



CAMDEN COUNCIL

DRAFT PLANNING PROPOSAL

Amendment No. 32 Crase Place, Grasmere

May 2014

June 2014 (Version 2)

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EXECUTIVE SUMMARY

The purpose of this Planning Proposal is to rezone Part of Lot 24 DP 1086823 Crase Place, Grasmere to R5 - Large Lot Residential. Currently the site is partially zoned RU1 – Primary Production and R5 - Large Lot Residential. The proposed rezoning and minimum lot size amendments would result in four (4) additional large residential lots.

1.0 INTRODUCTION

The site has an area of 5.6ha and is accessed by an existing cul-de-sac. The land is grassed with no existing structures. The surrounding land is characterised by large rural lots on undulating hills. To the west of the site is a riparian corridor consisting of two dams, swales and a cycle path which connects Benwerrin Crescent with Werombi Road. Directly opposite the site is the West Camden Water Recycling Plant (WRP) which is owned and operated by Sydney Water.

The site is currently partially zoned RU1 – Primary Production and R5 - Large Lot Residential. It is envisioned that the redevelopment would provide rural residential lots that complement the surrounding area.

2.0 SITE DESCRIPTION AND CONTEXT

2.1 Site Locality

The subject land is Lot 24 DP 1086823, Crase Place, Grasmere. The site is accessed via Crase Place which is a cul-de-sac. Werombi Road is located on the northern property and the recently 'decommissioned' 'Old Oaks Road' along the western boundary.



Figure 1: Location of site. (Source: Google maps, 2014)

The site has an area of approximately 5.6ha and is shown outlined in red in Figure 1. It has a gentle fall from east to west with an approximate fall of 12% and is vacant of any structures. The land is grassed and there is no significant vegetation on the site.

A drainage reserve traverses the property from the cul-de-sac in Crase Place to the adjoining property to the east (Lot 25 DP 1086823). This adjoining property is vegetated along the existing drainage line and feeds two dams located on the site. This adjoining lot essentially acts as a riparian buffer zone, filtering water run-off from adjacent properties.

The West Camden WRP is located to the north west of the subject property. The following Figure 2 shows an aerial photograph showing the location of the site in the context of the general surrounds.

