

# Submission to Greater Macarthur Land Release Investigation

**Prepared for:**

**Lend Lease Communities**

**November 2015**

**Project No: 10338**



## Submission to DPE

### Greater Macarthur Land Release Investigation

GLN Planning Pty Ltd  
ABN 39 585 269 237

Level 10, 66 King Street Sydney NSW 2000  
GPO Box 5013 Sydney NSW 2001

P	[02] 9249 4100	E	<a href="mailto:info@glntesting.com.au">info@glntesting.com.au</a>
F	[02] 9249 4111	W	glntesting.com.au



Date of Final Issue: 18 November 2015  
File Path: R:\Projects\10338 Lend Lease Mt Gilead DD\_CONFIDENTIAL\Macarthur South Strategy\Submission\10338 MSIA LLC Submission - FINAL.docx  
Project Manager: P Grech  
Client: Lend Lease Communities  
Project Number: 10338

The purpose for which this report may be used and relied upon is limited for that which it was commissioned. Copyright in the whole and every part of this document belongs to GLN Planning and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person without the prior written consent of GLN Planning.

## Document history and status

Version	Issued To	Qty	Date	Prepared by:	Reviewed by:
Preliminary Draft	LLC	1-e	10/11/15	M Cooper	P Grech
Draft	LLC	1-e	12/11/15	M Cooper	P Grech
Final Draft	LLC	1-e	16/11/15	M Cooper	P Grech
Submission	Department of Planning & Environment LLC	1-e	18/11/2015	M Cooper	P Grech

## Table of Contents

<b>Executive Summary</b>	<b>i</b>
<b>1.0 Introduction</b>	<b>1</b>
1.1 Commission	1
1.2 Subject Land	1
1.3 Outline of Submission	3
<b>2.0 Key Issues</b>	<b>5</b>
2.1 Statutory Planning Framework	5
2.2 Special Infrastructure Contributions (State Infrastructure)	8
2.3 Local Infrastructure Contributions (Local Infrastructure)	11
2.4 Delivery of Utility Infrastructure	12
2.5 Roads and Public Transport	15
2.6 Stormwater Management and Flooding	17
2.7 Ecology & Biocertification Process	17
2.8 Agricultural Land	20
2.9 Managing mineral resources	21
2.10 Heritage	21
2.11 Centres	22
2.12 Social Infrastructure	23
2.13 Precinct Planning	24
<b>3.0 Conclusions</b>	<b>25</b>
<b>Glossary</b>	<b>26</b>

## Table of Figures

Figure 1	Aerial photograph of study area	1
Figure 2	Study Area Components	2
Figure 3.	Alternative regional road network	16
Figure 4.	Ground truthed biodiversity constraints	18
Figure 5.	Revised biodiversity constraints and developable land footprint	18

## Appendices

Appendix A – Infrastructure delivery commentary

Appendix B – Biodiversity and ecological constraints commentary

Appendix C – Agricultural Investigation for MDP Lands

## Executive Summary

The Department's initiative to establish a clear planning framework for the Greater Macarthur region through the exhibition of the Greater Macarthur Land Release Investigation (**GMLRI**) area is applauded.

Lend Lease Communities (**LLC**) has control of a significant landholding in the Mount Gilead Precinct and at Wilton. The progress of the GMLRI area is supported and the following comments are made in relation to LLCs' land holding at Mount Gilead to ensure that the final document and approach to land release represents best practice and seamless delivery of this land and the broader area. A separate submission will be forwarded for Wilton (Bingara Gorge) land by LLC. Our comments relate to the Mount Gilead Area and summarised as follows:

### Progress of the current Planning Proposal to gazettal for MDP lands

It is essential that the current Planning Proposal for the MDP lands at Mount Gilead be progressed to gazettal, expected this year or early next year. This will enable approvals to be sought and early bulk earthworks, infrastructure and first stages of housing development to commence. LLC would support working with DPE to determine how best to incorporate the rezoned MDP Land into the future Growth Centres SEPP to ensure the MDP Land is aligned with the objectives of the GMLRI area.

The use of the Growth Centres SEPP to implement the new planning controls for the Macarthur Region is important as it will provide the opportunity to deliver the lands with consistent controls applicable across the entire release. There should be a standardised planning framework including land use zones, density of development as well as the principles for the payment of works to satisfy any State Infrastructure Contributions (**SIC**) and Biodiversity Offsets. This will require the Growth Centre SEPP to absorb the MDP lands and apply the new controls back over these areas.

### Need for a Robust Structure Plan

It is important for the overall planning of the release, establishment of SIC contributions that generate 'no cost to government' and a framework for biodiversity offsets that a Structure Plan apply to the entire release area identifying the spatial relationship of the land uses supported by a planning principles document. Together this can provide appropriate certainty for developers to understand the end goal and allowable flexibility to factor these into their detailed investigations for delivery.

All too often a Structure Plan will identify infrastructure in a location that should be modified after detailed planning investigations have been carried out. The planning principles document should support this occurring.

The Structure Plan is important as it will help developers make decisions about the cost of infrastructure and works to benefit the development and account for biodiversity offsets.

### Need for a Staging Plan

The staging of a Priority Precinct releases is supported as they will be logically based on building onto and extending the infrastructure in existing urban areas in a sequential manner. This provides a sound basis for the timing of other infrastructure identified in any SIC levy based on

population or development thresholds. There should not be, however, any encumbrance on a later Precinct forward funding SIC works to bring the early delivery of a Precinct if this is warranted, provided this is refunded later.

Finally, the planning for the GMLRI area should recognise that development will logically continue as an extension of the MDP Lands. This will allow for the efficient and orderly augmentation of infrastructure.

### **State Infrastructure Contributions**

The use of a Structure Plan for the entire release will help cost the likely SIC levy on new development and enable developers to make decisions about the delivery of up front infrastructure as part of the delivery of their developments.

There are two important considerations in relation to the SIC. The first is the principle of 'no cost to government' which has not been defined. The current SIC arrangements applying to various Growth Centres and other urban releases are based on a subsidised SIC levy in place since its inception. To ensure a competitive market and equitable affordability platform, the SIC levy should be no higher than that in the same submarket (ie the South West). In this regard, the 'no additional cost to Government' should exclude works already clearly required without any development within the GMLRI area. Such works would likely include a significant part of Spring Farm Parkway and required upgrades to Appin Road.

Across the GMLRI area, however, it should be recognised that some Precincts will require greater expenditure on infrastructure, and the SIC should not be used to apply substantial cross subsidisation where the works clearly only benefit a particular Precinct. Whether it be SIC of Section 94, these levies should be applied to bring about the equitable sharing of costs that benefit the entire release area. Where a particular work benefits only one Precinct, then the cost for that item should only be levied on that Precinct.

### **Bio Diversity Offsets**

The Mount Gilead landholding secured by LLC, has significant biodiversity lands that will be protected as part of the final development allowing biodiversity requirements be substantially met on site. However, there is an opportunity in the planning of the GMLRI area to clarify rules regarding biodiversity offsetting. This should include reviewing the offset ratios to align with that applied in the Growth Centres and the value of biodiversity offsets which typically reduce after rezoning has occurred. LLC seeks further engagement with DPE regarding the options of bio certifying land that has the capacity to be met on site.

### **Detailed Constraints**

Discussion with the mine licence holder has confirmed no objection to urban development on the Mount Gilead properties controlled by LLC given that no mining is proposed under these lands.

The classification of the Class 2 Agricultural Land is not warranted because it is fragmented and limited economic prospects for its continued use for agricultural purposes. It should therefore not be mapped as a constraint.

Where the GMLRI has identified constraints and encumbrances over land that is currently the subject of active Planning Proposals, it is considered that the constraint mapping is updated to be consistent with the associated studies that have supported these planning proposals and have

gone through the rigour and thoroughness of public exhibition and assessment by Campbelltown Council.

We have made a number of other detailed comments within the bod of the submission and would welcome the opportunity to discuss these further.

## 1.0 Introduction

### 1.1 Commission

GLN Planning (**GLN**) has been commissioned by Lend Lease Communities (**LLC**) to provide a technical review of the Greater Macarthur Land Release Investigation (**GMLRI**) and associated documents placed on exhibition by the Department of Planning and Environment (**DPE**).

### 1.2 Subject Land

Menangle Park and Mount Gilead are identified as a Priority Precinct in the GMLRI comprising a total area of 3,600 hectares. The Priority Precinct is situated within the southern fringe of Campbelltown LGA in an area commonly referred to as Macarthur South for planning purposes. The Precinct and surrounding areas is currently comprises rural farms land (cattle grazing and poultry sheds), bushland and rural residential lots.

Mount Gilead Pty Ltd (**MGP**) has a controlling interest of a significant area of land within the Mount Gilead Precinct in the order of 700 hectares. The extent of this landholding is shown in **Figure 1** below. MGP has entered into a conditional sale of the majority of their land and rights over other areas to Lend Lease Communities (**LLC**) to ultimately have development control over the majority of land.



Source: Six Maps as adapted by GLN

**Figure 1 Aerial photograph of study area**

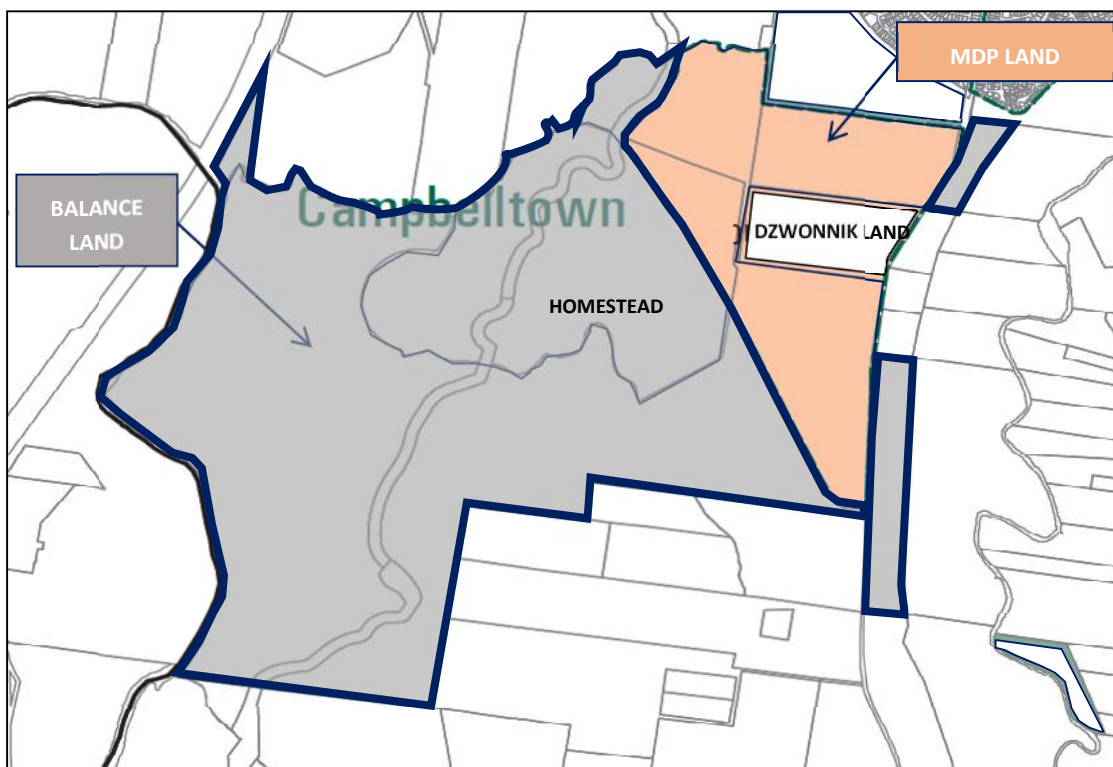
As DPE is aware, the Metropolitan Development Program (**MDP**) has identified a release area in Mount Gilead since the 1970's. This area accounts for just under 200 hectares of the subject landholding and is referred to as the **MDP Lands** in this submission. Campbelltown City Council (**Council**) has finalised the assessment and exhibition of a Planning Proposal to amend Council's

Local Environmental Plan (**LEP**) to zone the majority of the MDP land for residential development that will deliver an anticipated yield of 1,700 new homes with supporting local infrastructure and regional infrastructure. LLC intend to purchase the land and develop it for residential purposes.

The remainder of the land within the MDP land currently the subject of a Planning Proposal with Campbelltown Council is owned by Dzwonnik. At this time, it is understood that Dzwonnik intends to develop on their own or partner with a developer.

As indicated in the GMLRI package, rezoning of the MDP Land is a priority with DPE targeting rezoning by the end 2015. LLC are supportive of this priority timing and would also support the MDP Land by delivering housing within 2 years also as indicated in the announcement of GMLRI.

The remaining land, as shown in **Figure 2** below is referred to as the **Balance Lands** in this submission. This land has an area of 639 hectares and is currently used for cattle grazing with irrigated pastoral lands as well as a historic dwelling and agricultural buildings. It is anticipated that this land could yield approximately 5,000 new homes, provide supporting local infrastructure and contribute to regional infrastructure upgrades. No formal proposal has been lodged with Campbelltown City Council or DPE for this land but it can be scheduled to be progressed shortly after the rezoning of the MDP Land.



Source: Base map [MDP 2010/2011 Report](#) as adapted by GLN

**Figure 2 Study Area Components<sup>1</sup>**

A list of the property details this submission relates to is provided in **Table 1** below:

**Table 1: Description of study area components**

Component	Property Description	Approximate Area
MDP Land	<ul style="list-style-type: none"><li>Part Lot 1 in DP 807555</li><li>Lot 2 in DP 807555</li></ul>	Approximately 180 ha (subject to confirmation of Homestead Lot)
Balance Land (including land for development, environmental offsets, infrastructure and the future Homestead Lot)	<ul style="list-style-type: none"><li>Part Lot 1 in DP 807555</li><li>Part Lot 2 in DP 807555</li><li>Lot 59 in DP 752042</li><li>Lot 2 in DP 249393</li><li>Lot 1 in DP 603675</li><li>Lot 2 in DP 603674</li></ul>	Approximately 639 ha
:TOTAL		819 ha

Note: Dzwonnik is the other landowner within the MDP Lands but is not represented in this submission.

### 1.3 Outline of Submission

This submission reviews the GMLRI package placed on exhibition until 18 November 2015 which includes:

- Greater Macarthur Land Release Preliminary Strategy
- Greater Macarthur Background Analysis Report
- Explanation of Intended Effects
- Associated draft technical studies

This submission has been prepared on LLC's behalf with input as required from other technical consultants. This submission generally provides commentary in relation to the Menangle Park and Mount Gilead Precincts only. It should be noted that LLC are also a developer of Bingara Gorge in the Wilton Precinct. In this regard, a separate submission will be provided regarding the GMLRI for LLCs land within the Wilton precinct.

The issues raised during this submission deal directly with the subject land which is intended to be ultimately developed under a single landowner. The key issues raised are:

- Statutory Planning Framework
- Special Infrastructure Contributions (State Infrastructure)
- Local Infrastructure Contributions (Local Infrastructure)
- Delivery of Utility Infrastructure
- Roads and Public Transport
- Stormwater Management and Flooding

- Ecology & bio certification Process
- Agricultural Land
- Heritage
- Centres and Social Infrastructure
- Structure Plan
- Administration & Timing
- Impact of Mining on the release

Input has been provided to this submission by:

- Eco Logical Australia for matters relating to the extent of developable area and encumbered land extents due to biodiversity matters (**Appendix A**).
- Cardno for matters relating to infrastructure delivery, roads and public transport, stormwater management and flooding (**Appendix B**).
- Ag Econ Plus for matters relating to agricultural productivity (**Appendix C**).
- Lend Lease Living Utilities for matters related to private infrastructure and servicing

## 2.0 Key Issues

This section of the report provides a review of the GMLRI package and where necessary, explains the need for any refinement to the package and the information relied upon. Where possible we make suggestions on other potential amendments for DPE's consideration.

The size of the land holding and proximity to services provides a unique circumstance compared to other precincts identified in the GMLRI for early release and the satisfaction of infrastructure and biodiversity matters as part of the development of land. Consequently, a planning framework should be structured to suit this circumstance.

### 2.1 Statutory Planning Framework

The GMLRI is a welcomed step in the process of determining future development outcomes for the Greater Macarthur region to respond to demand for housing in Sydney. To ensure this process is carried through to fruition, land owners and developers will need the structure planning to be finalised and a clear policy position from the Government that supports appropriate development within the area.

The GMLRI exhibition documents propose that the GMLRI area is given statutory backing and is nominated in a State Environmental Planning Policy (**SEPP**), in the same way as the wider North West and South West Growth Centres release area are recognised in *State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Growth Centres SEPP)* or strategic employment lands in Western Sydney are recognised in *State Environmental Planning Policy (Western Sydney Employment Area) 2009*.

It is essential that a Structure Plan be prepared for the entire area that develops spatial concepts for future urban development, and required for conservation and infrastructure corridors. This is vital in setting clear expectations for landowners and developers in the region for the general location of areas where social infrastructure as well as biodiversity conservation can occur to meet the requirements of a development or traded within the Precinct or broader release area. This structure planning platform will provide an appropriate planning basis to progress rezonings and ultimately development. It is also desirable that the DPE remain in control of facilitating and driving the rezoning process with critical involvement of the relevant local councils. This will ensure a coordinated and consistent approach is applied to the planning of the GMLRI area.

#### Statutory Framework

Following the identification of the GMLRI area in a statutory instrument, there are generally three existing mechanisms DPE could consider to enable the rezoning of land including:

- The use of Planning Proposals to rezone land in Council's existing LEP;
- The use of SEPPs to amend the relevant Council's LEP; or
- Identify the GMLRI as a Growth Centre in the Growth Centres SEPP (as currently proposed in the Explanation of Intended Effect).

Ideally, for any release of land of this scale, the preferred method would be through the Growth Centre SEPP allowing for the orderly development of land and coordinated delivery housing and infrastructure and biodiversity outcomes. However, DPE would be aware, Campbelltown city

Council (**Council**) is currently progressing a Planning Proposal to rezone the MDP land separately at Mount Gilead and Menangle Park. These Planning Proposals are significantly progressed. We note the commitment from Government to rezone land in Menangle Park and the MDP Lands at Mount Gilead by the end of 2015<sup>2</sup>.

Given that the likely time frame for the DPE to respond to submissions received from the exhibition of the GMLRI package and confirmation of the final statutory framework for the wider GMLRI, it is critical that the current Planning Proposal proceeds within its current process. Depending on the final adopted planning framework for GMLRI area, the MDP Land can be included at a later date. Assuming that the inclusion of the GMLRI in the Growth Centres is the preferred statutory framework, a 'housekeeping' amendment to the Growth Centres SEPP could be facilitated to bring the MDP land under this framework to ensure a consistency in approach and development controls. The development potential of large release areas evolves over time and the translation of the MDP Land zoning into the Growth Centres SEPP will allow for a timely review of the planning controls if necessary.

The general application of the Growth Centres SEPP would support the implementation of a Special Infrastructure Contribution (**SIC**) to standardise the contribution amount and collection (or works in kind) compared to the current 'satisfactory arrangements' clause currently included for urban release areas in LEPs. The satisfactory arrangements clause currently is a time consuming process and typically fails to deliver an equitable and transparent outcome relative to specific rezonings and the associated upgrading and infrastructure investment they trigger.

### **Zoning detail and Planning Control Structure**

DPE recently consulted with key industry groups and Growth Centre Councils on a new statutory approach to the planning for the remaining North West and South West Growth Centres precincts<sup>3</sup>. In particular, this new approach suggested the rationalisation of land use zones to primarily determine land as being suitable for residential or employment development or undevelopable due to various constraints.

For the single residential zone, a full spectrum of permissible uses would be permitted. Residential form outcomes would either be controlled by continuing to apply minimum density targets, as currently is the case in the Growth Centres SEPP, or relying on Development Control Plan (**DCP**) controls. This is similar to the Growth Centres Commission approach to zoning that was taken for the large land holdings in Oran Park and Turner Road Precincts.

