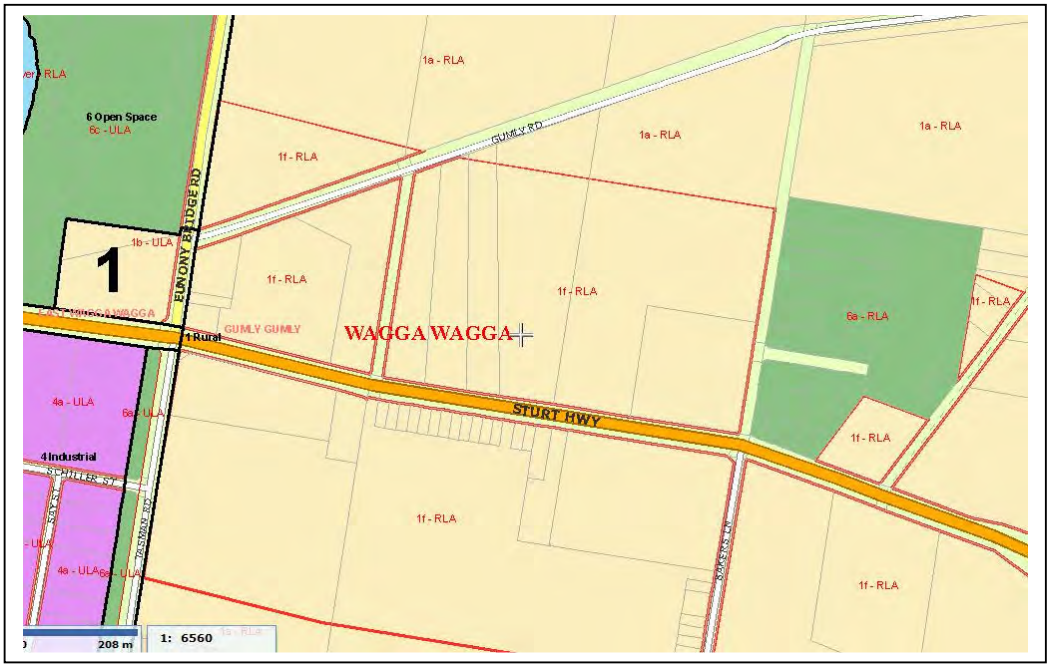

Figure 3: Subzoning of subject site under WWDCP 2005

2.1.4 Geology/Soils

The soil landscape is of the Kurrajong Plain group. The geology of this group is thick (mostly >20m) Cainozoic alluvial sediment sequences, with silty clay on top 5-8m and sand, gravel and clay at depth. The soils are moderately deep (80 – 150 cm) Eutrophic Brown Dermosols and Eutrophic Brown Kandosols. The soils of this group are subject to occasional flooding, localised waterlogging and localised erosion.

2.1.5 Topography

The landscape of this group is described as extensive level plain of higher Murrumbidgee River Floodplain. Local relief is mostly <2m and slope gradients are <1%.

Site specifically the southern side of the site is slightly more elevated than the northern side, with the land dropping away from Sturt Highway towards the river to the north.

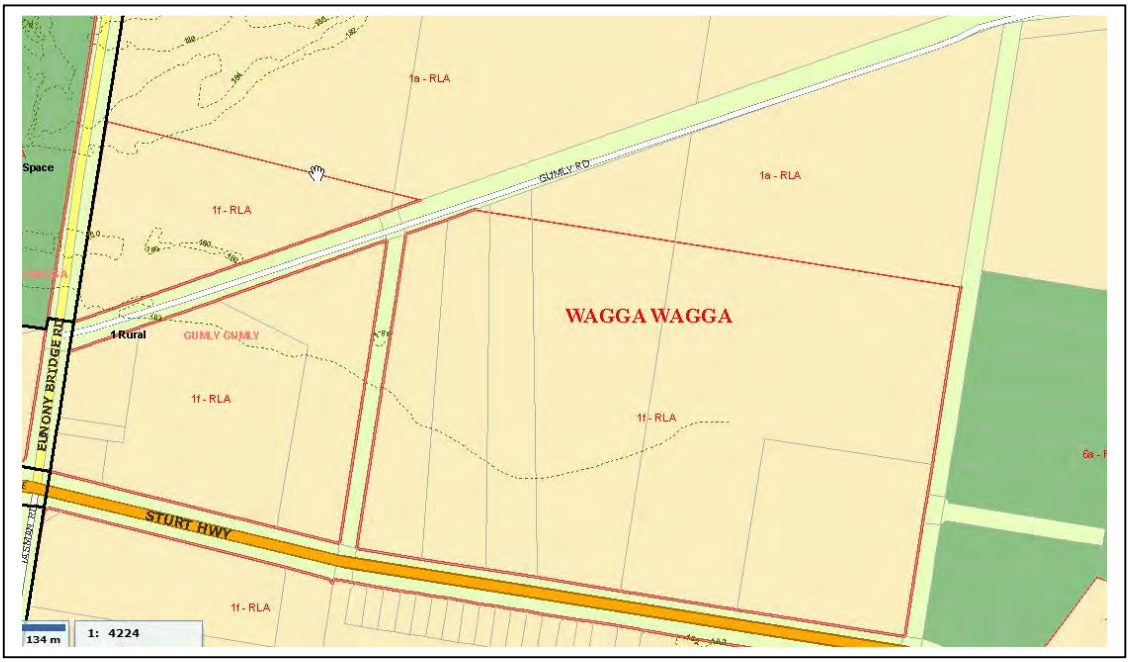

Figure 4: Contour plan for the site.

2.1.6 Flooding

The site is subject to flooding, being located on the Murrumbidgee River floodplain. The site has drainage line running from the east approximately 100m into the site, as shown on the contour map above. The height of this contour/drainage line is 182m.