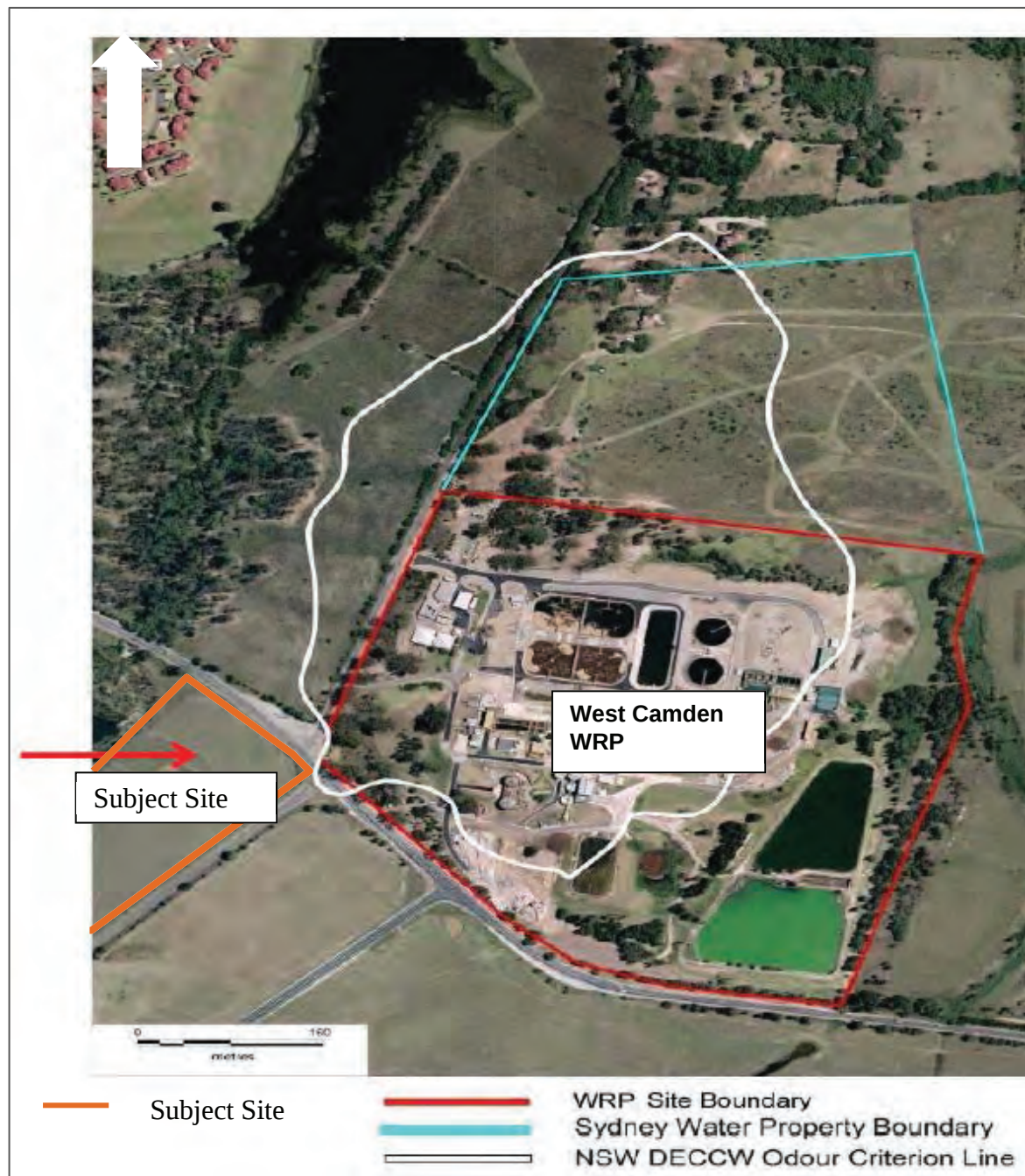


Figure 2: Odour impact of Camden WRP. (Source: Sydney Water REF West Camden Water Recycling Plant, 2011)

3.0 STATUTORY FRAMEWORK

3.1 Zoning

The site is currently partially zoned RU1 - Primary Production and R5 Large Lot Residential (refer to Figure 3 below).