This approach also looked to remove the specific identification of infrastructure on the Land Zoning Map, such as open space, road widening and drainage. Instead, this infrastructure would be identified in the Land Reservation Acquisition Map, within Councils Section 94 Contributions Plans and in DCPs.

For large landholdings, such as Mount Gilead, more flexible development zones and advanced rezoning of the land should be implemented where clear targets or parameters are set for local infrastructure such as open space and drainage facilities. This would allow flexibility to determine the best and most efficient way to deliver the infrastructure to meet these targets rather than statutorily fixed infrastructure locations. At a strategic rezoning stage, the design of infrastructure items are more conceptual and do not benefit from the level of detail to confirm final sizes,

<sup>2</sup> Greater Macarthur Land Release Investigation – Preliminary Strategy and Action Plan, DPE 2015.

<sup>3</sup> Changes to the statutory framework of Sydney's Growth Centres – Discussion Paper DPE 2015.

locations and cost. This would also avoid the need for flexible zone boundaries and 'housekeeping' rezonings to correct zone boundaries as experienced in some Growth Centre Precincts.

For fragmented land releases (which is not the Mount Gilead situation) where the consolidation of land into large parcels is unlikely, a more specific approach of identifying and zoning infrastructure is likely required to allow for more efficient development of land versus piecemeal developments on a site by site basis. This reduction in flexibility is often required to allow individual land parcels to be developed independently where a consensus between landowners may not be achievable. Where individual landowners were to cooperate, more flexibility of planning controls could be entertained through a formal amendment process where a greater landholding would permit greater efficiency in the development of land and infrastructure delivery.

Most land in the GMLRI area is relatively unfragmented, including the Mount Gilead Precinct, enabling the use of a more rationalised zoning palette. It is suggested that either the types of development proposed in the residential zone is paired back to a core list and that other types of development are enabled where density targets are set or other similar mechanism is established.

### **Role of Development Control Plan**

Given the approach proposed to simplify the zoning of land, it will still be necessary for the DCP to provide the specific detail to guide development within the Precincts. In this regard, it is suggested that the DCP include an overall masterplan or Indicative Layout Plan. This master planning exercise will generally need to be undertaken at the rezoning stage anyway in order to demonstrate how relevant targets, such as dwelling yields will be delivered, how the higher order road network will operate and how targets for the provision of open space and drainage facilities will be met.

It is suggested that a general template DCP be adopted for the GMLRI area to ensure controls are standardised wherever possible to improve efficiencies through consistency. The standard provisions for subdivision design and dwellings that were included in DPE's Housing Diversity amendment that applies to the Growth Centres could be used as a model set of controls to start from. This model DCP could then be used by DPE for any Government or proponent led rezonings in the GMLRI whether it was for fragmented or large landholdings.

To recognise that large landholdings present greater opportunities for more coordinated urban design outcomes, there should be flexibility to adapt the model DCP as required for individual Precincts. Such flexibility may relate to dwelling built form, road widths and will allow greater innovation in the development industry noting that the Housing Diversity DCP amendments in the Growth Centres were generally based on industry best practice that was pioneered by developers in new estates outside of the Growth Centres.

### **Preparation**

Subsequent to the establishing the planning framework and structure plans for the wider GMLRI area, there will be a need to undertake further investigations to prepare detailed planning packages for individual precincts. The process for the release of land and rezonings in GMLRI needs to be flexible in that it provides both Government and developers to instigate and lead rezonings. In the situation where there are large landholdings (ie. in excess of 100 hectares) and a willing developer, the rezoning of a Precinct (or part) should be proponent led and that DPE provides a facilitator and project control function through the rezoning process.

Key functions of DPE in this process should involve:

- managing a Project Control Group, including DPE, Council and proponent representatives, for ensuring program milestones and planning outcomes/targets are met;
- translating the proposed development outcome into formal planning controls including SEPP amendment and DCP preparation;
- act as the proponent to secure a Biodiversity Certification (if pursued);
- identification of a infrastructure delivery plan with infrastructure agencies;
- facilitating the exhibition of the proposed development and finalisation of the proposal to formally amend the Growth Centres SEPP and put the DCP and SIC in place; and
- facilitating of Voluntary Planning Agreements for Works In Kind against the future SIC.

This would give developers the flexibility to deliver development outcomes that are generally defined by Government in a manner that is economically viable.

Where there is the impetus for Government to intervene and continue a specific land rezoning over a large landholding or fragmented land forward of any landowner or developer interest, it is proposed that DPE would be responsible for preparing the rezoning proposal in a similar manner to the current Growth Centres program.

## 2.2 Special Infrastructure Contributions (State Infrastructure)

As indicated with the Land Use and Infrastructure Analysis, it is intended that the delivery of regional and higher order infrastructure to service GMLRI be at no cost to Government. It is also suggested that the Government's preferred approach to provide and fund infrastructure will be through the implementation of a SIC similar to the North West and South West Growth Centres. The concept of establishing a SIC for the GMLRI is generally supported as it is considered to be far superior from a process management perspective compared to the 'satisfactory arrangements' clause that has typically been relied upon for urban release areas in standard instrument LEPs. In the establishment of a SIC framework for the wider GMLRI area, it will be critical to consider the following matters:

### **Define 'no cost to Government'**

As currently is the case for the Precinct Acceleration Protocol that is applied to the North West and South West Growth Centres, the concept of 'no cost to Government' is not clearly defined. Clarification as to what this means, as applied to the GMLRI area is required to provide greater transparency and certainty to developers and landowners.

Essentially, the SIC in the Growth Centres was established to put in place a funding mechanism for regional level infrastructure such as land and construction costs for major roads and land for supporting facilities such as health, schools and public transport depots. The demand for this infrastructure was generally attributable to demand generated from the change in land use in the Growth Centres from agricultural and rural residential to urban development purposes. This

regime essentially established a funding stream to ensure essential regional infrastructure upgrades could be provided at no additional cost to Government.

In consideration of the inclusion of new major roads, it is critical that Government considers the demand from existing development within the GMLRI area and surrounds for roads like Spring Farm Parkway and Appin Road. On this basis, it is not considered reasonable that development within GMLRI area is solely responsible for funding the entire cost of these works. Should the GMLRI area be burdened by these associated costs, this will likely result in a higher cost that will impact on the affordability of housing and feasibility of development within the GMLRI area. The approach of applying a SIC to GMLRI area is supported on the basis Government is transparent in the apportionment of cost to major road works where there is already significant existing demand and the demand generated by additional development in GMLRI area.

It is also important to note that utility infrastructure (ie. water, sewer and electricity) has not traditionally been covered by a SIC. Utility infrastructure is typically funded by the relevant authority through their budgeting processes reliant on new connections from development generating a future revenue stream to warrant investment in the necessary assets. To ensure a level playing field for Greenfield development, it is essential that this process continues. As such, a lack of definition of 'no cost to Government' could create ambiguity or even barriers to the delivery of development enabling utility infrastructure.

Given that there are a number of significant landholdings in GMLRI area that are likely to be proponent led, defining 'no cost to Government' will be essential to informing investment decision making for industry. Critical to the definition will be the element of timing of expenditure on infrastructure. For instance, if a proponent led rezoning triggers the need for a road to be delivered in advance of Government's program, this does not trigger a cost to Government as it would ultimately be funded and delivered by the SIC. Similarly, the funding should not be applied to remedy works that makes up a shortfall to complete other works primarily benefitting other release areas or solving other issues. Any SIC funding requires a clear nexus or benefit to the development arising from the GMLRI area. LLC would also support the continuation of use of Voluntary Planning Agreements (VPA) to facilitate the delivery of works by developers with the application of credits against the SIC.

### **Benchmark cost of the contribution**

To ensure that development in the GLMRI area is able to operate on the same competitive terms of development in the Growth Centres and other urban release areas in the vicinity, it is recommended that the current SIC discounted rate is used as the benchmark for the maximum contribution rates for the GLMRI. If a higher SIC rate were to apply to the GMLRI area, this will essentially result in less affordable product and could slow or stall development. The current SIC rate is relied upon by DPE to inform the relevant contribution for the purposes of making satisfactory arrangements for urban release areas in the vicinity of the Growth Centres and is generally accepted by industry as the reasonable contribution rate to fund regional infrastructure in a Greenfield context.

### **Transparent works list**

Whilst the current SIC that applies to Growth Centres lists the items it funds and the total associated costs, little information is actually publicly available on the location, details and inclusions for each of these items. Any new SIC regime that is to be applied to the GLMRI area should be more transparent in terms of providing details of the associated costs and design requirements for the various infrastructure items that will be identified. The timing for the delivery

of works in the SIC should also be prepared and be made accessible. The timing for infrastructure could be expressed either as a date based on forecast development in the GMLRI area or alternatively be based upon triggers such as lot production.

The infrastructure cost information also needs to be complemented with a proposed timing for delivery of the infrastructure by Government or at least triggers that generate the demand for the infrastructure to be delivered that will benefit different Precincts within the GMRLI area. This will assist industry in making decisions, where possible, to deliver items as works in kind and remove the delivery liability from Government. The rigors that apply to Section 94 contributions plans should be applied to SIC schemes.

### **Application of the SIC**

There are two options to implement a SIC for regional infrastructure as required for the GMLRI area as follows:

#### ***Growth Centre wide SIC***

In terms of establishing a SIC regime for GMLRI, it could be possible to amend the current SIC that applies to the Growth Centres and selected releases. Once an infrastructure schedule was determined, the works items could then be included in a consolidated list of works with the Growth Centres. This would be advantageous as it would:

- Establish a benchmarked cost for regional infrastructure that would allow a level playing field for development in the Growth Centres and GMLRI;
- Where works weren't delivered as works in kind and a cash payment was required, this would deliver additional revenue for DPE to allocate to priority infrastructure projects;
- Require minimal legislation change as the SIC is already established; and
- Allow for the trading of credits for developers that have projects in different release areas.

#### ***GLMRI area only SIC***

As an alternative to a single overarching SIC that establishes a standard contribution rate for regional development for all release areas, a separate SIC could be established for GMLRI. If this option were to be pursued, it is recommended that the infrastructure contribution rate is in line with the Growth Centres SIC to ensure a level playing field for associated development costs between GMLRI and the Growth Centres.

Where the associated infrastructure costs for GMLRI area are greater than the current Growth Centres SIC, it would be necessary to either reassess the scope of the works or alternatively, Government could subsidise the infrastructure costs, as is currently done in the Growth Centres, on the expectation that additional revenue, in the form of increased stamp duty collections, increased land tax revenue and rates would be generated by allowing development within the GMLRI area.

Given the size of the GMRLI area and different traffic generation catchments, there is however the likelihood that different Precincts will have to cross subsidise road infrastructure in other areas. This would make development in some areas unnecessarily more expensive and impact of the affordability of housing product to meet the market expectations and tolerances.

In light of the above, it is recommended that a catchment based SIC is established for the GMLRI Precincts. This will ensure that land with a cheaper infrastructure cost, or that bares no benefit from certain works, is not unfairly disadvantaged. To implement a catchment based SIC regime, it would be necessary to identify and apportion regional road infrastructure in terms of external demand (growth and increased traffic volumes generated external to the GMLRI area), key regional roads that benefit the whole of GMLRI area and then specific links that are more dependent on development occurring within certain catchments. In this regard, Cardno has carried out an initial assessment of apportionment of cost of transport infrastructure relative to demand generated by development within their landholding and can be provided to DPE for consideration.

## 2.3 Local Infrastructure Contributions (Local Infrastructure)

Currently the Government's position caps contributions for new release areas at \$30,000 per dwelling. Presumably, the GMLRI area will be designated a new release area for these purposes. However, infrastructure costs for recent Growth Centre Precincts can be well in excess of \$30,000 per dwelling. As an interim arrangement, the Government has put in place the Local Infrastructure Growth Scheme (**LIGS**) to cover the gap between contribution income that is generated under the cap and the actual infrastructure cost of works to ensure Councils are able to deliver the necessary local infrastructure.

Given the GMLRI area has been identified for development, a Ministerial determination should be provided as soon as possible to confirm the increase in the cap from \$20,000 per dwelling to \$30,000 per dwelling that is applicable to new release areas. This determination will further reflect the Government's nomination of the land for urban development and provide greater certainty for stakeholder Councils in terms of reducing any potential infrastructure funding gap.

The extent of large landholdings and extent of interest in developing in the GMLRI presents an opportunity for Government to take an alternative approach to the delivery of local infrastructure. Rather than relying on the use of Section 94 Plans to specify exact items and the associated land acquisition and construction costs, at the structure plan stage, DPE could identify appropriate targets for the necessary local infrastructure required by development in the various Precincts.

Each of the identified stages and precincts could be reviewed to determine their development yield and to what extent the cost of works for infrastructure can be self-contained. Where infrastructure can be fairly attributed to development within a Precinct, such as roads, stormwater drainage and open space, appropriate requirements can be set. Where there are higher order items, such as surplus playing fields or community facilities, a total infrastructure cost could be identified as well as preferred locations. This cost could then inform the basis for a cash contribution where the facilities are not able to be accommodated on site. This approach would work given the low level of fragmentation and large development parcels.

Road links will need to be conceptually identified on the structure plan to ensure internal road network and access outcomes are achieved. However, rather than mandating a specific alignment or cost of construction, provided necessary connections are made and traffic thresholds are able to be accommodated, there should be flexibility in the ultimate alignment to allow developers to determine the most cost effective means of delivering these roads.

With regard to stormwater management infrastructure, once developable land extents are identified in the structure plan, it should then be possible to set appropriate stormwater detention and treatment targets. These standards could then be applied across the whole GMLRI area to ensure a consistent approach is being applied between each Council area. At the rezoning stage,

a developer could then propose a stormwater management regime to meet these targets generally to a Council specification.

As for open space, standard rates of provision could be adopted to guide infrastructure delivery in each Precinct. It would likely be necessary to set flexible local open space requirements such as minimum facility sizes and access/proximity to dwellings. These could be specified at a structure plan level based on anticipated yields and allow developers to determine the best ways to deliver these facilities within their landholdings. Locations and sizes of the ultimate facilities would be identified through the masterplanning and rezoning process.

Once a developer has master-planned their landholding and identified the appropriate infrastructure strategies to Council's satisfaction and associated costs are known, a Planning Agreement could be entered to secure the delivery of these outcomes. This could be an alternative to specifically zoning land for infrastructure purposes and allow for further refinement and flexibility to occur during the development stage versus current procedural delays that are being experienced in the North West Growth Centre. However, in the instance that contributions exceed \$30,000 for essential infrastructure, it will be necessary for DPE to still lead the preparation of a Contribution Plan, or provide the appropriate mechanism under a local VPA, for LIGS funding to provide funding for infrastructure above the \$30,000 per dwelling cap.

## 2.4 Delivery of Utility Infrastructure

The GMLRI Land Use and Infrastructure report prepared by DPE was reviewed by Cardno to understand the implications for the MDP and Balance Lands. A copy of their detailed advice is provided at **Appendix A** and generally summarised in the following sections below.

### General commentary

The *High Level Services Infrastructure Strategy* report prepared by AECOM (September 2015), noted the general assumption of all Government infrastructure providers consulted is that all of the North West and South West Growth Centres should be developed before development commences in the GLMRI area commences given there is limited available capacity in the existing systems. However, given the strong interest that is already being expressed by landowners and developers and current Planning Proposals in train, this is unlikely to be the case.

In addition to the known interest and capability of developers to deliver residential development in the GMLRI area a significant portion of the South West Growth Centre is fragmented and yet to be zoned. As such, this assumption should be tested and further clarifications sought from infrastructure providers on impacts to the servicing strategy if known parts of the GMLRI area are delivered in advance of the full development of the Growth Centres.

### Assumed yields

The assumed yields for the Menangle Park and Mt Gilead Priority Precinct reported in the various documents prepared for the GLMRI area are not consistent and are likely understated. In particular, the assumed yield for the Menangle Park and Mount Gilead Priority Precinct in the Preliminary Strategy and Action Plan of 18,100 dwellings appears to understate the yield for this area. This appears to be on the assumption of 15 dwellings per hectare of unencumbered land. However dwelling densities are likely to be greater than this, more comparable to what is currently being delivered in the North West and South West Growth Centres. In particular, areas designated and zoned for 15 dwellings per hectare under the SEPP are on average delivering in the order of 20 dwellings per hectare as a minimum.

Given current knowledge of existing Planning Proposals including Menangle Park, Mount Gilead MDP lands and Campbelltown South, and reality of what is being delivered in the North West and South West Growth Centres, based on the assumed 12,100 developable hectares identified in the GMLRI area, the potential dwelling yield would be in the order of 22,000 to 24,000 dwellings. This would also likely reflect more concentrated development that is likely to occur around the Town Centres that have been identified in the draft Structure Plan.

It is noted that there would likely be flexibility in dwelling yields after this point. Dwelling yields would likely be confirmed in more detail during the preparation of a structure plan for the Menangle Park and Mount Gilead Priority Precinct. However, given the variation in yields (in the order of 4,000 dwellings), it would be preferable to set a higher dwelling yield for this precinct than to establish expectations for a lower yield scenario that may not fully utilise the extent of developable land identified.

The establishment of baseline yields is also critical as they should form the basis of further investigations into infrastructure requirements, such as traffic, transport and social infrastructure etc, that will form the basis of a future SIC and S94 Contributions Plans for Precincts in the GMLRI area.

### **Staging**

To give the proposed staging meaning, it is necessary to achieve an interagency agreement between DPE, Transport for NSW (**TfNSW**) and the utility agencies for the timing of delivery (and associated expenditure) for each Precinct so industry has certainty of funding and timing or alternatively pursue opportunities to proceed ahead of the adopted staging plan.

The staging of land release based on the utilisation of capacity and augmentation to existing infrastructure is generally supported and is sound in identifying opportunities for first release areas. However, it is considered necessary that following the first release Precincts, the approach to subsequent release Precincts, whether DPE or proponent led, provides flexibility for release to occur on a needs and merit basis.

With regard to Wilton Junction, the justification for its inclusion in the Stage 2 release is unclear. Its inclusion in the Stage 2 release should not be at the expense of the Balance Lands being included in Stage 2 given its size, a willing and leading developer is committed to the site and that it is in close proximity to services.

### **Water Supply**

Confirmation that Sydney Water will be the preferred provider of potable water for the GMLRI area is critical to allowing landowners and developers to proceed with certainty in pursuing any rezoning of land and development. It is suggested that Government nominate Sydney Water as the preferred (but not exclusive) provider to be responsible for the funding and delivery of trunk infrastructure to service the precincts in the GMLRI area, to provide greater certainty and also allow alternative options to be pursued.

### **Sewerage**

Confirmation that Sydney Water will be the preferred provider of waste water treatment services for the GMLRI area is critical to allowing landowners and developers to proceed with certainty in pursuing any rezoning of land and development. It is suggested that Government nominate Sydney Water as the preferred provider to be responsible for the funding and delivery of trunk

infrastructure to service the precincts in the GMLRI area. In the instance that the timing of infrastructure may not be advantageous to the rezoning of land or alternative servicing arrangements can be identified, the option for private systems would still be available under the *Water Industry Competition Act 2006*.

In regard to the Indicative Sewer Infrastructure Augmentation and Upgrade Plan prepared by AECOM, it is noted that this provides for the scenario that the whole of the GMLRI area is developed. However, given that the Wastewater Treatment Plant (**WTP**) is located within land that is not within either of the Priority Precincts, it is likely that interim wastewater infrastructure leveraging of existing capacity (or augmentation) will be needed. Given the significant investment required for interim infrastructure and that there is no timing for the delivery of the final WTP, it is likely that any interim infrastructure would likely be required for the medium term if not in perpetuity. As such, a sewer servicing strategy recognising this likelihood and the staging of development needs to be prepared and provided for comment by landowners in the GMLRI area.