The council requirements are that buildings will need to be built 500mm above the flood line. The requirement can be met through appropriate building design when that stage of development is reached

A flood impact study was prepared for the exhaust factory site by Cardno Willing much of the information contained within this report is relevant to the entire precinct. As reported the area would also be affected by overbank flooding from the Murrumbidgee River, which is located approximately 700m north of the subject site.

The Cardno Willing study was based on the exhaust factory development involving construction of showrooms/workshops in the southern portion of that site. Preliminary sketches have been drawn for our client's site which also involves the construction of buildings in the southern portion of the land. The similarities between the neighbouring site and its development and the subject site and its proposed development allow the extrapolation of conclusions from the flood study to be used for preliminary purposes for this submission.

Based on the factors involved with the neighbouring site the flood risk was concluded to be low hazard – Flood Fringe or Flood Storage (using the categories listed in the Floodplain Development Manual). Flood depths over the neighbouring site during a 1 in 100 year event would be considered low (0.28m), as would the velocities of floods experienced (0.05m/s) and the duration of the event (17.5 hours).

Based on these figures an evacuation route and flood warning system were devised for the neighbouring site, the same route and system could be used for the subject site. Flood evacuation will involve movement along the Sturt Highway for at least 500m before moving south along either Tasman Road or Bakers Lane and away from the river. Under

the design 100 year ARI (average recurrence interval) conditions there is an estimated 12 hours from the point at which flood waters would reach the southern portion of the neighbouring site to when the flood peaks.

The slow rate of rise of floodwaters (ie approximately 300mm over 12 hours for a 1 in 100 year flood) means that an effective flood warning system can be devised for the site. This system can provide reasonable time to secure buildings and contents and for evacuation of the site without a reliance on existing emergency services. An appropriate flood warning system can comprise either an independent flood warning system or be part of the local flood plan emergency system and procedures which are endorsed by Council and the SES. An independent system could involve the use of a siren or electronic voice message which is triggered by a vandal proof float system housed on the northern (riverside) portion of the site.

Where the Council considers to positively support this submission, we propose that a precinct specific flood impact assessment be carried out for the entire area using estimates of floor areas and building types to explore any impacts expected taking into consideration the cumulative impacts of development once the precinct was fully developed.

2.1.7 Agricultural capability

The subject site is classified as prime crop and pasture land, as shown in the figure below.

The viability of agricultural pursuits is restricted by the small lot sizes on each of the individual lots. This is further exacerbated by the requirement to maintain adequate buffers between certain agricultural pursuits and other development.

Table 1: Examples of buffers between agricultural land use and residential development

Purpose of Buffer	Buffer Width
For spray drift where there is no vegetative buffer	300m +
For spray drift where there is adequate and effective buffer available	40m +
Between dwellings and sources of noise such as a working tractor, fans and pumps.	500m +
Between dwellings and a cropping enterprise that involves soil cultivation (this would include a vegetated buffer).	50m +
An adjoining drinking water supply	100m +
Where aerial application of chemicals is involved	150m +

The subject site is only 20 ha in size, with the entire subject precinct being approximately 43.3ha in area. The applicants land (and the precinct as a whole) is limited from an agricultural viewpoint due to surrounding land uses which include industrial (including the recently approved Exhaust Centre), commercial and residential uses and the need to buffer these land uses from the impacts of agricultural pursuits.

Figure 5: Agricultural Suitability

2.1.8 Other environmental constraints

No known threatened flora or fauna species exist on the site.

No known items of environmental heritage exist on the site.

The site is not subject to bushfire.

2.2 Infrastructure

2.2.1 Sewer

The development would currently be catered for by the pumped sewer system servicing the Gumly Gumly area. Liaison with Council's Development Engineer has revealed that when it was being designed it didn't include the possibility of this area developing and the additional loads. However, that doesn't mean that the system will not be able to accommodate the loads that could be expected from the proposed development. Council's development engineer has advised that a gravity sewer system draining to a sewer pump station in the area and pumping to Council gravity mains may be a method of servicing the development. However he has advised that there may be other alternatives and a study and analysis may be required to determine the best options.

2.2.2 Water

Liaison with Riverina Water has revealed that water is available at this site. However, they currently treat these two parcels as one property. If the one with the connection was sold the other would not have a connection anymore. Water lines also run along the Sturt Highway frontage of the precinct, further investigation into the capabilities of the existing infrastructure will be required.

2.2.3 Telecommunications

Liaison with Telstra has revealed that telecommunications are available to the precinct. Cables exist on both the Sturt Highway and Gumly Road.

2.2.4 Electricty

Electricity is available to the precinct.

2.2.5 Gas

Gas is available to the precinct.

2.2.6 Drainage

Liaison with MJM solutions has revealed that there is generally not very much drainage in this area with the land being predominantly flat. A drainage line does extend into the subject site from the west for approximately 100m. Further investigation will be required to determine drainage needs for the site at the subdivision stage and appropriate onsite detention ponds put in place to maintain the existing rural runoff.

2.3 Background to the Proposal

2.3.1 City Planning Ordinance (1960s)

The subject site sat outside of the former Shire boundaries and as such was not included in the City Planning Ordinance

2.3.2 Vision 21 Land Use Strategy

The purpose of the Vision 21 document was to examine the constraints, issues and options for Wagga Wagga in regard to urban development and the changing social, environmental and economic factors facing the community. Its preparation began in the late 1990s.

The Strategy includes a section titled Employment lands, this section makes reference to the Wagga Wagga Industrial Land Use Study which was completed at a similar time to the strategy.

2.3.3 Wagga Wagga Industrial Landuse Study 2006

The Wagga Wagga Industrial Landuse Study was completed in 2006 by Hill PDA. It considers industrial landuse on a city wide basis. Council determined to prepare the study for a number of reasons including:

- The existing land bank for small lot development and light industry is limited and much of it is subject to flooding from the Murrumbidgee River;
- The existing industrial land bank for lots between 2 and 5 hectares is also limited and much of it is subject to flooding;
- The existing land bank for large multi-hectare sites is not compatible to some industries due to the undulating landform;
- The Council does not have a comprehensive strategy for the provision of industrial lands beyond those existing;
- The Council wishes to support local industry and attract new employment generators to strengthen the local and regional economy.