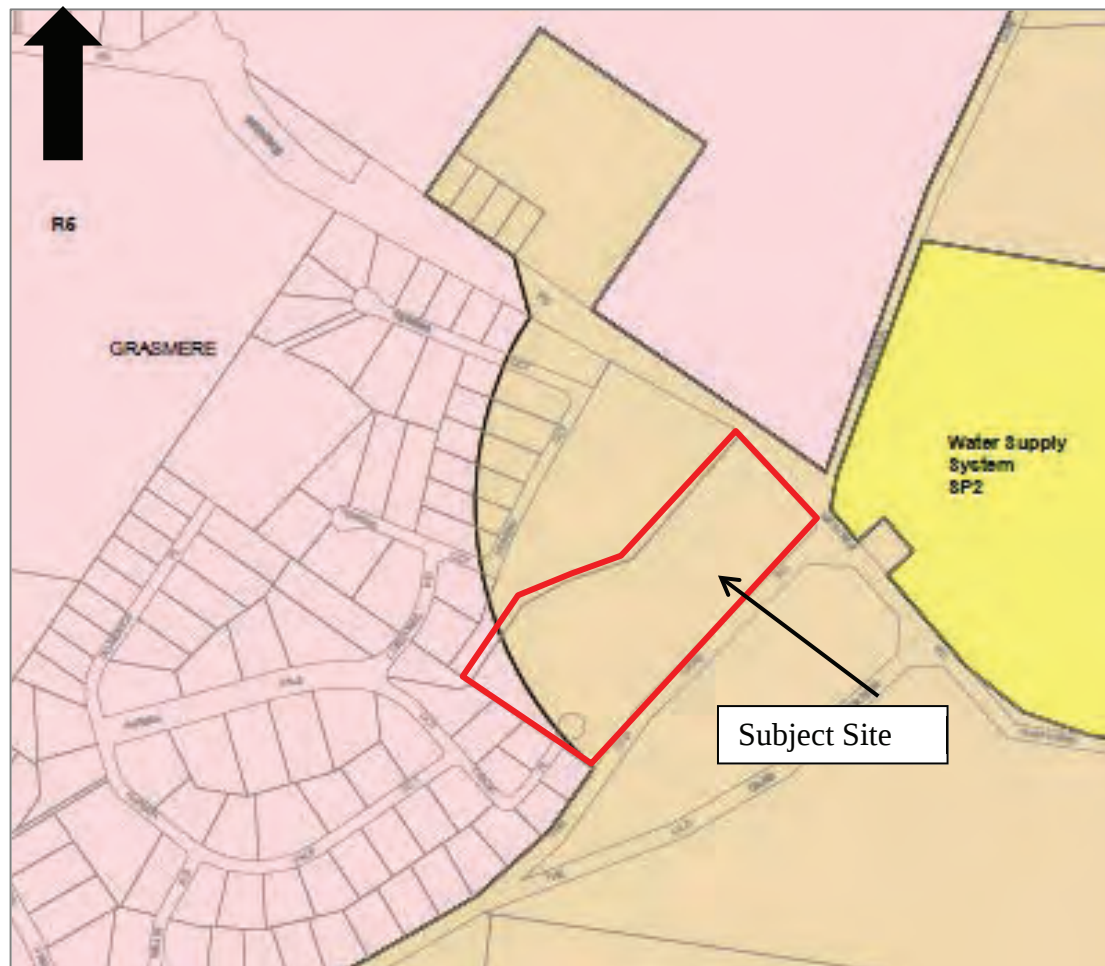


Figure 3: Existing zoning controls. (Source: Camden LEP 2010)

3.2 Other controls

A building height restriction of 9.5m currently applies to the site.

A split minimum lot size of AB – 40ha (applying to the RU1 land) and W – 4000sqm (applying to the R5 land) currently applies to the site.

4.0 PLANNING PROPOSAL

4.1 Objectives and Intended Outcomes

The objective of this Planning Proposal is to enable the redevelopment of the subject site at Lot 24 DP 1086823 Crase Place for large lot residential development.

An indicative layout plan for the site has been prepared to indicate how the development can occur.

The objective of this Planning Proposal is to achieve orderly development having regard to the sites constraints and opportunities. The intended outcome of the Planning Proposal is to rezone the land to R5 Large Lot Residential to facilitate 4 additional large lots that complement the adjoining residential development and scenic qualities of the immediate locality.

The following table provides a summary of the proposed changes.

	Existing	Proposed
Zoning	RU1 - Primary Production R5 - Large Lot Residential	R5 - Large Lot Residential
Minimum Lot Size	Currently the site has two minimum lot sizes: AB - 40ha W - 4000sqm	Two minimum lot sizes are proposed: Z2 – 4ha W – 4000sqm

Table 1: Comparison of existing and proposed provisions under Camden LEP 2010.

5.0 EXPLANATION OF PROVISIONS

The proposed zoning controls would allow for large lot residential and ensures a transition is provided to adjoining development.

The West Camden Water Recycling Plant (WRP) is located directly opposite the site. Council had previously imposed a 400m odour buffer around the WRP under Camden Local Environmental Plan (Camden LEP) 118. In July 2011 the extent of the odour buffer was reviewed as part of the upgrade to the WRP whereby Sydney Water has nominally reduced the odour buffer to 300m. The proponent has received concurrence from Sydney Water that it is satisfied the proposed development can occur outside the 300m buffer. A copy of the correspondence from Sydney Water is provided as Appendix B.

The rezoning to R5 Large Lot Residential will facilitate 4 additional residential large lots as represented in the draft indicative lot layout plan below – Figure 4. The proposed W – 4000sqm minimum lot size (coloured pink) is consistent with the zone objectives of R5 – Large lot residential and the proposed Z2 – 4ha minimum lot size (coloured purple) will limit the opportunity for additional residential lots and maintain compliance with the nominal odour buffer affecting the site.