DPE will also need to confirm the capability to discharge treated waste water into the Nepean River as it is currently understood that this is supported by EPA for upstream areas.

### **Gas Supply**

The Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy states that Jemena is unlikely to provide gas service to the GMLRI area due to significant costs that would not be viable. Given the GMLRI is anticipated to accommodate nearly 35,000 dwellings, it is counter-intuitive that this volume of development would not be sufficient to make the delivery of gas service feasible.

Whilst gas services are not considered a key development enabling type of infrastructure, it does provide an alternative for more efficient heating of dwellings and overall lower CO<sup>2</sup> emissions. It is requested that rather than excluding the likelihood of provision of gas service to GMLRI, that potential areas of gas service are identified (if they exist) as well as staged augmentation based on the known Planning Proposals in the GMLRI.

### **Electricity Supply**

The Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy prepared by AECOM identifies the need for the Gilead Zone Substation to support development of the MDP and Balance Lands. The Strategy however does not outline an indicative timeframe for the delivery of this zone substation. In addition, Endeavour Energy's position is that land release should generally look to be concentrated around existing infrastructure with capacity or around proposed infrastructure that is identified to be delivered in the next 3 years and that development in the South West Growth Centre should reach maturity before any other significant land releases are considered.

We recommend that DPE provides guidance to Endeavour Energy on the likely development timing and seeks clarification from Endeavour Energy on how servicing will be addressed on this timing, with particular regard for the MDP Lands.

Further to the above, it is understood that the locations of the future zone substations in Indicative Electrical Infrastructure Augmentation and Upgrade Plan prepared by AECOM are indicative. In this regard, LLC and MGP are directly to negotiating with Endeavour Energy to optimise and confirm the final location of the Gilead Zone Substation that is identified in the abovementioned plan.

## 2.5 Roads and Public Transport

It is understood that the proposed regional road network has been based on traffic modelling outputs from TMA and BTS data. Upgrades to the regional road network are likely to form the most significant cost component in any future SIC. Given this traffic model will guide future decision making for rezonings of the large landholdings in the GMLRI area, it is considered that this model and associated assumptions and inputs are provided in a transparent matter for review and future use by developers.

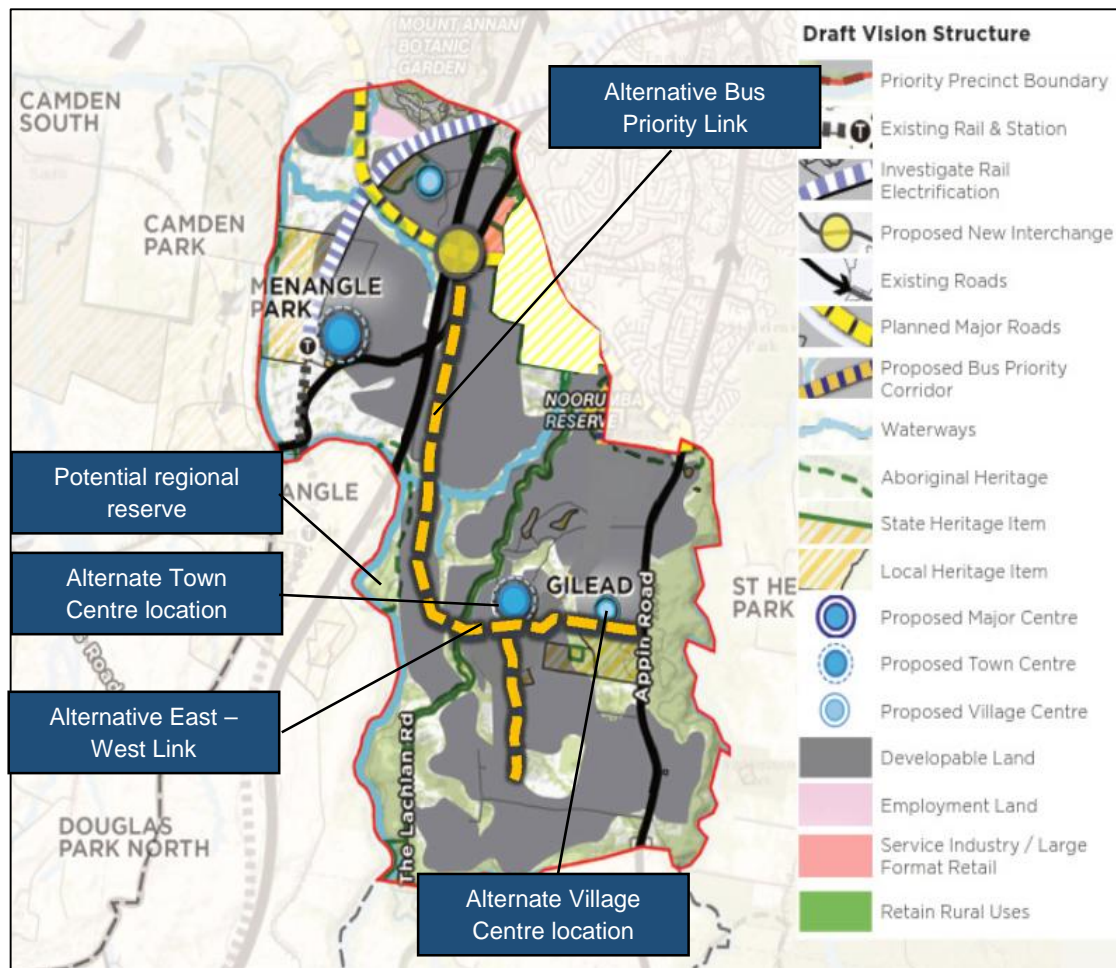
Key questions raised in regard to the traffic model and proposed regional road network that are not easily discernible from the information that is publicly available are as follows:

- For major road links, in particular Spring Farm Parkway and Macquariedale Road upgrades, what is the assumed split between internal and external road trips that has been used to determine the size and extent of road upgrades? This assumption is critical to ensuring the apportionment and reasonableness of road costs to be adopted in a SIC. The GMLRI area should not be used to make up for past discrepancies in other surrounding lands.
- Previously TfNSW and DPE have advised that a 95%/5% split should be used for north-south trip assignment. Given the assumptions around employment generation within the GMLRI area, in the order of 30,000 jobs, even if a job containment rate of 50% was adopted, the 95%/5% split is considered to be highly conservative. As such, these assumptions have a significant implication on road infrastructure requirements and may lead to significant and unnecessary additional costs for road infrastructure. In this regard, we would request DPE clarify the assumed job containment within the GMLRI area.
- The Spring Farm Parkway is now proposed to extend “East” from the proposed Hume Highway intersection to Appin Road (rather than terminating at Menangle Park as per previous iterations).
- This section of Spring Farm Parkway is likely to relieve existing traffic congestion that Rosemeadow is imposing on Appin Road and Narellan Road. We believe this section is not essential for managing traffic demand from the Mount Gilead Precinct. As such we seek transparency in the funding for this infrastructure.
- LLC propose an alternate East – West Road route and an alternate North – South Bus priority Road to the Mount Gilead Precinct. (Refer to **Figure 3**). The proposed East – West Road route sits within the centre of the Mount Gilead Precinct and would reduce traffic demand to Appin Road. The alternate North – South Collector avoids connecting to Spring Farm Parkway as proposed (through land subject to the existing planning proposal). The alternate North – South Bus priority corridor produces an intersection in the middle of the precinct that would serve the location for the Mount Gilead Precinct Town centre.
- With the corridors provided for East Spring Farm Parkway and Gilead East - West Link Road, and Macquariedale Road east-west links and improved north-south public transport services, traffic volumes on Appin Road would be significantly reduced. As such, the extent of widening of Appin Road is queried given a reduction in demand generated by development.
- LLC have undertaken a detailed pricing and apportionment study of the proposed regional road network associated with Menangle Park and Gilead Precincts. LLC welcomes the opportunity to engage early with DPE and their consultant team to

understand the scope, cost and apportionment to the Precincts and to assist all stakeholders in understanding the feasibility and/or challenges for development in the Precincts absorbing costs under a potential SIC.

- In particular, LLC have costed the additional lane upgrades to the M31 Hume Highway as suggested in the *Strategic Transport Plan to support the Greater Macarthur Land Release Preliminary Strategy and Action Plan* report prepared by AECOM. The upgrade of this stretch of road from 2 lanes to 4 lanes, in the order of 28km, will have a significant cost. It is unlikely attributing the cost of this road upgrade under a SIC over the Menangle Park, Gilead and Wilton Precincts will be feasible. Again, it is suggested that early stakeholder engagement is essential to understand the impacts on the feasibility of residential development in the GMLRI area.

As noted in the GMLRI package, LLC is supportive of further investigation by DPE and TfNSW into the feasibility of electrifying the Southern Highlands Rail Line to Menangle Park as it will provide significant public transport access to the wider region and employment areas. However, any upgrade cost should not be borne by the future SIC. This is consistent with the funding for the South West Rail Line that was not included within the SIC. It is particularly important within the GMLRI area as any major increase in development costs would likely have significant impact on the affordability of housing in a fairly price sensitive market.



Source: LLC 2015

**Figure 3. Alternative regional road network**

## 2.6 Stormwater Management and Flooding

To understand the wider flooding encumbrances and requirements for stormwater management over the wider GMLRI area, DPE engaged GHD to carry out a strategic level assessment. This assessment relies on a coarser grain of assumptions due to the size catchments that needed to be considered.

For the purposes of the Planning Proposal for the MDP Land, a more detailed flood and water cycle management assessment was prepared by Worley Parsons in 2014. It is noted that there are discrepancies between the two assessments and are outlined in the supporting information prepared by Cardno at **Appendix A**. In particular, these discrepancies include:

- Flooding extents are not identified over the MDP Lands and Balance Lands; and
- The water quality targets agreed for the MDP Lands with Campbelltown City Council differ with those adopted in the GHD report.

For the purposes of progressing the Planning Proposal for the MDP Lands, confirmation is sought from DPE that where more detailed modelling provided in the Worley Parsons report sets development controls over the site or agreed positions with Campbelltown Council have been established, that these take precedent over the GHD report.

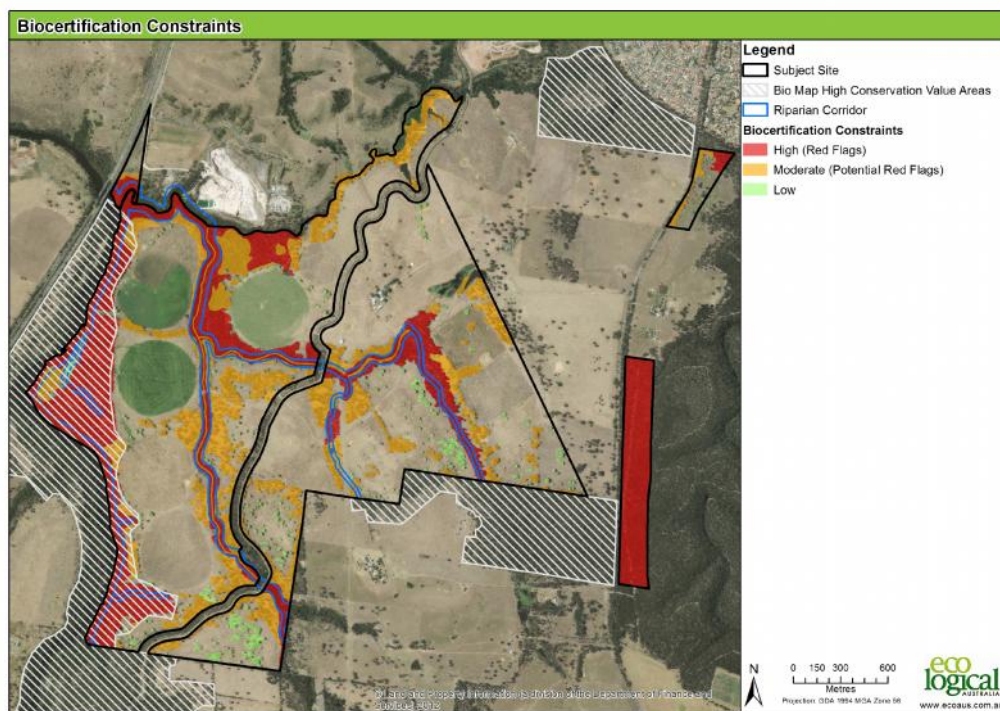
Generally, however, the majority of other assumptions and development controls suggested in the GHD are considered appropriate as they will either form the basis of more detailed assessment in associated concept development with development applications or rezoning of the Balance Lands.

## 2.7 Ecology & Biocertification Process

### Detail and extent of constraints

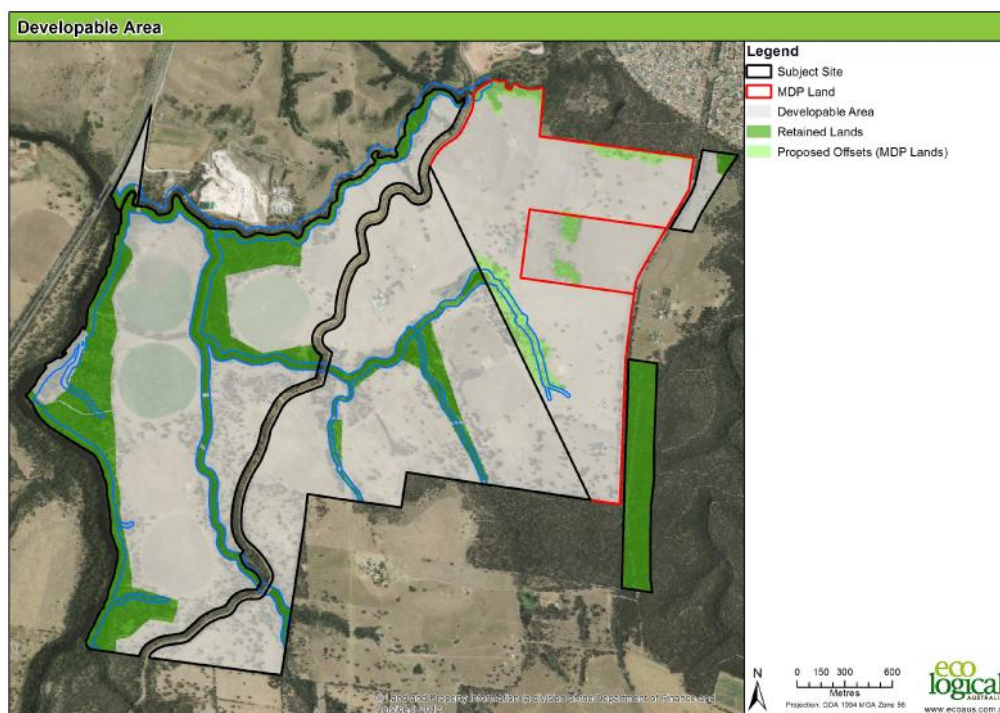
Given the scale of the GMLRI area, a desktop analysis of ecological and biodiversity constraints commissioned by the DPE was appropriate for identifying broad constraints and determining the extents of developable land. LLC for the MDP planning proposal had the benefit of carrying out more detailed survey and ground truthing to more accurately identify these constraints as they apply to their landholding. A copy of the refined mapping and accompanying explanation from Eco Logical Australia has been attached to this submission at **Appendix B**.

Based on this more detailed analysis, Eco Logical Australia has been able to refine the extent of 'red flag' areas. These extents are shown in **Figure 4**. This analysis also more clearly defined extents of moderate impacts (potential red flags). Given their sizeable land holding, the proponents have taken the approach that they will be able to offset these impacts onsite and offsite for the purposes of identifying a coherent and unconstrained development footprint for their land holding as shown in **Figure 5** below.



Source: ELA 2015

**Figure 4. Ground truthed biodiversity constraints**



Source: ELA 2015

**Figure 5. Revised biodiversity constraints and developable land footprint**

As such, LLC would like to make these results available to DPE to allow for refinement of any mapping that is to be used to inform the final structure plan for the GMLRI area and extents of unencumbered land suitable for development. Where the GMLRI has identified constraints and encumbrances over land that is currently the subject of active Planning Proposals, it is considered that the constraint mapping is updated to be consistent with the associated studies that have supported these planning proposals and have gone through the rigour and thoroughness of public exhibition and assessment by Council.

### **Biodiversity Certification**

The approach taken in the Growth Centres of defining the ecological and biodiversity constraints upfront to identify clear developable land extents and establish necessary offsets, where possible, should be continued in the GMLRI. It is considered that the Biodiversity Certification and Strategic Assessment that applies in the Growth Centres establishes a clear extent for acceptable development and reduces the need for piecemeal additional assessment at the Development Application (DA) stage. This ultimately reduces the costs of development and provides a superior ecological outcome. However given the proposed staging and extent of the initial release areas in the GMLRI, this may be difficult to achieve.

As DPE would be aware, MGP and LLC have progressed negotiations with the Office of Environment and Heritage to establish a Biodiversity Certification arrangement to offset the impact of development within the MDP lands. It is understood that only a planning authority (not proponent of a rezoning) can apply for the bio certification of land. In this instance, now that the MDP Land has been identified in the GMLRI area, it is imperative that DPE or Campbelltown City Council as the planning authority apply for a bio certification for the site.

Given how advanced the planning proposal to rezone the MDP Land is, in the instance DPE pursues a wider GMLRI area Biodiversity Certification, it is requested that this land and associated offsets are excluded from any future consideration in Biodiversity Certification.

Due to the sizeable landholdings (such as the Balance Lands) that are currently the subject of separate planning proposals or likely to be the subject of proponent led rezonings, LLC would suggest that individual bio certification agreements are established for each precinct as part of the rezoning process rather than an all-encompassing certification that applies to the North West and South West Growth Centres. This will allow for flexibility in individual sites to address these requirements and provide certainty at the time of rezoning that the necessary biodiversity offsets will be achieved versus potentially burdening land outside the precincts that is unable to be developed for some time (due to servicing, staging or fragmented land) with this requirement.

As part of the proponent led rezoning process, the proponent would undertake the necessary bio certification assessment reporting on DPE's behalf. The proponent would then request DPE to make the application for bio certification for their specific landholding, assuming the Growth Centres SEPP is to be the statutory framework to facilitate the rezoning of this land.

In the consideration of preparing bio certification, it will be important to assess the credit impacts that the Structure Plan will have on the credit calculations. It is understood that the zoning that is applied to land, and for instance any protection afforded to vegetation by designation of developable land and encumbered land under the Structure Plan, at the time of application for either a bio banking scheme or bio certification is instrumental in how offset credits are generated. In this regard, it is recommended that DPE work with OEH to refine the credit system to improve viability of applying a bio certification scheme during the rezoning process.

Alternatively, it will be important that for the purposes of these calculations, that the existing land use (being for rural purposes) of any land designated for conservation are adopted rather than the assurances the Structure Plan may provide in terms of the extents of developable and conservation land.

In the instance DPE sought to pursue a broader bio certification for GMLRI, where DPE nominated the acquisition of moderately constrained lands (ie. land that would have potential for red flags or ability to be revegetated if not developed), that the underlying value incorporated into the SIC reflected the development potential of that land if the developer could identify appropriate offsite offsets to better utilise their land holding for development purposes.

### **Investigations required at DA stage**

It is assumed that once a bio certification is in place for land which establishes clear offsets and non-developable areas, no additional assessment would be required under the *Threatened Species Conservation Act 1995* at the DA stage. If the land was rezoned before the bio certification was ratified, in the meantime, it would still then be necessary to prepare individual Flora and Fauna assessments for any DAs lodged in this time.

For the purposes of the Environment Protection and Biodiversity Conservation Act 1999 (**EPBC Act**), it is understood that despite having a bio certification in place, it would still be necessary for the Federal Government Department of Environment to determine that the action (being development of land) will not have a significant impact. Confirmation is sought as to whether DPE would also be pursuing a Strategic Assessment under the EPBC Act or alternatively, support a proponent led Strategic Assessment to avoid the need for cumulative DA by DA need to confirm that the development would not have a significant impact.