The subject site borders on the area referred to as East Wagga Wagga in the study. The East Wagga Wagga area has been described as follows

> *"East Wagga Wagga developed from the 1970s and some larger regional and national businesses located there in the 1980s. The area is predominately light industrial, transport and service, wholesaling and storage. On Sturt Highway there is some bulky goods retailing including a relatively new Harvey Norman centre. More recently there have been some quasi-commercial (office) uses*

establishing themselves in the area. Whilst there remains a considerable amount of undeveloped land, most of it is flood prone."

The report further describes the area as enjoying a number of attributes including proximity and rapid travel times into the CBD and also the airport. It is along a major highway and the major road and enjoys significant visual exposure between the CBD and airport.

The Industrial Landuse study forecasts demand for industrial land until 2016. Based on average take up rates of 4 – 5 hectares per annum over the past 25 to 30 years for the "east-end" and Bomen, it is expected that 176.0 ha of industrial land will be required in 2016, an increase from 161.2ha in 2011.

The Industrial Landuse study suggests that although there appears to be a 15 year surplus of land much of this is constrained by being owner – occupied, limited through environmental factors including topography and vacant or underused land to the east of the city (adjoining the subject site) is owned by private owners who may not want to develop their land. The subject site is in private ownership with the owners wishing to develop the site.

Four alternative sites within close proximity to Wagga Wagga have been proposed for possible future industrial use, as follows:

1. **Copland Street South Side** – a 30 ha block, which is zoned industrial, generally flood free, the bulk of the site is in a single ownership, has minor potential landuse conflicts, is close to the CBD, has existing infrastructure and is in close proximity to the airport. **Strategy** - suitable for small industrial parcels, light industry. Timing to be short term, providing around 5 years supply.
2. **Sturt Highway North Side (Forest Hill)** – around 200 ha, generally flood free, close to airport, minor potential land use conflicts (little residential in area, opposite defence site), 5 minutes to CBD, requires rezoning. **Strategy** – requires further investigation. Timing to be medium term. Sizes ranging from 2000m^2 to 20ha to large strata or community titled units.
3. **Riverina FARM (Bomen)** – Approximately 100 ha, in single ownership – owners are currently seeking approval for masterplan of the site which includes a number of industrial parcels. Includes intermodal terminal. **Strategy** – timing is short term.
4. **Elizabeth Avenue near the Airport** – on west side of Elizabeth Avenue, requires rezoning, around 400ha, excellent position close to airport, generally flood free, servicing likely to be inexpensive, building restrictions near airport, potential land use conflicts with residential areas of Forest Hill village. **Strategy** – requires further investigation. Timing to be medium term. Sizes ranging from 2000m^2 to 20ha to large strata or community titled units.

Uranquinty has also been identified as a future industrial area, however it is 11km from Wagga Wagga so was considered less attractive than the other short listed sites.

In order to prevent the cost of industrial land rising too high within the city it was suggested that the supply be kept strong to hopefully maintain sufficient competition between multiple land owners, and thus keep prices lower than has been the case in the past few years where demand has exceeded supply.

2.3.4 Spatial Plan 2008

The Wagga Wagga Spatial Plan maps out the key directions for the future development of Wagga Wagga, the villages and rural areas over the next 25 years or more. Section 2.6 of the spatial plan is devoted to discussion of Industrial Lands.

The existing land bank section suggests that of the available land within the city some of it suffers from serious constraints, either in terms of land ownership characteristics or

environmental factors. The plan goes on to say that *"vacant land with highway frontage is in demand, much of the land needs to be built up to meet flood constraints"* the subject site falls into this category.

Spatial Planning Decisions arising from the study include:

1. The formulation of an Industrial Lands Development Program which will ensure an adequate and timely supply for industrial land for the city, with a 15 year bank of land being included in the program and special opportunity sites being recognised and prepared for release. This will be achieved through the development of an Industrial Lands Register which will list and prioritise land suitable for industrial uses in the city.
2. Link with Council's Acceler8 and WISDOM projects
3. Identify Future Land Supply which will ensure sufficient supply of industrial land is available to meet the cities requirements. Nine areas have been nominated as options for possible future industrial zones. The nine areas are listed as (unfortunately a map of these areas was unavailable):
    a. Copland Street Southside (Council). Area - 30ha (approx)
    b. Bomen. Area – Larger study area is over 20km^2
    c. Riverina FARM (within Bomen). Area – 100ha (approx) undeveloped
    d. Edison Road
    e. Airport East. Area – 120ha (approx)
    f. CSU, and Biotech Precinct. Area – within CSU environs
    g. Sturt Highway Northside. Area – 200ha (approx)
    h. Elizabeth Avenue (near airport). Area – 400ha (approx)
    i. Uranquinty/Kapooka area.
4. Advancing Serviced Land - A strategy for the timed release of industrial land in the future will be developed which will ensure the servicing of these lots is in place.
5. Clear rules and Investment Confidence Through Good Policy – using the standard instrument for development of LEPs to develop defined zones for industrial areas within the city.
6. Environmental and Amenity Outcomes.

2.3.5 Copland Street/Highway/Edison Road/Gumly Road Precinct

A land use survey has been conducted on the precinct surrounding the subject land, the figure below shows the results.

There is a mix of uses in the area including:

- Rural
- Industrial
- Bulky Goods retail
- Village
- Residential
- Motels
- Public facilities – oval/school site

Figure 6: View of site from Gumly Road

Figure 7: Dwelling and shop to the east of the site.

Figure 8: Shed retailer to west of subject site

Figure 9: Marine Centre

The predominant landuse to the north of the precinct is agriculture; this can be clearly seen in the figure below. However, development to the east, north and west is increasingly varied and includes:

- residential,
- 2 motels
- Riverina Marine centre - comprising a plant nursery, café, fishing tackle retailer, motorcycle retailer, caravan/camping retailer, boat retailer and second hand car consignment center.
- A shed manufacturer/retailer also exists within the same precinct, further to the east.
- An Exhaust centre is also approved for construction within the precinct.

2.4 Justification for the proposal

Justification for the proposal is multi pronged and takes into consideration the information presented above.

The industrial Lands Study prepared on behalf of council short listed four sites that were considered suitable for industrial land uses. The subject site was not considered in the study due to its location on the Murrumbidgee River floodplain. A general review of the literature pertaining to development in floodplains reveals that on the whole industrial

development is considered a low risk type of development in this regards and as such is often allowable development on floodplains.

Of the four sites highlighted in the Industrial Lands Study (see figure 2) the Bomen site is currently the subject of the master planning process, as suggested in the Industrial Lands Study this land would be best suited to agribusiness pursuits and those requiring proximity to the proposed intermodal hub. This site has been earmarked for short-term release/development.

The two sites in Forest Hill – North side of highway to be used for lots varying in size from 2000m2 to 20ha, this site has been earmarked for release in the medium term, although the study stated that it required further investigation. This land is currently for sale and is being marketed as agricultural land. Given this and the impending change in ownership it would seem unlikely that the land would be available for industrial uses in the near future.

The other Forest Hill site is located on Elizabeth Ave. Again timing for release of this land is proposed to be medium term. Land use conflicts exist with the intended use of this site due the proximity to the airport and the associated height restrictions that will be imposed on development in that area. The subject site can also offer proximity to the airport as an advantage without the restrictions imposed by being too close.

The final site is Copland Street South, which is located on the southern side of Copland Street, north of the cemetery and between Kooringal and Lake Albert Roads. Timing for this land is expected to be short term, with approximately 5 years supply of small industrial and light industrial lots ranging in size from approximately 3000m^2 to 8.5ha (with 30 of the 32 industrially zoned lots being under 1 ha – determined through a review of the cadastre on Council's online mapping).

There has been no apparent action to develop this land since the release of the Industrial Landuse Study. There has been significant development occurring on neighbouring lots located to the north of Copland Street also between Kooringal and Lake Albert Roads. This has included the construction of a Star Track Express couriers (corner Copland Street and Kooringal Road), Paul Bourne Homes, Naturally Floored and also the sale of land which has been approved for use as a bulky goods outlet (with frontage to Hammond Avenue and Sutton Street), visual inspection of this area reveals approximately 13 vacant/undeveloped lots, with a number of other being currently undeveloped but sold.

Land to the east of Kooringal Road between Hammond Avenue and Copland Street is similarly in the process of being developed with initial works taking place on a number of lots in this area and sale of land being undertaken. This area includes a 15 lots industrial subdivision which is currently for sale. It would appear on visual inspection of this area that many of the lots have been taken up but are yet to be developed.

The first intended tenant for the subject site is Rundles Auction house who are intending to move into block 1 of the applicant's land should the development be approved. This means that this business is intending to move from their current site in Forsyth Street, which is more akin to residential development and moving to a more suitable area, away from predominantly residential development.

As another point of interest it is noted that a recent application by Bomen Agricultural Machinery for a proposed premises for the display, sale and service of agricultural plant and equipment on the land currently occupied by the shed retailer located to the west of the subject site was refused by The Planning Panel/Council. Reasons given for the refusal were associated with the ancillary use of part of the site for the display and sale of machinery, which is not allowable under the current zoning of the land. The Council report indicated that the proposed repair/servicing of agricultural machinery falls within

the allowable landuses and could be approved if the Development Application were amended and the sales aspect of the proposal were removed.