## **2.8 Agricultural Land**

To assess the potential impacts of the loss of agricultural lands as a result of development within GMLRI the DPE has relied upon a desktop study of agricultural land capability. By identifying and allowing development to occur in the GMLRI area, significant land use change will occur. Rather than requiring individual Precincts to demonstrate the long term value and viability of agricultural land uses on a Precinct by Precinct basis, it is necessary that Government make a policy decision on the strategic importance of the remaining agricultural land in GMLRI as a whole versus its importance for housing supply in the same way the North West and South West Growth Centres were identified.

The majority of land in the LLC and OMP land holding that is identified as encumbered (but resolvable) is located within the MDP land that is currently the subject of a Planning Proposal that DPE is aware of. This encumbrance has been identified on the basis of this part of the site meeting the criteria of Land and Soil Capability Class 2. However, this encumbrance should be reviewed in the context of existing vegetation in the Beulah Biobank site that would sever the continuity of land as well as the value or use of that land in the context of being surrounded by urban development on the unencumbered land.

In addition to the above, as part of this Planning Proposal, MGP and LLC engaged Ag Econ Plus to assess the viability of agricultural uses on the MDP land. A copy of this assessment is provided at **Appendix C** and concludes that at best the land is suited to cattle grazing. However the extent of land available for use and cattle it could rear would account for 0.002% of the total head of cattle in NSW. Furthermore, the relocation of current cattle grazing uses to make way for urban

development would not affect food production. In light of this, it is requested that the encumbered land extent identified for the MDP Land be removed.

The remaining encumbered (but resolvable) land that is identified on the remaining LLC land holding, is due to location of irrigated modified pastures associated with grazing. To date a detailed assessment for the viability of agricultural uses on the Balance Land has yet to be carried out. However it is assumed that the similar soil profiles and current land uses would suggest that similar cattle grazing would be the highest and best agricultural use of the land should it not be developed for residential purposes. If the same methodology was applied to the Balance Land, this would represent a loss of 0.0075%<sup>4</sup> to the total head of cattle in NSW and is likely to not have a significant impact on food production.

In light of the above, given there is minimal value of the sites continued contribution to wider cattle production activities in NSW, it is suggested that this encumbrance could be removed from the remainder of the Balance Lands.

## 2.9 Managing mineral resources

Now that the GMLRI area is being formally recognised for urban development purposes, a clear message needs to be sent to the development and resource industries confirm this transition from a rural context. In this regard, DPE, in conjunction with the Department of Trade and Investment, preclude the further coal mining and additional Coal Seam Gas licences in the Mount Gilead Precinct. This is required as extractive mineral and resource enterprises are typically conflicting land uses with each activity, whether it be housing development or mining operations, precluding further expansion of the other and not being able to coexist. This could be achieved by identifying the Mount Gilead Precinct wholly on the Future Residential Growth Areas Land Map under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

This is particularly relevant for any potential expansion of extension to operation of the Bloom quarry and Rosalind Park Gas Plant. In this regard, given these uses operate under an existing approval, it is considered essential that the application of Clause 16 of the Growth Centres SEPP is applied to any future DA or modification to the consents for these uses proposing to continue their uses.

## 2.10 Heritage

### Indigenous Heritage

It is noted the MDP Land and Balance Lands are largely unencumbered by constraints associated with Aboriginal Heritage and as is supported by LLC and MGP. As these constraints have been based on a high level assessment, it will be necessary to refine these areas in more detail during the rezoning process.

Large landholdings present an opportunity where DPE and developers can more readily identify the desired development outcomes at the rezoning stage. Where further items and areas of Aboriginal heritage are identified, the overall impact on these items and areas can be better understood and development outcomes locked in. On this basis, it is suggested that DPE and

---

<sup>4</sup> Based on a potential agricultural land footprint of 450 hectares, and 1 cow and 1 calf per 2 hectares, this allows for 450 head of cattle out of a total of 6,000,000 beasts in NSW.

OEH continue to support the issue of Precinct wide Aboriginal Heritage Impact Permits (**AHIP**) at the rezoning stage has been pursued in the East Leppington Precinct in the South West Growth Centre.

The issue of an AHIP at the rezoning stage is a more efficient use of resources and consultation with stakeholders rather than having to do a strategic level document to support a rezoning and then follow up with subsequent AHIP applications that delay the preparation of development applications.

### **Non-Indigenous Heritage**

It is noted the MDP Land and Balance Lands are largely unencumbered by constraints associated with Non-Indigenous Heritage. The GMLRI mapping appears to be a direct translation of the items, being the homestead and lake areas proposed for the draft Campbelltown LEP amendment that will rezone the MDP Lands and is supported by LLC.

## **2.11 Centres**

The GMLRI package identifies a series of centres, ranging in size from Village Centres to Town Centres, within the Menangle Park and Mount Gilead Priority Precinct. A Town Centre has in the order of 10,000m<sup>2</sup> to 20,000m<sup>2</sup> of employment gross floor area (**GFA**) on the MDP Land and a Village Centre of 5,000m<sup>2</sup> of employment GFA on the Balance Land has been identified. It is understood that these locations are indicative only at this stage and serve to highlight the need for this land use in the broader residential development area.

On the basis of maintaining a similar network of key roads and public transport links as proposed in the GMLRI package, an alternative location for both the Village Centre and Town Centre is proposed as shown in **Figure 3**. It is believed that these locations, in particular for the Town Centre are more centrally located and accessible to meet the needs of the future community compared to the indicative location shown in the GMLRI package.

Given the significant increase in population in the area that is required to support a Town Centre of this size, it is unlikely that the initial development of the MDP Land would be able to attract any development interest on its own and would likely remain dormant for some time. The location of this centre would also force any retail development to serve a catchment of existing development to the north that is currently being serviced by the well-established Macarthur Square shopping centre that is of considerable size and would be able to provide a greater offering of retail stores and services than a Town Centre of this size.

As DPE is aware, a Planning Proposal is nearing completion to rezone the MDP lands for residential development. As part of this Planning Proposal, a minor area of land was identified to be zoned B1 Neighbourhood Centre. The primary purpose of this area was to facilitate the delivery of a future community facility and low scale retail activity. The inclusion of additional retail and employment land at this stage would likely constitute a significant amendment to the current scheme proposed and likely would require exhibition. If this was required, it would be hard to fathom how the Government's goal of rezoning the MDP Land by the end of 2015 would be achieved.

Given that LLC have control over a significant area of land within the Priority Precinct and have proposed an alternative location for the centres that will provide a more central location for the anticipated concentration of residential development, confirmation is sought that DPE is

supportive of the relocation of these centres that will generally achieve the same outcomes for the provision of retail and employment land within the Mount Gilead Precinct.

## 2.12 Social Infrastructure

For the MDP Land that is currently subject of Planning Proposal, LLC and MGP have prepared a VPA proposal for the delivery of social infrastructure relative to the proposed dwelling yield. As suggested earlier in this submission, it is recommended that the Planning Proposal to amend Campbelltown City Council's LEP continues to ensure the MDP Land can be rezoned before the end of 2015. As such, once acceptable to Campbelltown City Council, it is suggested that the VPA to deliver the necessary social infrastructure will be suitable to address the requirements of the MDP Land.

For the Balance Land, LLC is committed to delivering the necessary social infrastructure required to support the future residential community in the Mount Gilead Precinct. As eluded to earlier in this submission, the application of a blanket residential zone for the Balance Land will allow flexibility in the delivery of housing outcomes and locations of social infrastructure as the development of the site will be subject to a comprehensive masterplanning process by LLC. It is assumed this approach will be reflected in the draft structure plan for the Mount Gilead Precinct to be prepared by DPE in the near future.

The rates of provision or target for open space and community facilities should accompany the structure plan. This would set a clear expectation for Councils as to the appropriate level of provision to be expected and allow developers to incorporate necessary elements during masterplan development and development feasibility exercises. An example of the targets that could accompany the structure plan for the Precinct could be as follows:

For higher order social infrastructure that is not specifically attributable to one Precinct, such as regional open space or major civic facilities, a needs analysis of each of the wider Priority Precincts should be undertaken to identify the necessary requirements.

Where possible, structure plans for the wider Priority Precincts should identify preferred location and specification for these higher order facilities. A framework, would then need to be established (possibly through a Section 94 Plan) to ensure the delivery impost of these higher order facilities is not borne by a sole development. For higher order active open space facilities, it is suggested that where possible, these be collocated with Town Centres to established central 'activity hubs' within the Precincts. These uses support each other as they are both significant activity destinations in their own right. LLC see a suitable opportunity to contribute to the provision of higher order active open space in the Balance Lands as shown in **Figure 3**.

As mentioned in the GMLRI package, LLC is also supportive of the investigation and of a regional open space network aligned along the Nepean River. Within the Balance Lands, provided regional infrastructure is funded by a wider contribution regime like the SIC or Metropolitan Greenspace Program, there is a unique opportunity to reappropriate a portion of land providing a beach frontage to the Nepean River. This site was formerly used as a sand mine and existing vegetation has been degraded and has access via a former haulage road. This land could embellished for a wider public benefit and promote whilst having minimal environmental impacts. LLC would appreciate the opportunity to facilitate this kind of use, or similar, with DPE as part of planning for the wider infrastructure to be included within the SIC.

Similar to the targets or rates of provision approach described above for social infrastructure typically delivered by Councils, the *GMLRI Land Use and Infrastructure Analysis* has generally

identified requirements for education facilities. Typically the expansion of existing facilities is to provide an initial stop gap as new development occurs in an area until there is a critical mass of student aged children that would warrant delivery of new school facilities.

Whilst final locations could be determined at the rezoning stage, to assist in setting clear expectations for landowners and developers, indicative locations of these facilities could be provided on the structure plan for the wider Priority Precinct based on catchment area and development yield. Alternatively, general triggers for the need for education facilities could be provided based on a development yield with preferred location criteria (such as proximity to centres and public transport access). LLC is generally supportive of the investigation into opportunities to deliver a special purpose agricultural school or education facility.

## 2.13 Precinct Planning

The proposed approach of identifying land unsuitable for development, encumbered and unencumbered land is supported in principle. We assume this means that the boundary of unsuitable land may be smoothed or varied to minor extents if justified, encumbered land requires further study and unencumbered land can proceed to urban rezoning without further environmental investigations. This provides a cost effective approach to targeting environmental investigations prior to an urban rezoning. This approach will not preclude the need for further detailed study at the DA stage when detailed planning is appropriately undertaken.

Where the GMLRI has identified constraints and encumbrances over land that is currently the subject of active Planning Proposals, it is considered that the constraint mapping is updated to be consistent with the associated studies that have supported these planning proposals and have gone through the rigour and thoroughness of public exhibition and assessment by Campbelltown Council.

### 3.0 Conclusions

The Department's initiative for undertaking the planning for the GMLRI area is applauded. In principle, many of the approach to land use planning for the GMLRI area are supported. We recommend the preparation of a Structure Plan that addresses the whole of the GMLRI area despite the central areas being less certain and deferred to later stages of release.

We also support the use of the existing framework established for the Growth Centres as the mechanism to facilitate future rezonings in the GMLRI areas. However, for the should not hold up rezonings that are currently underway (ie. The Mount Gilead MDP Planning Proposal) that has been the culmination of many years of work and planning. The opportunity will exist to translate this area into the planning framework for the GMLRI area in the future.

## Glossary

AHIP	Aboriginal Heritage Impact Permit
Balance Lands	Extent of Lend Lease Communities landholding not subject to the current Mount Gilead Planning Proposal being considered by Campbelltown Council
Council	Campbelltown City Council
DA	Development Application
DCP	Development Control Plan
DPE	Department of Planning and Environment
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
GC SEPP	State Environmental Planning Policy (Sydney Region Growth Centres) 2006
GFA	Gross Floor Area
GMLRI	Greater Macarthur Land Release Investigation
LEP	Local Environmental Plan
LIGS	Local Infrastructure Growth Scheme
LLC	Lend Lease Communities
MDP	Metropolitan Development Program
MDP Lands	Extent of Lend Lease Communities landholding that is currently the subject of the Mount Gilead Planning Proposal being progressed by Campbelltown City Council
MGP	Mount Gilead Pty Ltd
SEPP	State Environmental Planning Policy
SIC	Special Infrastructure Contribution
TfNSW	Transport for NSW
VPA	Voluntary Planning Agreement
WTP	Wastewater Treatment Plant

# APPENDIX A



Our Ref 80216021.001-16-0099  
Contact David Pitronaci

12 November 2015

Lendlease Communities  
Level 2, 88 Phillip Street  
Parramatta NSW 2150

Attention: Nathan Croft

by email: [nathan.croft@lendlease.com](mailto:nathan.croft@lendlease.com)

Dear Nathan

## **GREATER MACARTHUR LAND RELEASE INVESTIGATION – CARDNO REVIEW OF EXHIBITED DOCUMENTATION**

Cardno has been engaged by Lendlease Communities to undertake a review of the documentation published by the Department of Planning & Environment (DPE) which relates to the Greater Macarthur Land Release Investigation (GMLRI) study. The DPE released the findings of the GMLRI study, which has identified key infrastructure requirements in consultation with various stakeholders.

The DPE has advised that should the Preliminary Strategy and proposed amendments to the Growth Centres SEPP be approved, land at Menangle Park and Mount Gilead and Wilton will be released for urban development by the Minister. This will enable the detailed planning works required to rezone the land to begin.

This letter discusses the key findings of the GMLRI study, provides comment and identifies areas requiring clarification. The review has focussed primarily on infrastructure delivery, funding and staging, transport and the facilitation of efficient and effective development outcomes generally.

### **Delivery of Utility Infrastructure**

#### **1. General Overview**

##### **a) Proposed Infrastructure Staging**

- The *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* report prepared by AECOM, September 2015 proposes a staging for release of precincts within the GMLRI area based on available capacity in existing infrastructure and planned upgrades to the network.
- We are supportive of staging development to efficiently utilise existing infrastructure in principle, however believe that a holistic analysis of all contributing factors including utility infrastructure, transport upgrades

**Cardno (NSW/ACT) Pty Ltd**  
ABN 95 001 145 035

Level 9  
The Forum  
203 Pacific Highway  
St. Leonards NSW 2065

P.O. Box 19  
St Leonards NSW 1590  
Australia

**Phone: +61 2 9496 7700**  
**Fax: +61 2 9439 5170**

**[www.cardno.com.au](http://www.cardno.com.au)**

and geographical constraints should be undertaken before a decision is made on a preferred staging approach.

- It is our recommendation that the rezoning process provides flexibility to enable different stages within the GMLRI area to be released and rezoned on a needs and merit basis through either a developer-led rezoning or a DPE-led rezoning proposal. Aside from the constraints of infrastructure, the commercially viable development of land is often precipitated by numerous other factors such as land ownership, market conditions, risk appetite of developers/landowners, ownership fragmentation, accessibility of land to roads and other external factors, all of which change over time. Flexibility would therefore maximise opportunity for the efficient release of land to the market.
- The AECOM Infrastructure study identifies opportunities to develop Wilton Junction as the second Stage release within the GMLRI area. Whilst we have no objection to Wilton being nominated as a Stage 2 release, we reiterate that flexibility in the release of precincts for development should be permitted so that release of Wilton Junction would not be at the expense of continued development at Gilead / Gilead South which is equally viable for development.

#### b) Infrastructure Planning

- The *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* report prepared by AECOM presents advice from both Sydney Water and Endeavour Energy. These utility agencies advise that development in the North West and South West Growth Centres will utilise any remaining capacity in the infrastructure network, and that funding for additional infrastructure capacity or network augmentation is not currently budgeted, with most funding allocated to the South West Growth Centre. We note that it is unrealistic to wait for development in the North West and South West Growth centres to be completed, in particular noting that the Mount Gilead MDP site has significantly progressed towards rezoning.
- The DPE should ensure that a suitable mechanism is in place so that necessary services are delivered in a timely fashion where development is likely to occur. It would seem logical that the DPE nominates Sydney Water as the preferred (though not necessarily the exclusive) supplier for both potable water and wastewater infrastructure. This would provide more certainty in development outcomes whilst also allowing flexibility.
- The planning of necessary infrastructure also needs to permit flexibility in the staging of the development of the precincts within the GMLRI area such that developable parcels of land are not delayed unnecessarily while issues associated with more challenging parcels of land are resolved.
- It is our recommendation that the DPE recognises agreements already reached or in progress between utility providers and landholders/developers regarding locations for necessary infrastructure, including zone substation sites and easements.

#### c) Infrastructure Funding and Mechanism for Delivery

- The various documents released by the DPE confirm that the development of the GMLRI should proceed at “no cost to government”. It is recommended that clarification is sought on funding of required infrastructure and the mechanism that would be put in place for delivery. Further, it is requested that the DPE define how a “no cost to government” outcome is measured to ensure certainty for the development industry and an ability to objectively assess alternative proposals.
- As part of the detailed planning process it would need to be identified what infrastructure upgrades were necessary as a result of background growth, versus those that would be

directly attributable to the additional dwellings being provided as part of the GMLR. For example, costs to undertake upgrades to wastewater treatment plants that are ultimately required regardless of the GMLR development should be separated from costs to service additional development. At this stage it is assumed that the DPE would nominate Sydney Water and Endeavour Energy as the preferred suppliers for the area, and these agencies would work with the DPE to finalise the detailed planning, provide a servicing strategy and outline the necessary trunk infrastructure upgrades to facilitate development of both private planning proposals or release areas.

d) Precinct Yields

- The various documents released by the DPE report different precinct yields, in particular there are differences between the *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* prepared by AECOM, September 2015, the *Greater Macarthur Land Release Investigation – Strategic Transport Plan to support the Greater Macarthur Land Release Preliminary Strategy and Action Plan* by AECOM, October 2015 and the *Greater Macarthur Land Release Investigation – Preliminary Strategy and Action Plan* by Department of Planning & Environment.
- The potential dwelling yield of 18,100 dwellings within the Menangle Park and Mount Gilead precinct as noted in the *Preliminary Strategy and Action Plan* appears to be a lower bound estimate given current knowledge of existing planning proposals including Menangle Park, Gilead and Campbelltown South. We would suggest that the dwelling yield for the precinct could be in the order of 22,000, which takes into consideration an increase in yield at the Mount Gilead MDP site from 1,500 lots to between 1,800 and 2,000 lots. There is potential for additional dwellings still, should development of encumbered lands within the area be permitted.
- We are supportive of flexibility being provided in terms of dwelling yields however would recommend an appropriate yield or density be agreed upon prior to completion of the detailed studies.

e) Location of Proposed Infrastructure

- The *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* report prepared by AECOM, September 2015 identifies locations for electrical, potable water and wastewater infrastructure. It is our recommendation that the DPE denotes these locations as indicative only, given that detailed studies have not yet been undertaken and fixed locations might unnecessarily constrain development.
- The final location for all utility infrastructure should be confirmed at the detailed planning stage and in consultation with the utility agencies and land holders, so that infrastructure and required easements can be co-located within development masterplans.
- In particular it is noted that the Mount Gilead MDP planning proposal and masterplan has progressed significantly with the proposal in the final stages of rezoning and discussions with the various agencies on infrastructure configuration progressing. It would not be practical nor conducive to orderly development to nominate conflicting configurations in the planning framework, however we have identified various inconsistencies. This is further discussed under 'Roads and Public Transport'.

f) Encumbered Urban Land

- The *Greater Macarthur Land Release Investigation – Land Use and Infrastructure Analysis* by Department of Planning & Environment notes on Page 5 that for encumbered urban land, "Land Release will only be supported where funding commitments to meet infrastructure servicing requirements area made either by private accelerated proposals or by the State Government."

- It should be noted that there are some areas of land identified as ‘encumbered by constraints which are resolvable with appropriate environmental or staging measures’ which we anticipate can be developed within a similar timeframe to land identified as unencumbered. As such, there is the potential for areas of developable land to be unduly burdened with requirements to follow a private acceleration proposal or obtain State Government funding using different mechanisms to “unencumbered” land. It is our recommendation that the DPE permits flexibility in defining boundaries of developable land so that maximum benefit and efficiency from the release area can be obtained. Alternatively we suggest that any land which is encumbered but is reasonably anticipated to be developable with resolution of constraints, follows the same planning and infrastructure delivery pathways as “unencumbered” land.
- We also note that analysis of required infrastructure and associated costings should be undertaken based on the assumed dwelling yield for all areas classified as either “unencumbered” or “encumbered by constraints which are resolvable with appropriate environmental or staging measures”. This approach should theoretically realise economies of scale in infrastructure provision and therefore reduce the per lot infrastructure cost.
- We note that as part of the detailed investigations undertaken to progress the rezoning of the Mount Gilead MDP site, a report titled *Agricultural Investigation of Proposed Urban Development Site – Campbelltown LGA*, prepared by AgEconPlus dated June 2014 states that reallocation of land used for food production to “land for urban development will not affect food production and is consistent with the need to strike a balance between land for a growing population and land for agriculture” (AgEconPlus, page 14, June 2014). This supports the rationale for including such ‘encumbered’ areas into the planning process.

## 2. Potable Water Supply

### a) Preferred supplier

- We believe that the development industry would benefit from clarification on whether or not Sydney Water will be nominated as the preferred supplier for potable water to the GMLR area. It is our recommendation that the DPE nominate Sydney Water as the preferred (but not exclusive) supplier. This would provide greater certainty however allows flexibility for alternative options.
- We understand that funding costs would be recovered by Sydney Water through water rates received from new and existing customers, in a mechanism similar to how delivery of trunk infrastructure is funded for both the North West and South West Growth Centres.

## 3. Wastewater Servicing

### a) Preferred supplier

- As noted above with respect to Potable Water, we believe that the development industry would benefit from clarification on whether or not Sydney Water will be nominated as the preferred supplier to provide wastewater treatment services to the GMLR area. It is our recommendation that the DPE nominate Sydney Water as the preferred (but not exclusive) supplier. This would provide greater certainty however allows flexibility for alternative options.
- As noted above under potable water supply, we understand that where Sydney Water is the nominated as the service provider for a development, funding costs would be recovered by Sydney Water through water rates received from new and existing customers, in a mechanism similar to how delivery of trunk infrastructure is funded for both the North West and South West Growth Centres.

### b) Development of the NWGC and SWGC

- The *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* report prepared by AECOM, September 2015 states that Sydney Water has assumed

that the North West Growth Centre and the South West Growth Centres will be fully developed by the time the GMRL study area is developed. As a result of this, Sydney Water has provided advice that there will be limited capacity in the existing systems.

- It is our recommendation that the DPE seeks clarification from Sydney Water on the impact to the servicing strategy if the GMLR study area is developed earlier than the completion of the NWGC and SWGC, given that this is very likely to be the case.
- Areas of the North West and South West Growth Centres will have difficulties to overcome prior to development, such as fragmented land ownership and commercial viability. When considered against the existing private planning proposals within the GMLR area as well as the DPE's proposed timing, it would appear that precincts within the Greater Macarthur area would be able to be rezoned and proceed with development within a three to ten year time frame, well in advance of the NWGC and SWGC being fully developed.
- The AECOM Infrastructure Strategy (Page 51) notes that costs associated with the provision of necessary infrastructure "would be distributed across the stages; however it would not be evenly distributed as it will be dependent on existing capacities and the rate of construction of surrounding developments". It is our recommendation that when distributing costs across stages, consideration is given to physical constraints and geography rather than the timing of development. For example, infrastructure costs associated with the Menangle Park and Mount Gilead precinct should be kept separate to infrastructure costs associated with Wilton due to the geographical split between the two precincts and no shared infrastructure requirements.

#### 4. Electrical Servicing

- Endeavour Energy notes that it is ideal to start from where infrastructure was either existing or planning to be established in the next 3 years. This includes Wilton Zone Substation (existing) and Menangle Park Zone Substation (planned). The location of the proposed zone substations and additional easements for high voltage transmission lines appear to be indicative only, with a holistic approach towards the whole GMLR study area taken when considering these locations.
- In particular it is noted that the Mount Gilead MDP planning proposal and masterplan has progressed significantly with the proposal in the final stages of rezoning. We have identified some inconsistencies between the exhibited documents and precinct planning. As noted above under 1 e), It would not be practical nor conducive to orderly development to nominate conflicting configurations in the planning framework.
- Endeavour Energy has recommend development in the South West Growth Centre be allowed to reach maturity prior to allowing large scale land release in the Greater Macarthur area. As noted above, it is unrealistic to wait for development in the North West and South West Growth centres, in particular noting that the Mount Gilead MDP site has significantly progressed towards rezoning.

#### 5. Gas Servicing

- The *Greater Macarthur Land Release Investigation – High Level Services Infrastructure Strategy* report prepared by AECOM, September 2015 states that Jemena has indicated there are very low prospects of gas being available as there are significant costs in order to service these areas which would render the project commercially unviable (Page 25).
- Whilst servicing of the area for gas will ultimately be a commercial decision for Jemena, it would appear surprising that such a significant tract of development could not be viably serviced. We would suggest that the DPE further clarifies this with Jemena to ensure that a significant opportunity is not discounted at the outset.
- Cardno has previously liaised with Jemena with regard to servicing the Mount Gilead MDP site. At the time of correspondence, Jemena (February 2015) noted that it was its policy to extend gas mains to all developments wherever possible, depending upon economic viability. Jemena indicated that there

were long term plans to upgrade the existing gas main in Appin Road, for which a financial contribution may be sought to meet development if Jemena was required to bring forward the planning and construction of this upgrade.

## **Stormwater Management and Flooding**

### **1. General Overview**

- It is understood the intent of the *Greater Macarthur Water Management* (GHD, 2015) report was to determine whether the study area (15,970 hectares), which includes Mount Gilead (210 hectares, or 1.3% of the total study area), is suitable for urban development. The GHD (2015) report focused on the following water management issues:
  - Flood Modelling – to define flood conditions and to estimate potential impacts associated with climate change (i.e. increased rainfall intensity).
  - Site Planning – identification of appropriate flood planning levels and preparation of a Flood Evacuation Strategy.
  - Planning advancement – including future refinement of analyses that should be completed as potential site planning proceeds.
  - Water Cycle Management – strategic stormwater management incorporating WSUD principles.
  - Riparian Corridor Assessment – review of available data and description of how WSUD measures could impact the riparian corridor.
- In terms of water management at the Mount Gilead site, it is assumed that any development controls or specific requirements relating to stormwater management and flooding that are included in the document titled *Stormwater Management and Flooding Assessment* (WorleyParsons, 2014), which accompanied the Mount Gilead Planning Proposal, would take precedence over the GHD (2015) report.
- A comparison of the recommendations outlined in the GHD (2015) report to the WorleyParsons (2014) strategy report is summarised below:
  - a) Flood Modelling
    - The flood levels and flood extents presented in the GHD (2015) report do not cover the Mount Gilead site, most likely due to the fact the watercourses within the site are either 1st or 2nd order streams that are relatively steep and incised.
    - The WorleyParsons (2014) strategy included results of one-dimensional flood modelling which showed the extents of both the 1% AEP flood event and the PMF are within areas designated as RU2 – Rural Landscape, which are therefore precluded from residential development.
  - b) Site Planning
    - The GHD (2015) report notes that adoption of the design 100 year ARI flood level with an appropriate freeboard is considered to be appropriate within the study area. This is consistent with the Mount Gilead Planning Proposal, which notes that minimum habitable floor levels within the Mount Gilead site should be 500mm above the predicted 1% AEP flood level.
  - c) Planning Advancement
    - GHD (2015) recommends consideration be given to the following five actions should urban development be considered within the study area. Comment in relation to the consideration of these on potential future development at Mount Gilead is made below:
      - *‘Making contact with Illawarra Coal to attempt to gain access to the detailed water quality sampling, stream assessments and ecosystem monitoring and assessment*

*data to better understand the background conditions...*. Whilst additional data that is made available would provide a better understanding of background conditions, we suggest that this needs to be finalised early in the planning process, to ensure that future development is not subjected to uncertain outcomes resulting from changing baseline assumptions.

- *'Completing an in depth assessment of the practicality of, and implications on, site planning of using the perimeter road as a device for conveying stormwater runoff to the nearest bio-retention area.'* The need or otherwise for perimeter roads to convey stormwater runoff to bio-retention and/or stormwater detention basins would be considered during concept design of the proposed structures at development approval stage.
- *'Periodically updating the hydrologic and hydraulic modelling for changes in the anticipated or achieved impervious fraction...'* The appropriateness of all assumptions made in the data that is input into hydrologic and hydraulic modelling would be reviewed at subsequent phases of the development.
- *'Should there be a significant flood event during further site planning, it would be prudent to obtain flood levels throughout the site to verify, or refine, the flood level predictions.'* As acknowledged in the GHD report, this is less critical where watercourses are generally deep and incised, which is the case across the majority of the Mount Gilead site.
- *'When the development density distribution is advanced, it would be prudent to update the site hydrology to determine whether the sizing of elements within the WSUD strategy require refinement.'* As noted above, the appropriateness of all assumptions made in the data that is input into hydrologic and hydraulic modelling would be reviewed at subsequent phases of the development. This also applies to water quality modelling required to size water quality control structures (e.g. bio-retention basins).

#### d) Water Cycle Management

- GHD (2015) presents a preferred water cycle management strategy, which has been reviewed for consistency with the strategy outlined in the Stormwater Management and Flooding Assessment (WorleyParsons, 2014) that accompanied the Mount Gilead Planning Proposal.
  - *Dwellings fitted with water efficient appliances and rainwater tanks as required to satisfy BASIX requirements* This is consistent with the proposed strategy that supported the Mount Gilead Planning Proposal and is a requirement under *SEPP (Building Sustainability Index: BASIX) 2004*.
  - *A conventional minor pipe drainage network and major drainage network to convey flows to the regional water quality treatment measures.* This is consistent with the proposed strategy that supported the Mount Gilead Planning Proposal and with Campbelltown City Council's engineering and development guidelines.
  - *Construction of the perimeter road located within, or adjacent to the APZ, in such a form as to convey the major stormwater flows to the water quality measures. This functionality could be achieved through using an enlarged capacity pipe network system for this road or construction, use of a single cross fall road to enhance the flow conveyance capacity or, where the landform suits, of a swale system parallel to the road.* The need or otherwise for one or more perimeter roads to convey stormwater runoff to bio-retention and/or stormwater detention basins would best be considered during concept design of the proposed structures at development approval stage.
  - *Construction of a combined bio-retention and detention area at each discharge point from the major/minor drainage discharge location into the creekline vegetation areas.*

*The bio-retention would have a slow drainage (1.5 days) of extended detention storage to maximise water filtration and the bio-retention would be designed to maximise nutrient removal. We note that co-location is not always practical and that when used, provision should be made to avoid frequent inundation and erosion of bio-retention areas by detention storage.*

- *Opportunistic incorporation of pocket parks of landscape water bodies into the development footprint (allowed as 1.5% of catchment area) will be adopted. No allowance was made in the Planning Proposal of Mount Gilead for pocket parks of landscape water bodies throughout the development. We believe that these should be considered as a possible solution to water quality treatment and assessed on merit, but not prescribed as a requirement.*
- *Litter and gross pollutant traps at the discharge of the piped drainage system into the regional water quality control facilities. This is consistent with the proposed strategy that supported the Mount Gilead Planning Proposal and with Campbelltown City Council's engineering and development guidelines.*

e) Riparian Corridor Assessment

- The recommended riparian corridor strategy outlined in the GHD (2015) report is consistent with the findings of the Mount Gilead Ecological Assessment (EcoLogical Australia, 2014), which accompanied the Mount Gilead Planning Proposal.

2. Appropriate Water Quality Standards

- The GHD (2015) report noted that water quality targets within the study area were not adopted, although removal rates for Total Suspended Solids (TSS), Total Phosphorus (TP) and Total Nitrogen (TN) of 85%, 70% and 45% respectively were adopted for the purpose of sizing regional combined detention basins and bio-retention areas. The slightly more stringent water quality targets adopted in the Mount Gilead Planning Proposal (WorleyParsons, 2014), being a reduction in TSS, TP and TN of 85%, 70% and 55% respectively, have been discussed and agreed with Campbelltown City Council.

## Roads and Public Transport

### 1. General Overview

The comments provided below are in relation to the *Greater Macarthur Land Release Investigation – Strategic Transport Plan to support the Greater Macarthur land Release Preliminary Strategy and Action Plan* prepared by AECOM, October 2015.

a) Modelling

- The major road upgrade proposals contained in Section 6.5.1 are stated as 'based on traffic modelling outputs by TMA / BTS, 2015', however there are few details on the modelling methodology and assumptions within the report. Given that major landholders in the region are key stakeholders in the forward planning of development and infrastructure, it would seem appropriate that this modelling should be undertaken in an open and transparent manner. As such it is recommended that the DPE releases the models and associated reporting into the public domain for independent verification and scrutiny. We would also request clarification from the DPE on the assumed job containment rate within the GMIA, as discussed further below.
- One of the key issues to be addressed is the extent to which proposed new roads service external to external trips (ie. trips not originating or ending in the Greater Macarthur area), in particular Spring Farm Parkway and the Macquariedale Road Upgrade. The split between these 'through' trips and locally generated trips will have a major bearing on how road infrastructure is funded and delivered, whether in the form of works in kind or SIC levies.

- It is not clear from the report what trip assignment was used for trips originating in the Greater Macarthur Investigation Area (GMIA). Lendlease and Cardno has previously been advised by the DPE/TfNSW to assume a 95%:5% split between north and south (i.e. in the AM peak 95% of outbound journeys head north towards employment centres such as Sydney, Campbelltown and Liverpool, and this flow is reversed in the PM peak). This major tidal movement in the AM and PM peaks puts significant pressure on road infrastructure and would appear to be highly conservative in light of the assumptions around employment outlined in the AECOM report. For example, in Section 6.3 it is stated that up to 30,000 workers will be contained within the GMIA. Even if only half of these jobs were taken by locals (ie. those living within the GMIA) this would still represent 15,000 'self-contained trips', which challenges the trip assignment assumptions previously advised by DPPE/TfNSW to inform road infrastructure requirements and may lead to an expensive and unnecessary over-provision of road infrastructure.
- We refer to the attached plans which demonstrate the differences between the '*DPE Road Development Strategy*' and the '*Mt Gilead Preferred Road Development Strategy*'. The Mt Gilead preferred road strategy proposes the realignment of the North-South Collector Road and Bus Priority Route as well as the connecting road between Spring Farm and Appin Road, to alignments that have the following benefits:
  - Better utilisation of existing road infrastructure and road reserves.
  - The adjusted alignment will provide better direct access to Campbelltown and direct traffic away from Appin Road, reducing traffic volumes and strain on the existing road network, whereas there are concerns the DPE proposal would direct traffic towards Campbelltown via the northern end of Appin Road.
  - The adjusted alignment is also better suited to the natural topography, with grades typically less than 10%, compared to the DPE alignment which would need to traverse steep terrain with grades in the range of 10% to 18%.
- Cardno and Lendlease seek to reserve the right to update our submission to the DPE in relation to the Greater Macarthur area once the strategic transport model is released to the public domain.

## 2. Preferred Regional Road Connections

A number of the road upgrades contained in Section 6.5.1 of the AECOM report require further explanation and justification.

- a) Spring Farm Link Road and its Eastern Extension to Appin Road
  - This new link road, which is also known as Spring Farm Parkway to the west of the Hume Highway, is now proposed to extend from Camden Bypass in the west all the way to Appin Road in the east. Previous iterations of this new road saw it terminating at Menangle Road. Whilst it is recognised that there would be benefits to this new proposal in terms of relieving the congested B69 corridor, further details are required regarding the alignment of the extension. We are of the opinion that a similar link road further south as shown in the '*Mt Gilead Preferred Road Development Strategy*' noted above could serve a similar function in a more efficient manner which also makes use of existing infrastructure. More details are also required on the location, layout and cost of the Spring Farm Link Road Interchange, which may now require full grade separation and free flow ramps to the north and south.
- b) Macquariedale Road Upgrade
  - This new four lane east-west connection includes a 'full interchange' with the Hume Motorway. Further details are required on the justification for this route as it appears to over provide east west capacity by duplicating the proposed Spring Farm Link Road.

## c) Appin Road

- Justification is required for the widening of Appin Road between Macquariedale Road and the proposed Spring Farm Link Road. With both east-west connections in place and vastly improved north south public transport utility, it is considered that demand on this section of Appin Road will be relatively low.

## 3. Public Transport Upgrades

- A new north-south arterial/sub arterial road is proposed with bus priority features or separated transit way, and is shown in Figure 31 extending from Menangle Road in the north to Picton Road and the Wilton Junction development to the south. Whilst improved public transport provision is welcome and greatly needed, more details are required on the alignment of this new transit way, noting that it conflicts with planning that is already underway for the Mount Gilead MDP site. It is also not clear from Figure 31 how the proposed transit way would connect to Campbelltown and other major centres to the north. It would also be useful to know the mode split assumptions for Mount Gilead residents in light of this new public transport provision.

**State Infrastructure Contributions Levy**

With respect to the development of a State Infrastructure Contributions Levy or SIC, we make the following comments:

- Given the difference in infrastructure requirements between Menangle Park / Gilead and Wilton, we propose that the two precincts be treated separately for the collection of SIC, to avoid the risk of cross-subsidisation that may hamper development of viable parcels or otherwise create an inequitable outcome.
- The exhibited documents note a SIC for Menangle Park / Gilead and Wilton. It is not clear what is intended how Douglas Park, Appin and other areas are intended to be treated.
- There should be transparency in the determination of SIC levies and apportionment should be equitable. There should also be flexibility in the mechanisms available to deliver / fund infrastructure, in order to maximise opportunities for its delivery.
- DPE should give consideration to transferability of credits between the GMLR and SWGC for any given Developer, noting that the infrastructure requirements of these two areas are partly intertwined.