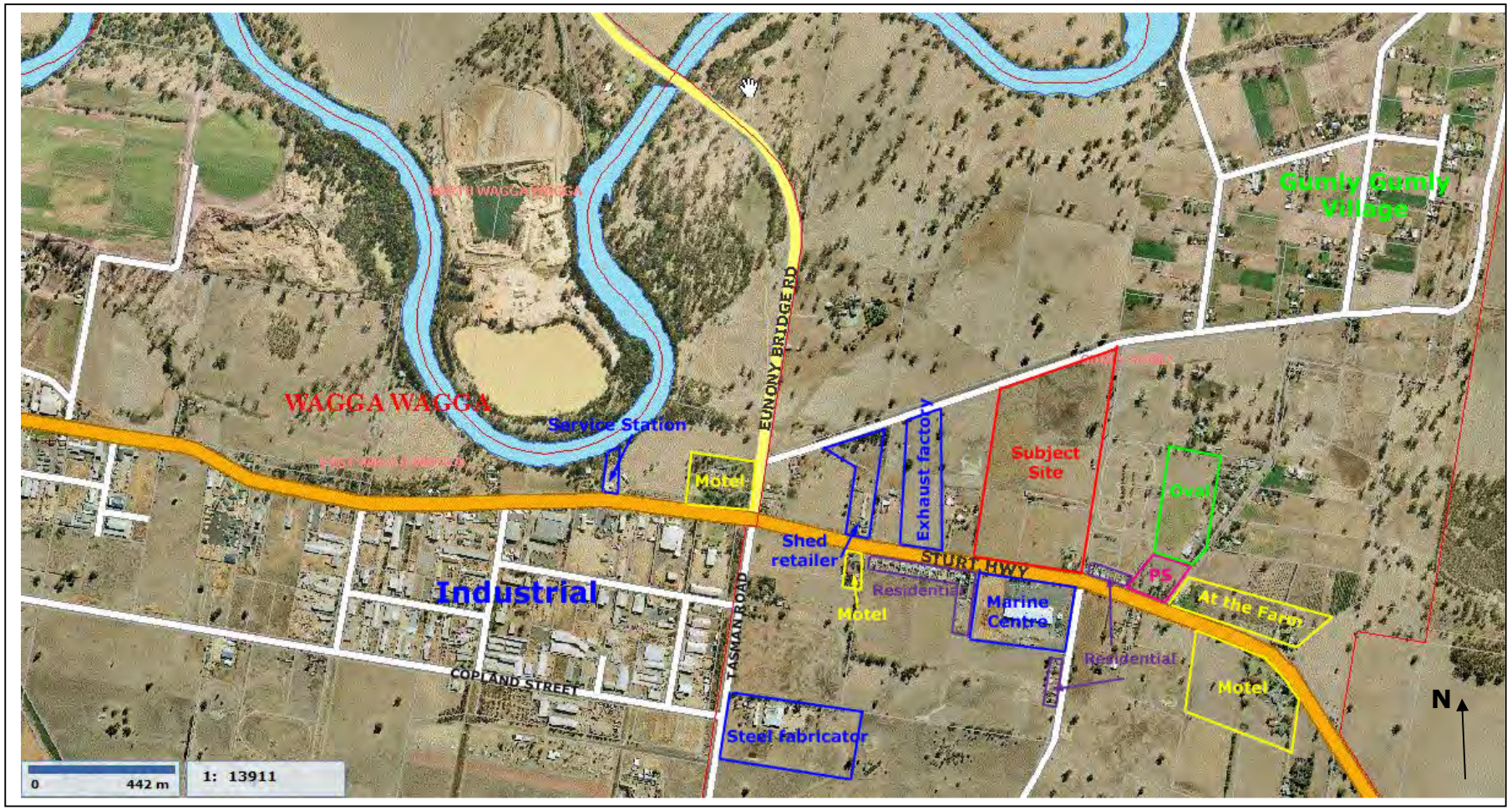

Figure 10: Landuse survey of area around subject site

3. CONCEPT PLAN

3.1 Lot yields

The current application requests Council to consider allowing industrial uses on the subject lots only, however, the applicant has prepared a masterplan (see Appendix 1) for illustrative purposes to show how the subject lots could fit into the precinct as a whole were it to be zoned for industrial uses. Five variations for the precinct have been formulated for the site, with varying options for access to/from the site. On these plans the applicant's land is unshaded, with the shaded area being the precinct that the applicant's land is part of.

Lot yields and sizes for the site vary as follows:

- Option 1 – 29 lots
- Option 2 – 28 lots
- Option 3 – 34 lots from 2900m^2 to 2.49ha
- Option 4 – 34 lots from 2900m^2 to 2.49ha
- Option 5 – 34 lots from 2900m^2 to 2.49ha (preferred option)

3.2 Traffic and Access

From a traffic and access point of view the preferred concept for the site is option five. This is confirmed in the Traffic Engineer's report and was also suggested at our consultation meeting with the RTA.

Option Five (Figure 11) involves the development of service roadway which runs parallel to the Sturt Highway for the full length of the sites boundary with that highway. There are three access points onto the Sturt Highway and two driveways onto Eunony Bridge Road. The western access road on the Sturt Highway is approximately 40 metres east of the intersection of the Sturt Highway and Eunony Bridge Road. The design would require a slip lane of 20 metres length for traffic entering the site from the Sturt Highway. The slip lane would commence approximately 15 metres east of the round-a-bout at the intersection of the Sturt Highway and Eunony Bridge Road. Sight distances are too short in this option to allow vehicles to turn right whilst exiting the site. In order for this option to be effective, the median strip in the Sturt Highway would need to be extended to approximately 10 metres east of the assess roadway.

Benefits

- The design incorporates the use of a service road which restricts driveway access to the Sturt Highway for the entire length of the proposed sites frontage with that roadway.
- The layout does not give access to the intersection of the Sturt Highway and Bakers Lane. Bakers Lane remains a T-type intersection which is appropriate for the traffic volumes experienced at that location.
- The design does not involve the construction of a round-a-bout which is an inappropriate treatment of the intersection of the Sturt Highway and Bakers lane.
- There are three access points on the Sturt Highway and two driveways onto Eunony Bridge Road. This will distribute the impact of the generated traffic.
- The access points are obvious to the general public.
- Traffic utilising the entrance closest to the intersection of the Sturt Highway/Eunony Bridge Road is restricted to left in/left out.

Weaknesses

- The design does not incorporate access from Gumly Road, which experiences the lowest level of traffic volumes of all the surrounding roadways.

- Traffic utilising the entrance closest to the intersection of the Sturt Highway/Eunony Bridge Road could not execute right turns to exit the site due to the close proximity of the round-about.

The entire report prepared by Kiloran Engineering Pty Ltd details all five options for the site and list the strengths and weaknesses of each. This report can be found in Appendix 2.

3.3 Urban Design / Streetscape

The applicant's vision for the proposed industrial subdivision is to be of high quality design in an effort to ensure that the entry into the city of Wagga Wagga along this arterial road is attractive and appealing to visitors of the city. The proposal will include substantial planting of street trees along the Sturt Highway frontage to soften the overall view of the subdivision.

In the vicinity of the subject land a number of similar landuses have been allowed through the granting of special provisions over the land, these include:

- The Riverina Marine Centre – located directly across the Sturt Highway from the subject site. The site is approved for use as a showroom for display and sale of marine, fishing and outdoor leisure products, and
- The recently approved exhaust fabrication and distribution centre which is located on the same side of Sturt Highway approximately 120 m to the west of the subject site.

The plans of the overall precinct between Sturt Highway and Gumly Road have included the proposed exhaust centre and the existing shed manufacturer/retailer in its vision.

The site and precinct is also within close proximity to the industrial lands to the east of the city between the Sturt Highway and Copland Street and the development of this site could be viewed as an extension of this precinct. As with the existing precinct there are a number of advantages that are afforded to the proposed development from a logistics viewpoint.