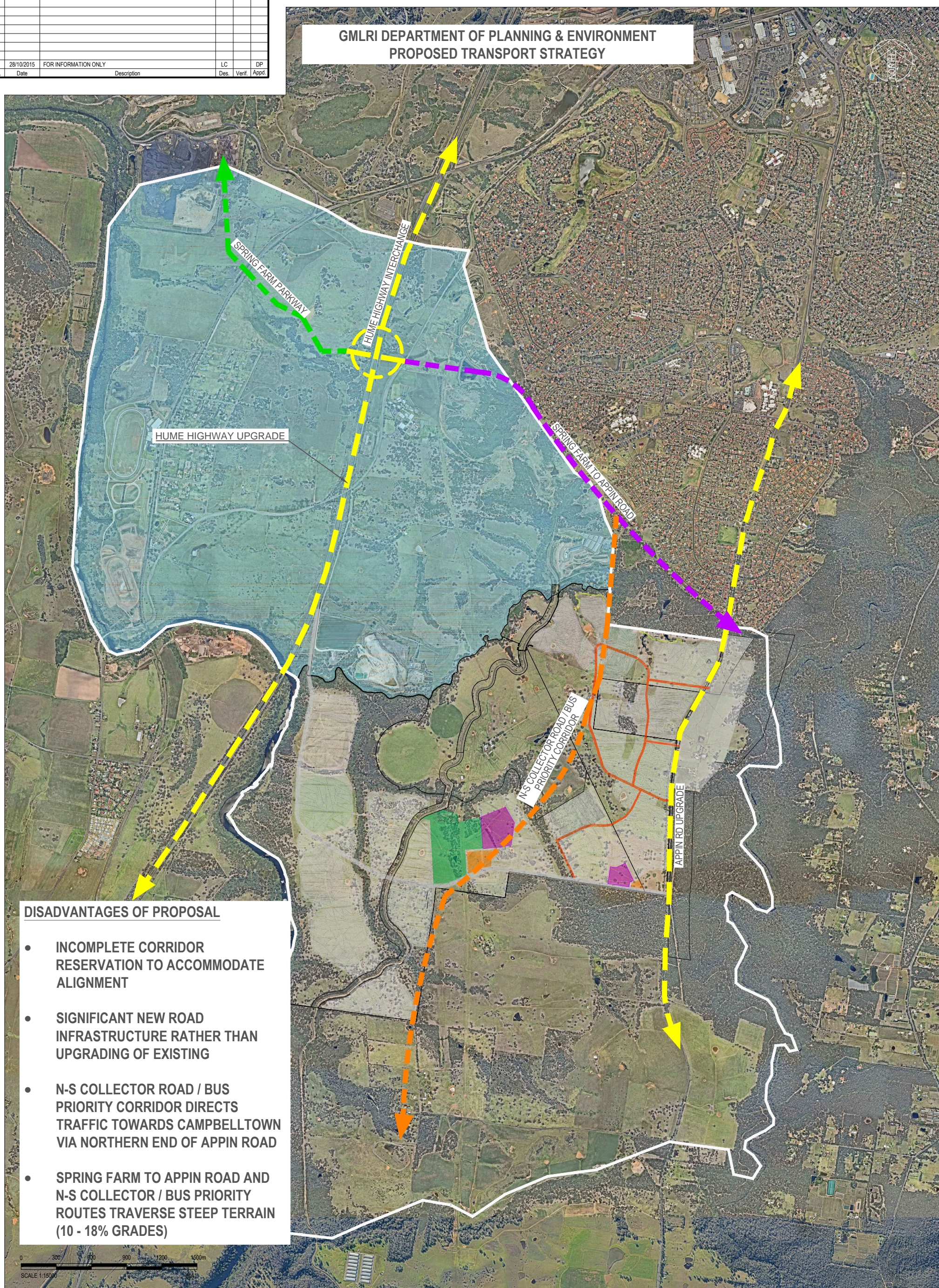
We thank you for the opportunity to provide comment on the exhibited documents and would be pleased to further discuss any of the above with you.

Yours faithfully



David Pitronaci, B.E. (Civil), CPEng, MBA (Exec)  
Manager, Urban Infrastructure  
For Cardno  
(02) 9496 7737

Scale		Size	
1:15000		A1	
Drawing Number			Revision
80216021-001-SK001			1



### DISADVANTAGES OF PROPOSAL

- **INCOMPLETE CORRIDOR  
RESERVATION TO ACCOMMODATE  
ALIGNMENT**
- **SIGNIFICANT NEW ROAD  
INFRASTRUCTURE RATHER THAN  
UPGRADING OF EXISTING**
- **N-S COLLECTOR ROAD / BUS  
PRIORITY CORRIDOR DIRECTS  
TRAFFIC TOWARDS CAMPBELLTOWN  
VIA NORTHERN END OF APPIN ROAD**
- **SPRING FARM TO APPIN ROAD AND  
N-S COLLECTOR / BUS PRIORITY  
ROUTES TRAVERSE STEEP TERRAIN  
(10 - 18% GRADES)**

## **APPENDIX B**



Paul Thompson  
State Business Manager NSW/ACT  
Lend Lease Communities (Australia) Pty Ltd  
PO Box 4  
**Parramatta NSW 2124**

***Our Ref: 15SUT-2560***

20 October 2015

Dear Paul

**RE: Review of implications of Greater Macarthur Land Release Investigation Report – Mt Gilead balance lands.**

### **Background**

Lend Lease Communities Pty Ltd (Lend Lease) have been investigating the development potential of the Mt Gilead balance lands. Eco Logical Australia (ELA) have previously provided due diligence advice on the high level environmental (biodiversity, riparian and bushfire) constraints that the land contains to inform the development potential of the land (ELA 2015a).

The Department of Planning and Environment (DPE) has also been investigating the urban development potential of the Greater Macarthur Region, which the Mount Gilead site is part of. The Department released its investigation report in October (DPE 2015) that found immediate development opportunities in the Menangle Park, Mount Gilead and Wilton areas and these areas have been identified as Priority Growth Areas/Precincts.

Within these priority precincts, the Department has identified relatively “unencumbered land” and land “encumbered by resolvable constraints” that are suitable for development. They have also identified land which is highly constrained and not suitable for development (see Figures 2 3 in DPE 2015). These findings have been informed by a number of technical studies commissioned by the DPE including biodiversity (ELA 2015b), bushfire (ELA 2015c) and aboriginal and historic heritage (AHMS 2015).

Lend Lease has requested that ELA review these documents and where relevant provide any details that would update the technical studies and provide a refined constraints/developable land layer for consideration by DPE.

The following provides this response.

*Robert Humphries*

Robert Humphries

**Eco Logical Australia Pty Ltd**

## Menangle Park and Mount Gilead Priority Precinct

The Mount Gilead section of the Menangle Park – Mount Gilead Priority Precinct comprises of 510 ha of land in which Lend Lease has an interest with an estimated developable area of 317 ha (incl. APZs) as well as the Mount Gilead MDP lands for which a planning proposal and BioCertification application is currently being considered by Campbelltown City Council (CCC), DPE and the Office of Environment and Heritage (OEH).

The Greater Macarthur Land Release Investigation Report (GMLRI report) (DPE 2015) identifies a larger developable area than earlier Lend Lease studies as it includes lands within the Homestead lot and east of Appin Road (Figure 2 in DPE 2015). The developable area has largely been informed by ELA (2015b) and OEH Biodiversity investment area boundaries where any mapped endangered ecological communities in “moderate to good” biometric condition and any vegetation within “Priority Conservation Lands” as identified in the Cumberland Plain Recovery Plan (DECCW 2011) have been identified as “High Biodiversity Constraint” (see Figure 8 in DPE 2015).

Figure 8 in DPE 2015 has been derived entirely by a desktop assessment using the NPWS western Sydney vegetation mapping layer which itself was derived from 1:25,000 scale 1997-1998 aerial photographs and limited ground trothing (**Figure 1** – Existing vegetation mapping of Mt Gilead Balance lands). This data source has therefore only included limited information regarding the condition of the vegetation on site that has largely been interpreted as being in moderate-good condition despite intensive, long term, cattle grazing.

The GMLRI report is unclear whether the remaining rezoning pathway is to be a state-led rezoning process or proponent –led. It also states that technical studies will need to be prepared in accordance with the specific requirements of the DPE. For biodiversity, a detailed biodiversity assessment will be required that considers whether threatened species and endangered ecological communities (EECs) will be impacted by the proposal, whether areas of High Biodiversity Constraint (HBC) will be avoided and whether Asset Protection Zones (APZs) are outside of High Conservation Value Land (HCV). The GMLRI also states that HCV areas should be targeted for BioBanking Agreements with consideration of options for long term management and ownership of these areas.

ELA has undertaken several assessments of the Mt Gilead lands since 2006 that would likely meet the technical studies required by DPE, including:-

1. Mount Gilead MDP Lands Ecological Assessment (ELA 2014) and Biocertification Assessment (ELA 2015) – 10 person days of vegetation mapping and validation and targeted threatened flora surveys in March, April, June and September 2013, 18 biometric plots, diurnal avifauna, mammals, reptiles and Amphibians surveys (March, April, July 2013).
2. Mount Gilead Flora and Fauna Assessment Stage 2 – May 2006 for Australand properties – including 8 person day of vegetation type and condition validation, targeted threatened flora surveys and riparian and terrestrial fauna habitat assessment in February and March 2006.
3. Mount Gilead Urban Investigation Area due diligence Assessment – May 2015 for Lend Lease - including 16 person days of further vegetation type and condition validation, biometric plots, targeted threatened flora surveys and terrestrial fauna habitat assessment in January and February 2015.
4. Mount Gilead Urban Investigation Area Targeted Threatened Flora Surveys – October 2015 for Lend Lease - including 8 person days of targeted spring threatened flora surveys in September and October 2015.

These surveys have been undertaken by accredited BioBanking/BioCertification Assessors in accordance with the BioCertification Assessment Methodology to address the likely delivery pathway as identified in DPE 2015. The vegetation has been mapped as Plant Community Types (PCTs) and stratified into biometric condition

zones to allow the identification of “Red Flag” areas (i.e. Areas of High Biodiversity Conservation Value) and other areas that may be developed subject to meeting improve or maintain outcomes.

**Figure 2** shows the revised vegetation mapping for the area as PCTs and biometric condition.

**Figure 3** shows the survey effort and results for threatened flora to date.

**Figure 4** is a revised constraints layer (and developable lands outcome) based on this updated information source.

### **Key findings of studies to date**

The majority of the vegetation in riparian corridors is Shale Sandstone Transition Forest or Alluvial Woodland in BioMetric moderate to good condition and thus constitutes red flag areas. These areas will be excluded from proposed development footprints as they are within riparian corridors.

ELA has found a greater proportion of Cumberland Plain Woodland than mapped by NPWS (2002) across the developable lands identified by DPE 2015, mostly in a highly degraded condition as scattered trees over exotic pasture, and thus not constituting red flag areas or as “underscrubbed”/modified woodland that is either in ‘biometric low condition’ and thus not a red flag or is in poor condition and has a low site value score (Full biometric plot analysis has not yet been completed). The grassland areas are generally pasture improved, including pivot irrigation, have been extensively grazed by cattle and do not meet the definition of derived native grasslands, other than small areas (**Figure 2**).

Despite extensive surveys for threatened flora, only one species, (*Pomaderris brunnea*) has been recorded. Again, all records are in riparian corridors or land proposed for conservation measures (**Figure 3**).

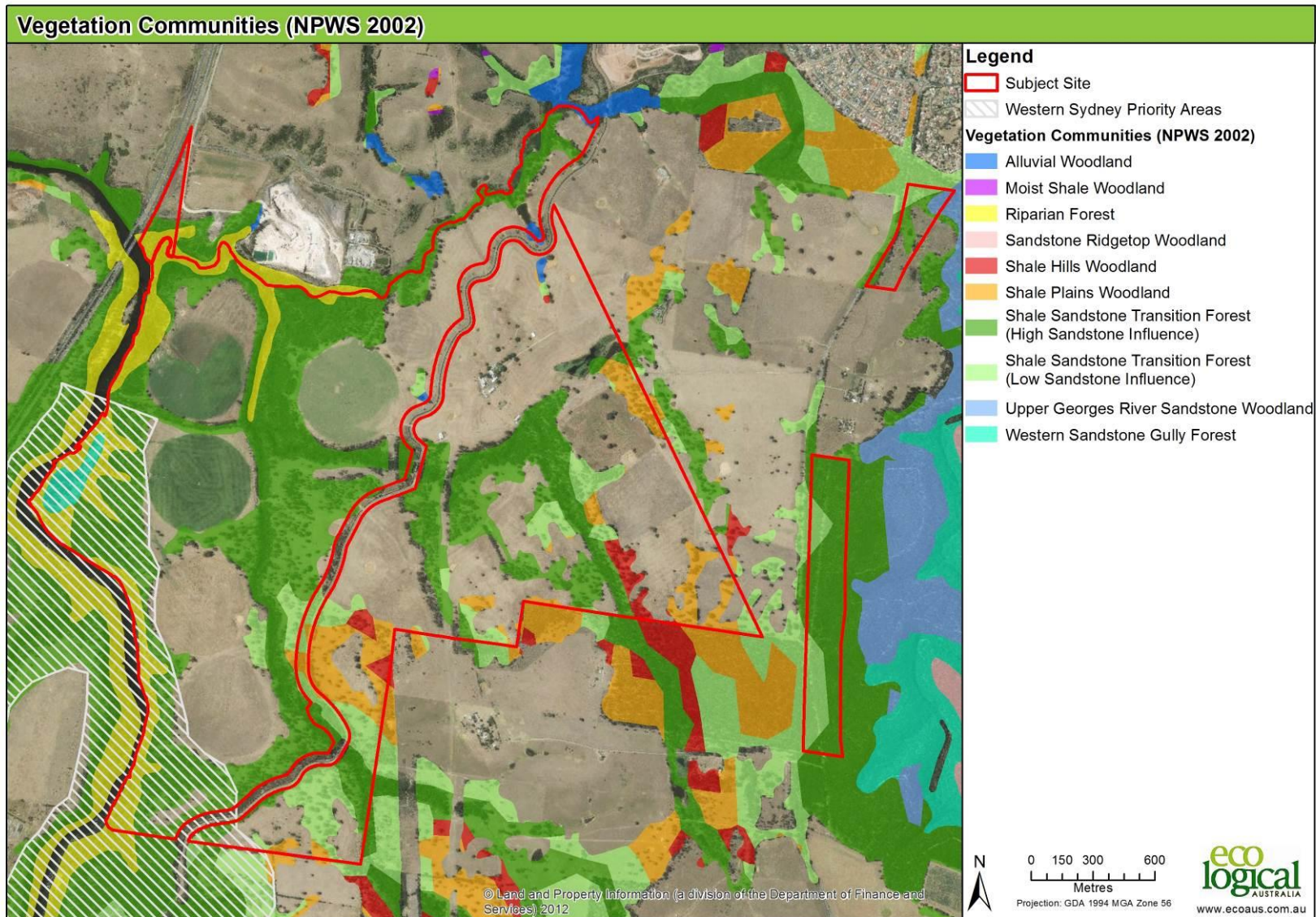
Based on an indicative Biocertification Assessment, the majority of the offset requirements can be met on site through the registration of BioBanking Agreements over identified High Conservation Value lands, consistent with the delivery pathway outlined in the GMLRI report however, would require relatively minor “red flag” variations. The majority of red flag areas are expected to be in ‘poor’ condition i.e. a site value score between 30 and 40 and thus able to meet the variation criteria and are ‘minor’ relative to the areas proposed for conservation measures.

Based on the above, Lend Lease is of the opinion that the Mt Gilead priority precinct should be delivered via a proponent led Biocertification assessment with the Department of Planning and/or Campbelltown City Council as the applicant (only a Planning Authority can apply to the Minister for the Environment for biocertification of land).

**Figure 4** provides a revised developable land boundary based on the studies undertaken on behalf of Lend Lease.

## References

- DECCW (2011) Cumberland Plain Recovery Plan. Prepared by NSW Department of Environment, Climate Change and Water, January 2011.
- Department of Planning and Environment (2015) Greater Macarthur Land Release Investigation – Preliminary Strategy & Action Plan, October 2015.
- ELA (2006) Mt Gilead Flora and Fauna Assessment Stage 2. Report prepared for Australand, May 2006.
- ELA (2014) Mt Gilead Rezoning Ecological Assessment. Report prepared for Mt Gilead Pty Ltd and S & A Dzwonnik, September 2014.
- ELA (2015a) Mount Gilead Urban Investigation Area Biodiversity and Bushfire Due Diligence Assessment. Report prepared for Lend Lease, May 2015.
- ELA (2015b) Greater Macarthur Investigation Area – Biodiversity Assessment Report. Report prepared for the NSW Department of Planning and Environment, September 2015.
- ELA (2015c) Mt Gilead Biodiversity Certification Assessment Report & Biocertification Strategy. Report prepared for Mt Gilead Pty Ltd and S & A Dzwonnik, October 2015.
- NPWS (2002) Native Vegetation maps of the Cumberland Plain Western Sydney. NSW National Parks and Wildlife Service, October 2002.



**Figure 1: NPWS 2002 mapping of EECs and Priority Conservation lands at Mt Gilead**

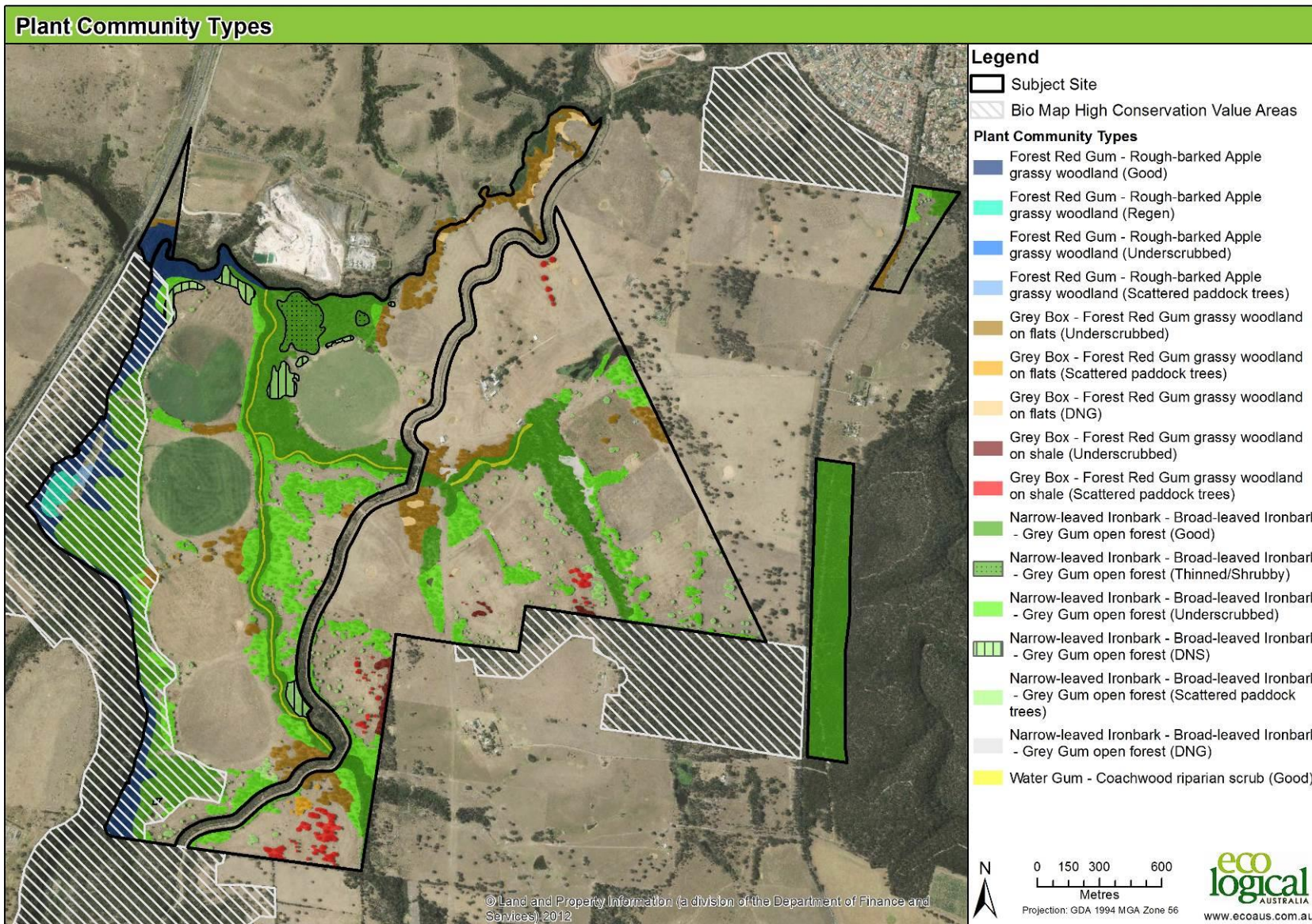
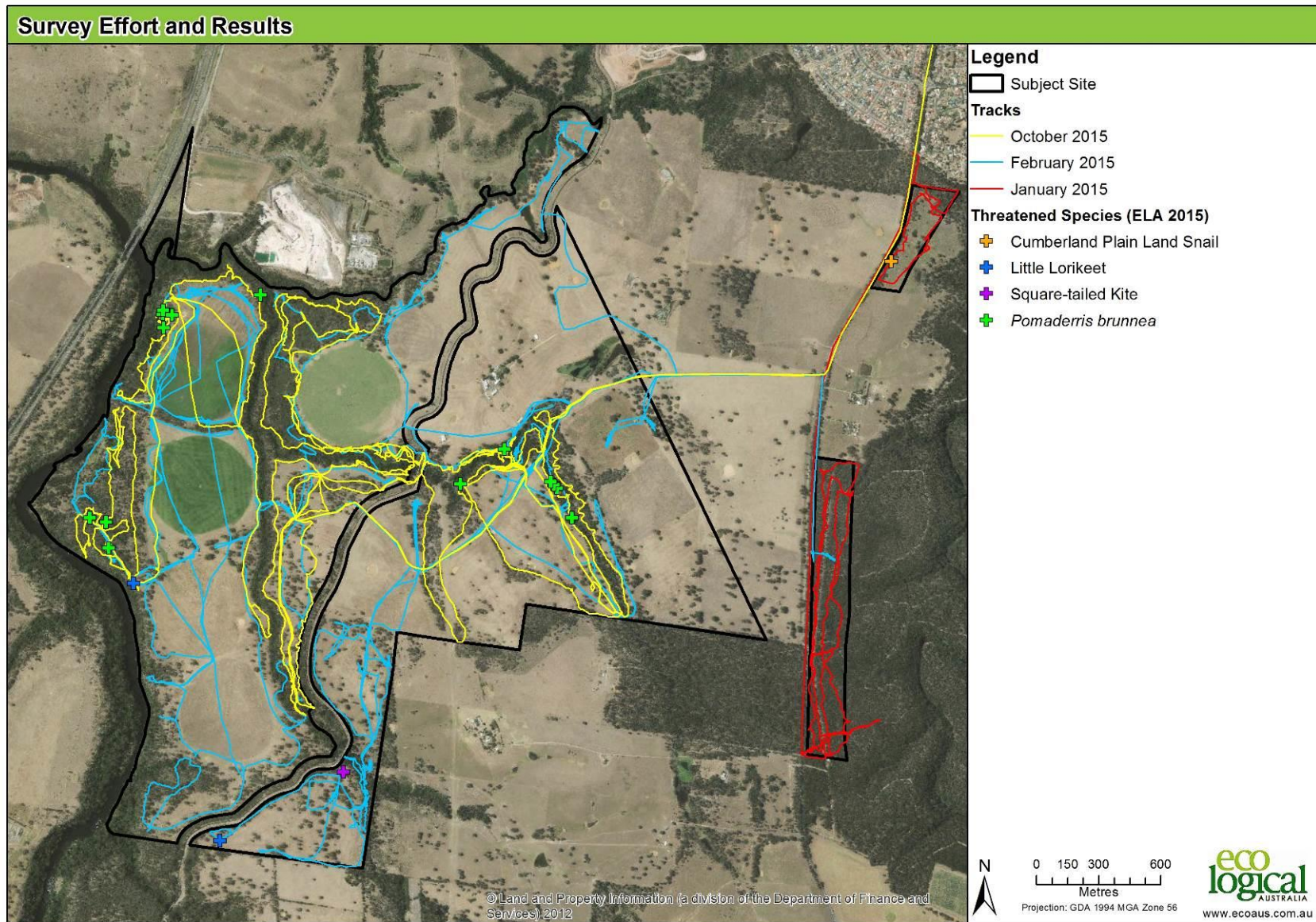
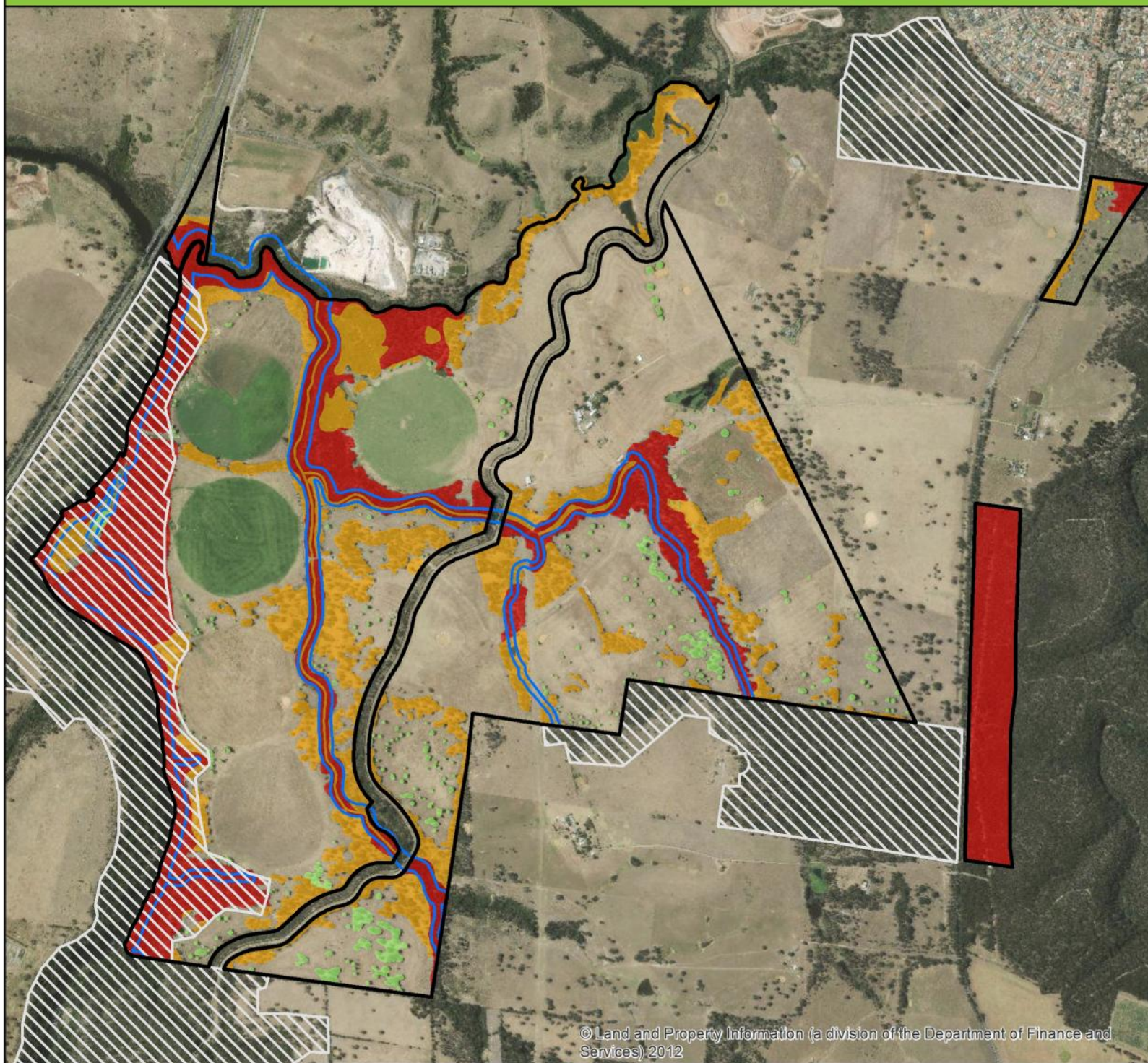


Figure 2: ELAs refined mapping of EECs and OEH High Conservation Value Lands



**Figure 3: Targeted survey effort for threatened flora, Mt Gilead Balance lands**

# Biocertification Constraints



## Legend

- Subject Site
- Bio Map High Conservation Value Areas
- Riparian Corridor

## Biocertification Constraints

- High (Red Flags)
- Moderate (Potential Red Flags)
- Low



## APPENDIX C



---

# Agricultural Investigation of Proposed Urban Development Site – Campbelltown LGA

---

Mt Gilead Pty Ltd  
S & A Dzwonnik

17 June 2014

---



ABN 41 107 715 364

**Michael Clarke and David Ronning**

P: (02) 9817 5888

E: [clarke@AgEconPlus.com.au](mailto:clarke@AgEconPlus.com.au)

W: [www.AgEconPlus.com.au](http://www.AgEconPlus.com.au)

---

**Contents**

1 Introduction ..... 5

1.1 Study Purpose ..... 5

1.2 Project Background ..... 5

1.3 Approach ..... 6

2 Site Inspection and Agricultural Assessment ..... 7

2.1 Land Titles ..... 7

2.2 Site Inspection, Description and Observations ..... 7

2.3 Agricultural Use and Intensity / Productivity of Operations ..... 9

2.4 Site Infrastructure and New Infrastructure Needed ..... 10

2.5 Agricultural Land Classification and Capability ..... 10

2.6 Neighbouring Land and Other Factors Relevant to Agriculture ..... 10

2.7 Agriculturally Feasible Food Production Enterprises ..... 11

2.8 Economic Feasibility of Food Production ..... 12

3 Scarcity of Land for Food Production ..... 13

3.1 Factors Offsetting Scarcity ..... 13

3.2 Scale of Production Loss in the Absence of Offsetting Factors ..... 13

4 Study Conclusion ..... 14

References ..... 14

Appendix 1 Map of Proposed Rezoning Development Site ..... 15

Appendix 2 Agricultural Land Classification Data for the Site ..... 16

**About the Authors**

This agricultural investigation was completed by Michael Clarke and David Ronning.

Michael is an agricultural economist (University of Sydney 1987) with more than 25 years professional experience in agricultural land use feasibility assessment in NSW. He commenced his professional career with the NSW Department of Lands in 1987, joined agricultural consultants Hassall & Associates in 1990 and has operated his own company ([www.AgEconPlus.com.au](http://www.AgEconPlus.com.au)) since 2004. Michael has worked on numerous land use planning studies in the Sydney Basin on behalf of NSW Government, local councils and property owners.

David Ronning has a Cootamundra farm family background, 30 years analysis experience and qualifications in Economics and Accounting from the University of Sydney.

**Acknowledgments**

AgEconPlus wish to thank:

Andrew Docking	Resource Management Officer, NSW DPI
Anna Dzwonnik	Owner, Lot 61 DP 752042
Darryl Kite	Director, Old Mill Properties Pty Limited
Guy Evans	Associate Director, Development Planning Strategies
Lee Macarthur – Onslow	Director, Mt Gilead Pty Ltd
Nigel McAndrew	DPS
Phil Anderson	Chairman, Old Mill Properties Pty Limited

Abbreviations

ABS	Australian Bureau of Statistics
CCC	Campbelltown City Council
CSG	Coal Seam Gas
CLEP	Campbelltown Local Environmental Plan
LGA	Local Government Area
DPI	NSW Department of Primary Industries
DPS	Development Planning Strategies
EPI	Environmental Planning Instrument
IDO	Interim Development Order
LGA	Local Government Area
LSC	Land and Soil Capability
MDP	Metropolitan Development Program
OMP	Old Mill Properties

DISCLAIMER

All description, figures, analyses, forecasts and other details have been prepared in good faith from information furnished to Michael Clarke and David Ronning of AgEconPlus Pty Ltd by other parties. These data are believed to be correct at the date of preparation of this report.

However, it should be noted that predictions, forecasts and calculations are subject to assumptions which may or may not turn out to be correct and AgEconPlus Pty Ltd expressly disclaim all and any liability to any persons in reliance, in whole or in part, on the report in total or any part of its contents.

Michael Clarke  
AgEconPlus Pty Ltd

## 1 Introduction

### 1.1 Study Purpose

This purpose of this document is to review the proposal by Campbelltown City Council (CCC) in respect of a 210 ha rural site in the Campbelltown Local Government Area (LGA) scheduled for rezoning under the State Government's Metropolitan Development Program (MDP) that addresses the following consideration outlined by Council:

‘An investigation of the feasibility of the use of the land for food production and how the land fits with the stated focus of securing agricultural land as expressed in the Discussion Paper – Sydney Over the Next 20 years’.

### 1.2 Project Background

Under *Draft Campbelltown (Urban Area) Local Environmental Plan 2002 – Amendment No 27 – Mount Gilead*, Campbelltown City Council seeks to develop a planning proposal to enable 210 hectares of rural land at Mount Gilead to be developed for approximately 1,700 residential allotments and associated open space. The planning proposal applies to land at Mount Gilead known as Lot 59 DP 752042, part of Lot 1 DP 807555, part of Lot 2 DP 807555 and Lot 61 DP 752042, Appin Road, Campbelltown. This area has been identified for urban development under the State Government's Metropolitan Development Program (MDP).

The subject site is currently zoned Non-Urban under the provisions of Environmental Planning Instrument (EPI) *Interim Development Order (IDO) No 15 – City of Campbelltown* (IDO No 15), with a minimum residential subdivision standard of 100 hectares.

The main EPI for the Campbelltown Local Government Area is *Campbelltown (Urban Area) Local Environmental Plan 2002* (CLEP 2002). As the northern boundary of the subject site adjoins the southern boundary of CLEP 2002, CCC has considered it appropriate to include the subject site within the provisions of CLEP 2002.

A number of detailed technical studies were required to inform a final planning proposal and include matters such as flora and fauna, conservation of ecological and riparian corridors, transport and access. These technical studies also needed to include an investigation of the feasibility of the use of the subject land for food production and how this land fits with the stated focus of securing agricultural land as expressed in the *Discussion Paper – Sydney Over the Next 20 Years*.

The NSW Government (2012) *Discussion Paper – Sydney Over the Next 20 Years* identifies a number of aims for NSW through to 2021. Those relevant to agriculture and the residential development of the project site include:

- Protecting strategic agricultural land and improving agricultural productivity
- Improving productivity on NSW farms

The Discussion Paper also points to the need for the resultant Metropolitan Development Program to strike a balance between land for a growing population and land for agriculture and resources.

### 1.3 Approach

The feasibility study was completed in three parts:

1. Examination of the agricultural capability of the site and identification of its food production potential including:
  - Land titles
  - Site inspection, description and observations
  - Agricultural use and intensity / productivity of agricultural operations (including pasture type and condition and fertiliser history)
  - Site Infrastructure and new infrastructure needed to secure ongoing food production (e.g. surface water including dams and creeks, irrigation licences and infrastructure, stock yards and fencing condition)
  - Application of NSW Agriculture Agricultural Land Classification system and Rural Land Capability system to provide an objective assessment of the site's food production potential
  - Review of neighbouring land and other economic and social factors supporting or constraining agriculture and food production
  - Determination of the range of feasible food production enterprises using the above information and professional experience.
2. Comment on the availability/scarcity of this land class in the Sydney Basin and in NSW more generally (using NSW Agriculture Agricultural Land Classification system – comparison of classes found on the project site to hectares available in the rest of the state).
3. Conclude on whether the land is of strategic importance for agricultural production, its scarcity, factors offsetting scarcity that work against loss of food production potential and the need for trade-offs as expressed in the 'Discussion Paper – Sydney Over the Next 20 years'.

To discharge the feasibility study AgEconPlus reviewed relevant background documents, publications and maps and completed a site inspection and agricultural land use questionnaire with both of the relevant landholders. Site inspection was completed 14 June 2013.

## 2 Site Inspection and Agricultural Assessment

### 2.1 Land Titles

A map of the site is included as Appendix 1. The land subject to the rezoning proposal is situated at Appin Road, Campbelltown and is owned by two separate parties:

Landowner:	Mt Gilead Pty Ltd	S & A Dzwonnik	Total MDP Area
Identifier:	Lot 59 DP 752042 Part of Lot 1 DP 807555 Part of Lot 2 DP 807555	Lot 61 DP 752042	
Approximate Land Area:	175.5 hectares	34.5 hectares	210 hectares
Manager	Mr Lee Macarthur – Onslow	Mrs Anna Dzwonnik	

- Mt Gilead Pty Ltd's consultant is Old Mill Properties Pty Ltd (Darryl Kite)
- S & A Dzwonnik's consultant is Development Planning Strategies (Nigel McAndrew)

### 2.2 Site Inspection, Description and Observations

The following observations were made from review of the survey questionnaire and site inspection:

	Mt Gilead Pty Ltd site	S & A Dzwonnik site
Site Description and Topography	<ul style="list-style-type: none"> <li>• Site is approximately 95% cleared for grazing with 5% sporadic eucalypt tree cover of iron bark, white gum and box with heavier concentrations of eucalypt tree cover in the riparian zone on the western side of the site.</li> <li>• Between 90% and 95% of the site is gently sloping (estimated 3° to 5° slope) with between 5% and 10% of site steep (up to 30° slope) around 'One Tree' hill on the northwestern side of the property.</li> </ul>	<ul style="list-style-type: none"> <li>• Site is approximately 95% cleared for grazing with a 5% wooded area of eucalypt tree cover in second paddock to the western side of the site.</li> <li>• All of the site is flat to gently sloping (estimated 1° to 5° slope).</li> </ul>

	<b>Mt Gilead Pty Ltd site</b>	<b>S &amp; A Dzwonnik site</b>
<b>Site Observations and Biophysical Factors</b>	<ul style="list-style-type: none"> <li>• The site is generally well managed grazing land fenced into paddocks with sound pasture cover – no cropping or cultivation observed.</li> <li>• Cattle are in sound condition.</li> <li>• Site has three creeks and several good quality rain and creek fed dams.</li> <li>• Some surface sandstone and minor sandstone outcropping near creek on the western side of the site.</li> <li>• Some shale patches noted where shale previously used to stop cattle bogging (e.g. near gates) – shale sourced on site.</li> <li>• Small shale excavation near ‘One Tree’ hill approximately 500 sq metres in area and between 5 to 10 metres deep.</li> <li>• No erosion noted.</li> <li>• No salinity noted.</li> <li>• Some weed shrubs evident.</li> </ul>	<ul style="list-style-type: none"> <li>• Generally well managed grazing land fenced into paddocks with sound pasture cover – no cropping or cultivation observed.</li> <li>• Cattle are in sound condition.</li> <li>• Site has two good quality rain fed dams.</li> <li>• No stone surfaces or stone outcropping noted.</li> <li>• Old wooden cattle yards observed in first paddock on eastern side of site.</li> <li>• No erosion noted.</li> <li>• No salinity noted.</li> <li>• Some weed shrubs evident.</li> <li>• A significant number of in-ground cut tree stumps were observed in the second paddock to western side of site as a remainder from previous historical tree clearing activities.</li> </ul>
<b>Approx % of site prone to or at risk of flooding</b>	Owner estimated percentage: 5% - accepted as reasonable based on presence of semi-permanent creek / water course on western side of site.	Owner estimated percentage: 0% - accepted as reasonable.
<b>Soil depth and base</b>	Predominately shallow: Manager advised approximately 10 cm of top soil, then clay over a shale rock base.	Predominately shallow: Accepted to be same as Mt Gilead Pty Ltd site land.
<b>Rainfall</b>	767.4 mm with an even monthly distribution	767.4 mm with an even monthly distribution

### 2.3 Agricultural Use and Intensity / Productivity of Operations

	Mt Gilead Pty Ltd site	S & A Dzwonnik site
<b>Historical land use</b>	<ul style="list-style-type: none"> <li>Dairy cattle until 1986, beef cattle production since 1986.</li> <li>Oat crops for grazing sometimes instead of purchasing hay.</li> <li>Up until 10 years ago, approx. 20% of cleared site was used for irrigation with irrigation water sourced from on-site dam.</li> </ul>	<ul style="list-style-type: none"> <li>Site has been owned by S &amp; A Dzwonnik for approximately 30 years and during this time has always been used for beef cattle production.</li> <li>No cultivation or cropping undertaken during 30 year tenure.</li> </ul>
<b>Current land use</b>	<ul style="list-style-type: none"> <li>Beef cattle breeding and sale (i.e. weaner production).</li> </ul>	<ul style="list-style-type: none"> <li>Beef cattle fattening and sale (i.e. weaner production). Weaners are breed off site at other nearby properties owned by S&amp;A Dzwonnik.</li> </ul>
<b>Intensity / Productivity of Operations</b>	<ul style="list-style-type: none"> <li>Site is able to produce up to 100 weaners pa worth between \$500 and \$700 per head at current market prices.</li> <li>Site can support approx. 1 cow and calf per 2 ha in a reasonable to good year; supplementary fodder (hay) purchased in drought periods.</li> </ul>	<ul style="list-style-type: none"> <li>Site is able to produce approx. 25 weaners pa worth between \$500 and \$700 per head at current market prices.</li> <li>Site can support approx. 1 weaner per ha in a reasonable to good year.</li> </ul>
<b>Pasture Type</b>	<ul style="list-style-type: none"> <li>Predominately kikuyu and other perennial grasses with some clover</li> </ul>	<ul style="list-style-type: none"> <li>Mixture of annual and perennial pasture species including clover.</li> </ul>
<b>Pasture Condition</b>	<ul style="list-style-type: none"> <li>Good on most areas</li> </ul>	<ul style="list-style-type: none"> <li>Good on most areas</li> </ul>
<b>Irrigation</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Fertiliser History</b>	<ul style="list-style-type: none"> <li>When operated as a dairy pre 1986, 100kg of regular fertiliser per ha pa plus chicken manure.</li> <li>Regular fertiliser and some chicken manure applied since 1986 but at a much lower rate.</li> </ul>	<ul style="list-style-type: none"> <li>No fertiliser has been applied since the owners acquired the site.</li> </ul>
<b>Weeds Present</b>	<ul style="list-style-type: none"> <li>Some paddocks noted as almost weed free others with significant weed infestation.</li> <li>Weeds noted included: <ul style="list-style-type: none"> <li>Paddy's Lucerne</li> <li>Fireweed</li> <li>Stinking Roger</li> </ul> </li> <li>Manager performs periodic control with herbicide.</li> </ul>	<ul style="list-style-type: none"> <li>Both paddocks noted as mostly weed free except for some significant weed infestation on northern and western section of western paddock.</li> <li>Weeds noted included: <ul style="list-style-type: none"> <li>African Box Thorn</li> <li>Blackberry</li> </ul> </li> <li>Manager performs periodic control with herbicide.</li> </ul>

## 2.4 Site Infrastructure and New Infrastructure Needed

	Mt Gilead Pty Ltd site	S & A Dzwonnik site
<b>Surface water / dams</b>	Site has several good quality rain and creek fed dams.	Site has two good quality rain fed dams.
<b>Irrigation licence</b>	N/A	N/A
<b>Stock handling yards / pens</b>	None sighted	Old wooden cattle yards observed in first paddock on eastern side of site.
<b>Fencing</b>	Fencing noted as being in good condition with gates well hung and secure from animal egress.	Fencing noted as being in good condition with gates well hung and secure from animal egress.