The site and precinct is within close proximity to the airport and can thus take advantage of this by attracting airport related and or dependant development to it. The site also has highway frontage and as such would be attractive to many companies requiring high visibility and accessibility.

The site and precincts represents and offers an opportunity for infill development, especially with the recently approved exhaust centre being located 120m west of our client's site. Much of the infrastructure required to establish an industrial site already exists and as such the costs associated with developing it would be less than a comparable undeveloped site. Industrial use of this land would also see much better utilisation of the area that is currently zoned but under utilised for agricultural purposes. The area is severely limited for rural uses due to inappropriate block sizes and as such has not been used for serious agricultural pursuits for close to 15 years.

3.4 Staging

The present application only seeks to develop the section of the precinct to the east of the overall site. At the present time the applicant is looking to develop block 1 with a tenant already keen to take up this block for the purpose of an auction house. Approval is being sought for the layout on the applicant's land.

3.5 Consultation

Preliminary plans were presented to Council officers in September 2008 and our intention to prepare a submission to the LEP was disclosed. The officers while not committing to supporting the concept (as this would be up to the consultant preparing the LEP and the planning panel), they did support the process and our approach.

The potential precinct plan has been prepared to demonstrate how our clients site could fit in with a masterplan solution over the precinct, however it was not our brief to consult with other land holders within the precinct. Obviously this would need to occur as part of any further process and would be a precursor the rezoning of the site.

4. CONCLUSION / RECOMMENDATIONS

The position of the site and precinct in proximity to the many multiple land uses in the general area demonstrates that the proposed rezoning is within the context of the area which is a mix of agriculture, residential, commercial and industrial development. The opportunity now exists to strategically plan for the entire precinct in a way that enhances the general amenity of the area especially the residential component, while providing for high quality industrial development that will be planned to address issues such as:

- flooding and the cumulative impacts of existing and proposed/ potential development)
- timely provision of services funded on a user pays basis
- safe and satisfactory accessibility for all types vehicles, bikes and pedestrians,
- neighbourhood amenity, and
- streetscape and city entry statement.

The proposal provides an opportunity for infill development which will result in better utilisation of a parcel of land that is well located for industrial uses. The land is within close proximity of the airport and as such would be well suited to industrial/commercial uses which rely on this facility. The land also has good position, being located on the highway, giving it good visibility and accessibility, again a key requirement of many industrial/commercial uses of land and a requirement that is not offered by the other nominated industrial sites within the industrial lands study.

It is recommended that Council consider the inclusion of this parcel of land in the yet to be released LEP as industrially zoned land.

It is also recommended that Council include the subject site on the Industrial Lands Register (suggested in the Spatial Plan) for inclusion for development in the short to medium term.

5. APPENDICES

1. Masterplan of precinct
2. Road Layout Assessment

APPENDIX 1 – MASTERPLAN OF PRECINCT

GUMLY GUMLY INDUSTRIAL ESTATE
DRAFT SITE STRUCTURE PLAN

LEGEND

- Non Developable Land - no buildings allowed and ecological Improvement
- Developable Land
- Alignment of internal streets and building setbacks combine to maintain and enhance views through to agricultural floodway and bushland horizon
- Where possible allow views between buildings
- Consistent landscape treatment of Sturt Highway to provide a quality experience for drivers upon entering the urban area of Wagga Wagga
- Tree lined country lane to provide an attractive interface between Gumly Gumly and the estate
- Access to Site
- New Roads
- - Consistent buildings setback behind higher quality landscaping and display areas; and
  - High quality fencing to provide a consistent and transparent frontage that allows views through to landscaping and built form behind
- Consistent setback and scale of high quality buildings designed to flank the urban approach into Wagga Wagga
- Landmark built form to mark entry to this high quality industrial area of Wagga Wagga and reinforce the importance of the neighbourhood centre
- Development to front Bakers Lane to establish a streetscape and provide passive surveillance of the village green

LENNON SALVESTRO planning

DAVID LOCK ASSOCIATES
URBAN DESIGN AND TOWN PLANNING

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APPENDIX 2 – ROAD LAYOUT ASSESSMENT

MURRUMBIDGEE RIVER

Link to Bomen Industrial Estate

FLOOD WAY

PRIME AGRICULTURE

Improve the interface with Gumly Gumly through the formalisation of a 'village green' and sensitive, high quality employment development

Gumly Gumly Village scattered houses in the river floodplain

Proposed edge of Wagga Wagga urban area

FLOOD WAY

EUNONY BRIDGE ROAD

GUMLY ROAD

FLOOD WAY

Capitalise on potential cross benefits between Gumly Gumly Village and the Employment Area

Motel

Possible extension to the employment area and town of Wagga Wagga.

Gumly Gumly Village Green

STURT HIGHWAY

Provide a consistent landscape character and high quality built form between the Entry Statement and the Town Centre

Residential lots to be consolidated over time and incorporated into overall development

Possible Wagga Wagga Town entry statement located to incorporate Gumly Gumly

Existing area of light industrial

Existing access points to highway to be removed over time and access to future development to be from side roads

BAKERS LANE

Motel

PRIME AGRICULTURE

Entry from Wagga Wagga Airport and Sydney

TASMAN ROAD

Gumly Heights Rural / Residential

LAND USE

- RESIDENTIAL
- EMPLOYMENT
- LOCAL CENTRE
- PLAYING FIELDS / OPEN SPACE
- AGRICULTURE
- NON DEVELOPABLE - NO BUILDINGS ALLOWED - ECOLOGICAL IMPROVEMENT
- EXTENSION OF EMPLOYMENT AREA
- EDGE OF URBAN AREA

MOVEMENT

- EXISTING ROAD
- PROPOSED ROAD

LANDSCAPE AND AMENITY

- ENTRY STATEMENT
- IMPROVED ENTRY BOULEVARD LANDSCAPE
- ECOLOGICAL PARKLAND
- HIGH QUALITY LANDSCAPE INTERFACE

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GUMLY GUMLY INDUSTRIAL ESTATE AREA WIDE STRUCTURE PLAN

LENNON SALVESTRO planning

DAVID LOCK ASSOCIATES
URBAN DESIGN AND TOWN PLANNING

Ref: LSP 08050
Contact: Nicole Lennon

28 May 2009

The General Manager
Wagga Wagga City Council
PO Box 20
Wagga Wagga NSW 2650

Dear Ms Russell

RE: SUBMISSION TO DRAFT LEP 2008 – MR JOE HOWARD AND MR RICHARD ALLSOPP
Lot 1 DP 305732 and Lot 1 DP 1085667, Sturt Highway, Gumly Gumly

I refer to the current exhibition of draft Wagga Wagga Local Environmental Plan 2008. Lennon Salvestro Planning is acting on behalf of Mssrs, Howard and Allsopp, owners of the subject land, who wish to make a supplementary submission to that which was submitted on 8 December 2008 and 15th April 2009 in relation to the draft LEP and the zoning of their site.

Thank you for the meeting held between your Ian Grant and Colin Fough on the 7th May 2009. After discussions held during that meeting we established that to progress this submission further there were certain matters that could be addressed in more detail. These matters are discussed below:

1. Address the retention of the Gumly Gumly village edge and separation with any development.

   At our meeting we discussed whether Gumly was actually a village and if there had been any strategic planning carried out to enhance and protect this area. It is our understanding that Gumly Gumly is a locality and not a village. It is not identified as a village under the Wagga Wagga Local Environmental Plan and does not appear to have been the focus of any strategic planning efforts in the past. The locality of Gumly Gumly is quite vast when you apply the boundary set by the Department of Lands information exchange website. This area has been shaded in green on the following plan which is an extract from the Department of Lands mapping available online.

Looking closely to identify where the core of Gumly Gumly is located we are of the opinion that the main residential and service precinct of Gumly Gumly exists to the north of the Sturt Highway. In the following plan we have made an arbitrary line around what we perceive as the core area. It should be noted that Gumly Gumly exists within the floodplain and there will be little to no opportunity for

expansion of the residential component of the village. The local school has been closed down and the area is served now by a local store and tourist's café.

2. Address value of open landscape verses built up development in terms of entrance statements to the city.

To the east of Gumly Gumly the landscape opens up and the area is clearly prime agricultural land in full production. Our client's site exists to the west of the Gumly precinct and includes mixed uses and small parcels of vacant rural land that is too small for production. This site does not represent an area that should be preserved as a view corridor as it currently offers nothing in terms of visual appeal, streetscape or entry statement to the city of Wagga Wagga.

Our client's site and the precinct further west and south affords the city an opportunity to:

- appropriately and strategically plan for development that will enhance and support the locality of Gumly,
- provide a canvas for the city to create a contemporary, appealing and precinct appropriate entrance statement which provides the "point" at which the city proper commences.
- Capture passing trade that will not necessarily be entering Wagga but will be serving the Bomen industrial precinct via the Eunony Bridge Road and future link road to Bomen.
- Utilizing prime highway frontage land to its full potential for a highest and best use.
- Reduce access entry points along this section of the highway, thereby reducing safety issues which have arisen from previously unplanned ribbon development

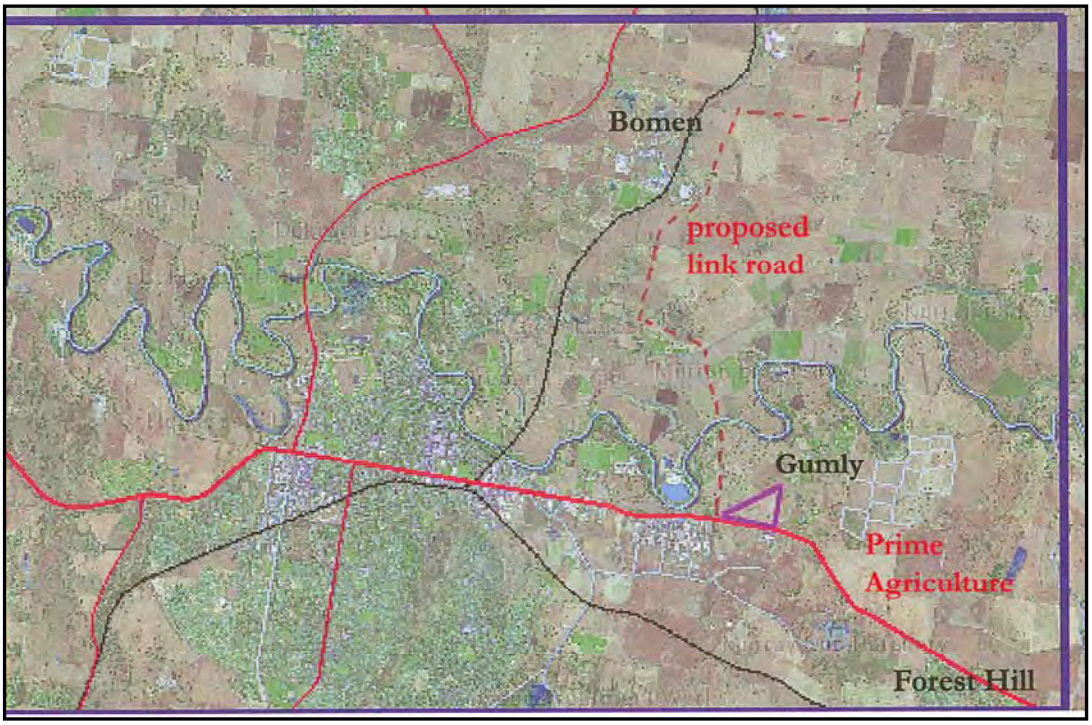
3. Address the containment principle.

The Dictionary of Geography defines *urban containment* as "the policy of limiting sprawl by restricting out-of-town development." (Oxford University Press. 1997.)