## 2.5 Agricultural Land Classification and Capability

	Mt Gilead Pty Ltd site	S & A Dzwonnik site
<b>Agricultural Land Classification</b>	Notated as Class 3 <i>(i.e. well suited to grazing including use of improved pastures, cultivation limited to cash or forage crop in rotation with pastures. Limitations to production include shallow, stony or eroded soils.)</i> - accepted as appropriate	Notated as Class 3 <i>(i.e. well suited to grazing including use of improved pastures, cultivation limited to cash or forage crop in rotation with pastures. Limitations to production include shallow, stony or eroded soils.)</i> - accepted as appropriate
<b>Land and Soil Capability classes</b>	Estimated at: Class 2 to 3 on the gently sloping grazing land Class 4 to 5 on the moderately hilly grazing land	Estimated at: Class 2 to 3 on the flat to gently sloping grazing land

The study site overlaid with land classification is shown as Appendix 2.

## 2.6 Neighbouring Land and Other Factors Relevant to Agriculture

	Mt Gilead Pty Ltd site	S & A Dzwonnik site
<b>Remaining agricultural land owned by owner</b>	Approximately 575 hectares adjoining site to the west and south-west.	Approximately 195 hectares in total in two separate properties in nearby area: Campbelltown and Camden Valley Way.
<b>Off-site support Infrastructure</b>	Owner / manager has cattle yards on their remaining land to support agricultural enterprise of beef cattle production.	Owner / manager has cattle yards on their remaining land to support agricultural enterprise of beef cattle production.

<b>Use of neighbouring land</b>	<ul style="list-style-type: none"> <li>• To the East (eastern side of Appin Rd): small area of rural cleared land of approximately 50 ha and native bush land further south.</li> <li>• To the North: native bush land (Noorumba Reserve) and residential housing.</li> <li>• To the North-West: Sydney Water Corporation water supply channel and Menangle Creek.</li> <li>• To the West: rural cleared land comprising remainder of Mt Gilead Pty Ltd property being other part of Lot 1 DP 807555 and other part of Lot 2 DP 807555. Also a Coal Seam Gas plant (Rosalind Park Gas Plant – part of Camden Gas Project operated by AGL).</li> <li>• To the South: native bush land and an area of rural cleared land.</li> </ul>
<b>Regional factors</b>	<ul style="list-style-type: none"> <li>• Nearest saleyards: Camden, then Moss Vale</li> <li>• Nearest fertiliser supplier: Port Kembla</li> <li>• Nearest rural supplier: Campbelltown, Camden, then Goulburn</li> </ul>
<b>Labour Availability</b>	<ul style="list-style-type: none"> <li>• No constraints noted by owner or manager in relation to labour hire or permanent employment.</li> </ul>
<b>Peri urban land use restrictions</b>	<ul style="list-style-type: none"> <li>• None advised by owner / managers. However, land intensification with high spray load horticulture or poultry, pigs or cattle feedlot likely to be inconsistent with community expectations.</li> </ul>

## 2.7 Agriculturally Feasible Food Production Enterprises

Based on the above agricultural assessment, key factors that set the parameters for the range of feasible food production enterprises are as follows:

- Site topography: mostly cleared and predominantly gently sloping
- Site biophysical factors: three creeks and several good quality rain and creek fed dams
- Soil depth and base: predominately shallow soil depth on top of clay base with shale rock base underneath - limited capacity for cultivation and cropping
- Rainfall: 767.4 mm with an even monthly distribution
- Traditional agricultural use: beef cattle breeding, fattening and sale; or dairy cattle for milk production
- Ag Land Classification: notated as Class 3 – this is accepted due to the limited capacity for cultivation and cropping.

Consequently feasible food production is limited to horticulture that is able to cope with shallow and relatively low fertility soil, intensive animal production or some form of extensive animal grazing activity.

Feasible horticulture is limited to the growing of a tenacious tree or vine crop that requires limited irrigation water and is productive in shallow soils – a crop such as olives or wine grapes would be agronomically feasible on the site. However, both these crops would require significantly more high priced labour than is currently used on either farm, additional capital

equipment for harvesting and processing as well as access to specialised and difficult to secure markets. Both commodities are currently oversupplied and prices are depressed.

Whilst more intensive agricultural activities such as beef feedlotting, pig or poultry production could be accommodated on the site, these activities would require a large upfront capital investment to establish the operation and a significant increase in labour hires (management), labour costs and feed input costs. Intensive livestock production on the site is likely to be inconsistent with Campbelltown community values and would generate odour and noise complaints. Furthermore, modern intensive animal production tends to locate close to large scale grain production areas west of the Great Dividing Range to take advantage of all important freight cost savings on bulk livestock feed. The Mt Gilead site would be considerably less feasible than an alternative in either the NSW North West or Riverina.

Animal grazing options include open range beef cattle breeding, fattening and sale, open range dairy production, or sheep/goats/alpaca for meat, milk or wool production. Alternative range grazing enterprises such as alpaca, goats and dairy sheep require considerable capital, specialised skills, labour and access to niche markets. The long term viability of these enterprises is normally associated with some form of supply chain partnership. Sheep for wool production is considerably more labour intensive and consequently less profitable than say beef cattle grazing. Wool returns are reliant on scale operations which are not available to the operators of the Mt Gilead site. Historically dairy grazing has been profitable within the Campbelltown Camden area but with the deregulation of the fresh milk market in 2000 the NSW dairy industry has contracted to a few key sites where larger production areas and lower land values provide an adequate return on investment. Beef cattle grazing provides a low capital, labour and risk enterprise for the site. Weaners require few capital inputs other than adequate fodder, water and fencing. Labour is less than alternative enterprises and easily serviced markets are available through saleyards in Camden and Moss Vale.

In terms of food production, the study site is best suited for grow out of beef cattle weaners.

## **2.8 Economic Feasibility of Food Production**

While the study site is technically suitable for the grow out of beef cattle weaners, it is not an economically rational use for the asset. Gross receipts from cattle production are approximately \$75,000 per year (125 head of beef cattle at an average value of \$600) of which direct costs, including animal health and pasture maintenance, account for approximately half this total (NSW DPI 2012). Annual return per hectare, before allowing for capital costs, is therefore a modest \$189 (gross margin of \$39,737 divided by 210 ha).

3 Scarcity of Land for Food Production

Chapter 3 addresses the scarcity of Class 3 agricultural land for food production and Table 3.1 shows the availability of this asset class.

Table 3.1 Area of Class 3 Land across Various Assets Available for Food Production

Asset Available for Food Production	Area of Class 3 Land (ha)	Development Site as a Share of Asset (%)
Campbelltown <ul style="list-style-type: none"><li>Local Government Area</li></ul>	12,000	2%
Sydney Basin <ul style="list-style-type: none"><li>Excluding Wollongong, Gosford, Lithgow and Wingecarribee LGAs</li></ul>	150,000	0.2%
NSW <ul style="list-style-type: none"><li>Excluding the Riverina and most of the South West Slopes that have not yet been mapped</li></ul>	3,400,000	0.01%

Source: Land Class Atlas Mapping

Table 3.1 shows that relative to the state of NSW, the Sydney Basin and even the Campbelltown LGA, the area of grazing land proposed for urban development at the study site is modest.

3.1 Factors Offsetting Scarcity

Factors mitigating the loss of food production potential include:

- Class 3 grazing land is not necessarily ‘strategically important’ agricultural land. Class 3 is general grazing land not suitable for high value agricultural uses such as intensive vegetable production that more closely aligns to concerns about securing land for long term food production
- Reallocation of 210ha of Class 3 grazing land for urban development does not necessarily result in a reduction in beef cattle production. Land is only one factor of production and a reduction in land may be offset with investment in other inputs. For example Mt Gilead Pty Ltd and S & A Dzwonnik may choose to further improve the pastures on the balance of their Class 3 land, through addition of improved pasture species and or additional fertiliser or they may choose to purchase additional fodder and graze more livestock.

3.2 Scale of Production Loss in the Absence of Offsetting Factors

In the absence of investment to offset carrying capacity loss, the NSW beef herd would be reduced by 125 head. According to the Australian Bureau of Statistics (ABS) the NSW beef herd is greater than 6 million head.

## 4 Study Conclusion

The feasibility study has shown that from a food production perspective the study site is best suited to beef cattle grazing. Loss in beef cattle grazing can be offset through pasture improvement or purchase of fodder. In the absence of offsetting investment in pasture or fodder the NSW beef herd would be reduced by approximately 0.002% (i.e. 125 head in a total NSW herd of more than 6 million beasts). Reallocation of the land for urban development will not affect food production and is consistent with the need to strike a balance between land for a growing population and land for agriculture expressed in the Discussion Paper – Sydney Over the Next 20 Years.

## References

ABS NSW Regional Statistics Catalogue Number 1304.1 ISSN 0818-2272

NSW Government (2012) Sydney Over the Next 20 Years A Discussion Paper

NSW Agriculture Agricultural Land Classification, AgFact AC. 25, October 2002

NSW Government Land and Soil Capability Assessment Scheme - Second approximation, Published by Office of Environment and Heritage, October 2012

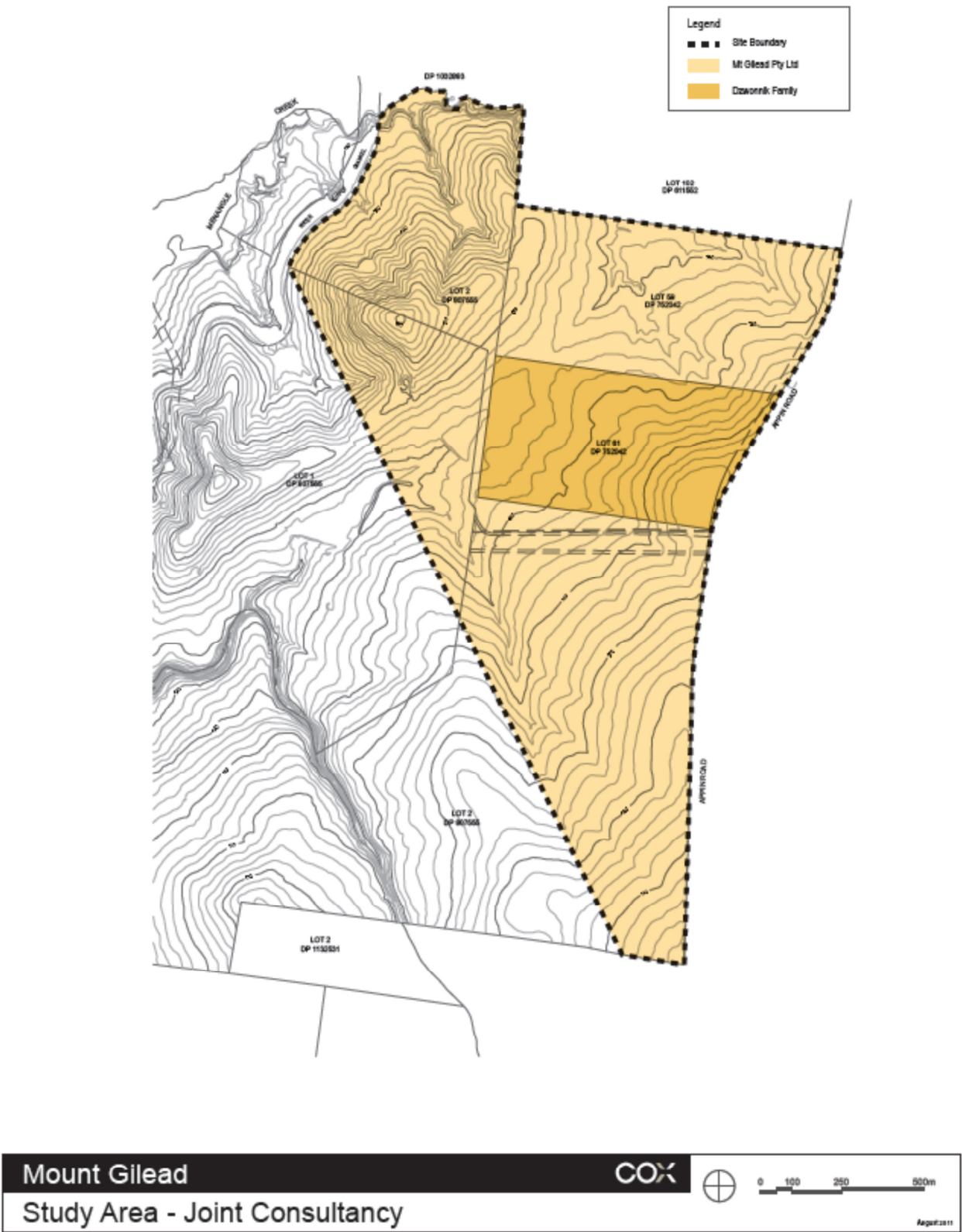
NSW DPI (2012) Beef Cattle Gross Margin – Weaners 2012

[http://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0004/175522/18-North-coast-weaners-improved.pdf](http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0004/175522/18-North-coast-weaners-improved.pdf)

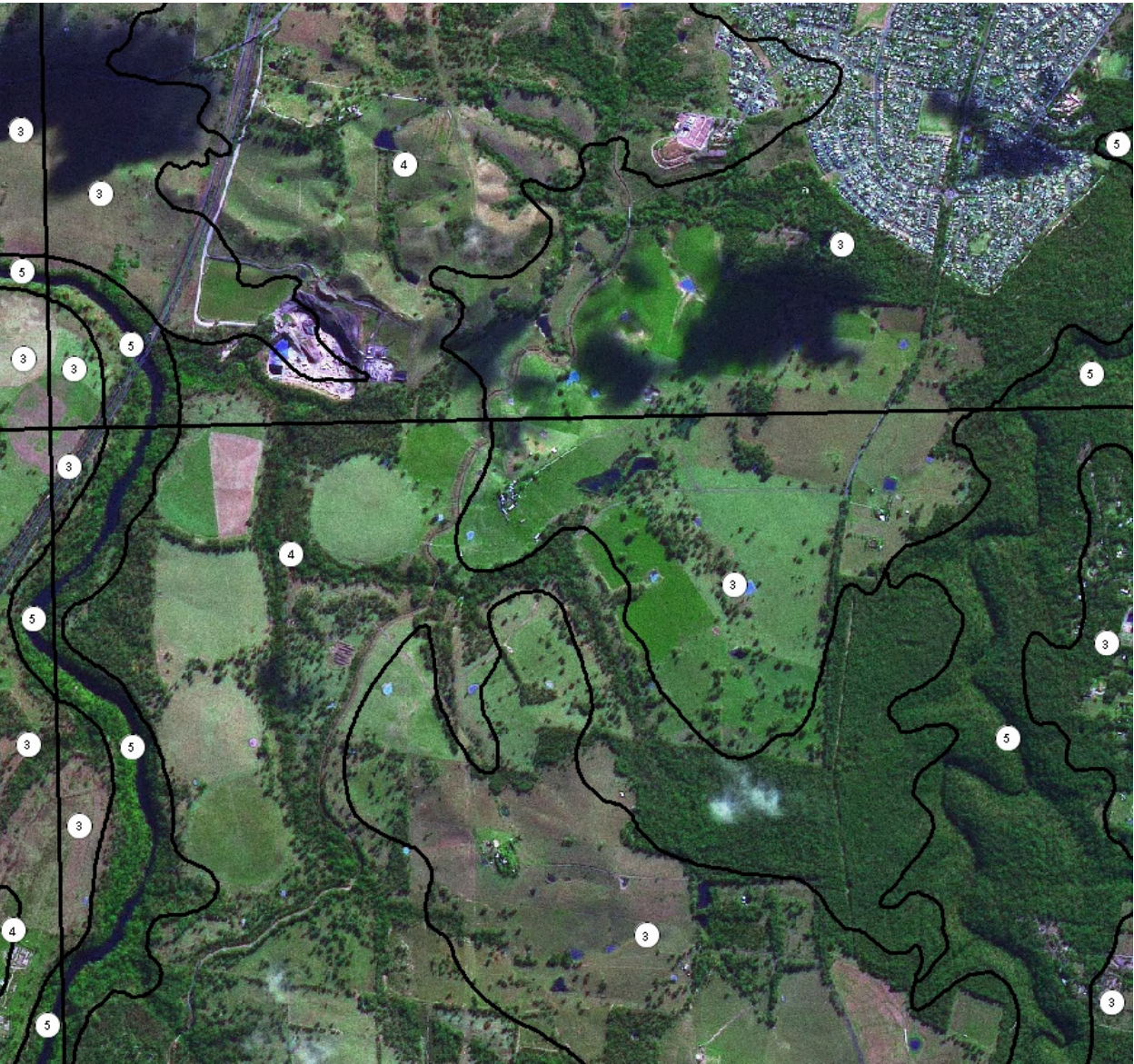
Draft Campbelltown (Urban Area) Local Environmental Plan 2002, Amendment No 27 – Mount Gilead (extract)

SIX Maps online mapping tool – NSW Government Department of Finance and Services, Land and Property Information

Appendix 1 Map of Proposed Rezoning Development Site



Appendix 2 Agricultural Land Classification Data for the Site



Scale: 1:17,040

Note: Proposed Rezoning Development site has a NSW Agricultural Land Classification of Class 3