The main urban containment principles include:

- Sustainable development
- Accommodate Development needs (including public facilities, businesses and housing)
- Cost efficient facilities and services
- Balance burdens and benefits and foster positive externalities.

(Source: http://www.greaterlansingurbanservice.org/documents/Urban%20Containment%20Principles.pdf)



A tool of urban containment is to identify and implement an Urban Growth Boundary (UGB). In our opinion the most logical place to set an UGB to the east of Wagga would be at Pioneer Avenue, Gumly Gumly. Effectively the fact that the locality is flood prone limits the ability for the Gumly residential precinct to intensify. When viewing the locality more broadly, land to the east of Gumly Gumly opens up and there is the progression to agricultural land in full production. Factors such as landscape value, preservation of agricultural lands, infrastructure limitations and restrictions on landuse activity will come into play in this area.

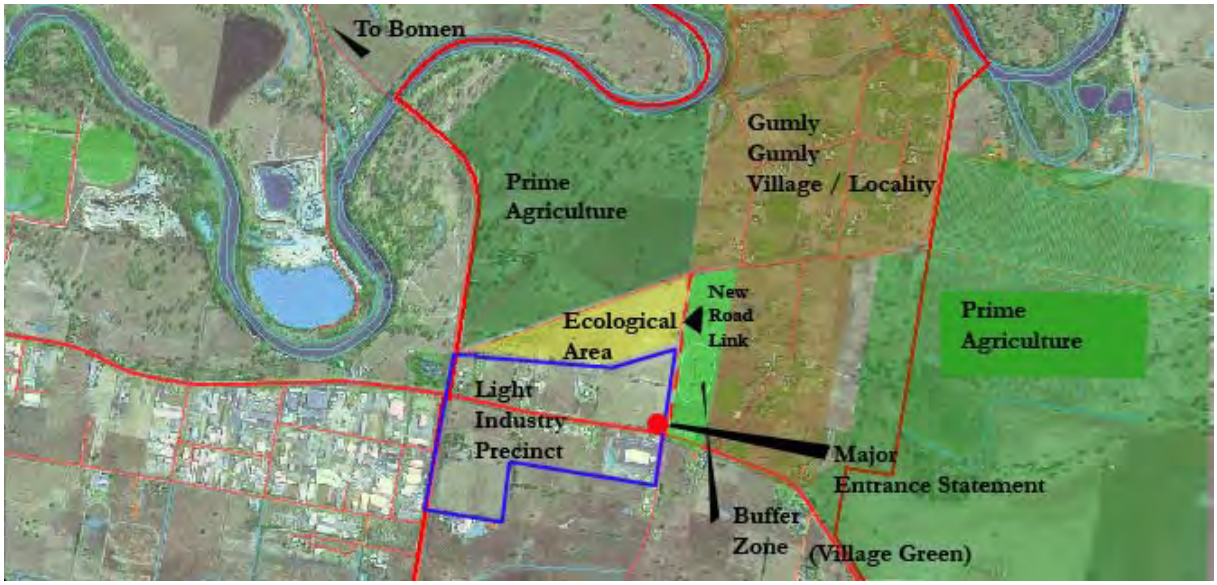
To link in with the City's aspirations to foster and encourage the intermodal freight related developments proposed for Bomen, it is understood that over time major industry related traffic will be utilizing this section of the Sturt Highway and Eunony bridge road to access the Bomen estate. Our clients land and this Gumly precinct offers an opportunity to create a contemporary and appealing light industrial precinct that will offer many positive externalities including:

- potential to provide employment for east Wagga residents of Gumly Gumly and Forest Hill
- Developer Contributions that could enhance community needs and facilities in the direct neighbourhood (parkland, other facilities)
- A Contemporary and appealing (precinct related) entrance statement for Wagga Wagga. Industry / Agricultural theme
- Critical mass of activity to ensure no further loss of amenities (shop etc) to the local area and possible enhancement
- Reduce access points to highway

- Development Opportunities for industry that requires highway frontage and will benefit from passing trade including spin offs from Bomen generated activities.

The following plan reveals spatially our strategic thinking for the precinct. Prime agricultural areas have been clearly defined. The core Gumly Gumly residential and service precinct has been identified along with:

- an area that is proposed to be embellished for ecological value
- an area that can act as a buffer between uses while providing facilities to the Gumly Residents (Village Green)
- An approximate area for light industry which is contiguous with existing industry in the precinct.
- Approximate location of City entrance statement



4. Define the floodplain better and cumulative impact of development on surrounding locality.

From previous flood impact assessment in the locality it is our understanding that flooding risk is minimal and only low hazard. We have had discussions with Councils Flood consultants who have advised that tools will be available shortly to quickly identify flood impact for areas including this site. We were advised that these tools will likely reveal even less flood risk than previously anticipated. My client is prepared to undertake any required flood impact assessment when these tools are made available.

5. Access issues

Our client is committed to reducing access points along the highway and working with Council and the RTA to agree on the most safe and efficient way to access his site and the broader precinct.

6. Substantiate why highway frontage is required and that there is no other or better opportunities for highway frontage elsewhere.

When viewing the city more broadly it becomes apparent that this site forms an important part of the route to the 1500 ha Bomen Business Park precinct. The opportunity exists for this small precinct to enjoy the positive externalities that would result from not only existing on the major highway route between Sydney and Adelaide but the main route for Bomen bound traffic coming from the east. This precinct due to its limited size will only facilitate a short term supply to the industrial land market and will more likely compliment rather than compete with the broader Bomen Business parks objectives for larger agricultural based industries, freight and intermodal activities.

We would like the opportunity to address the planning panel at a public hearing in relation to this proposal.

Should you wish further information I can be contacted on 69717799 or by email to admin@lennonsalvestroplanning.com.au.

Yours sincerely,

Nicole Lennon
Director
Lennon Salvestro Planning