There are no other provisions that are required to be amended.



Figure 4: Indicative Lot Layout. (Source: SitePlus, 2014)

6.0 JUSTIFICATION

6.1 Section A - Need for the Planning Proposal

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

Technical studies have been prepared for nearby sites including the West Camden Water Recycling Plant. The results of this study in particular have informed the Planning Proposal.

Odour Impacts from West Camden Water Recycling Plant (WRP)

The West Camden Water Recycling Plant (WRP) is located directly opposite the site. Council had previously imposed a 400m odour buffer around the WRP under Camden Local Environmental Plan (Camden LEP) 118, dated May 2001. Camden LEP 118 was repealed in September 2010 and replaced with Camden LEP 2010. In July 2011 the extent of the odour buffer was reviewed as part of the upgrade to the WRP. The odour impact mapped in the Review of Environmental Factors (REF) for the WRP upgrade is significantly less than the previous 400m odour buffer. A map indicating the revised odour impact of the WRP is provided in Figure 2 of this Planning Proposal. In light of this study, Sydney Water has nominally reduced the odour buffer to 300m. The proponent has received concurrence from Sydney Water that it is satisfied the proposed development can occur outside the 300m buffer. A copy of the correspondence from Sydney Water is provided as Appendix B. Sydney Water and Council have also confirmed that the WRP received no complaints in relation to odour in the past 12 months.

Should the Planning Proposal receive a favourable gateway determination a Level 3 Odour Assessment in accordance with the NSW EPA "Assessment and Management of Odour from Stationary Sources in NSW" guidelines will be prepared. This assessment will be undertaken utilising appropriate modelling as determined by Council in consultation with the EPA.

Bushfire

There is limited vegetation on the subject site. A bushfire assessment has been prepared which forms Appendix E.

In preparing this new bushfire report, an iterative approach has been taken where the initial indicative plans prepared for Sydney Water were reviewed. This analysis further considered the constraints and opportunities of the site, including the nominal 300m odour buffer. Through this iterative approach an indicative subdivision plan has been developed which shows that 4 lots are compliant with the 300m odour buffer and are located within the Bushfire Attack Level (BAL) 12.5 category. Indicative plans are shown in (Appendix D).

Traffic

Appendix G contains a traffic assessment on the potential impacts associated with the Planning Proposal. The assessment has concluded that there is ample capacity within the existing street system to accommodate the level of development anticipated. It has also concluded that no additional infrastructure works would be required as a result of the Planning Proposal.

Phase 1 Land Capability Assessment

A Phase 1 contamination assessment and salinity assessment has been undertaken by Coffeys Pty Ltd (Attachmet H).

The assessment considered the site and in particular, the 2 ha portion of the site where the building envelope has been made available by Sydney Water.

The assessment found that opportunities for contaminating activities was low to very low. Impacts for salinity were found to be low to moderate. A part 2 Land Capability Assessment will be undertaken post gateway determination.

Visual Landscape Study

A detailed visual landscape study has not been prepared for this site at this stage. It is envisaged that this would be prepared post gateway determination and prior to the exhibition of the proposal.

Infrastructure Provision

Sewer provision for the proposed development is provided in Appendix F of this report. The report has concluded that there is sufficient capacity within the system to accommodate the form of development which is envisaged by the Planning Proposal.

Other utilities are also available to the site and can be augmented as required.

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

The Planning Proposal is considered the best option as it will allow the redevelopment of the site in a manner that is compatible with surrounding development and also takes into consideration the site constraints. The site is currently partially zoned RU1 - Primary Production and R5 - Large Lot Residential which has limited development potential. Given the revised odour impact from the WRP, the Planning Proposal will allow development that is consistent with the nominal odour buffer of 300m.

The Planning Proposal is considered to be the best method of achieving renewal of landuse at the site which is sympathetic with adjoining lands.

6.2 Section B - Relationship to Strategic Planning Framework

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

Draft South West Subregional Strategy

Camden Local Government Area (LGA) is a sub-region within the Metropolitan *Plan for Sydney 2036*. The *South West Subregion* is comprised of Liverpool, Campbelltown, Wollondilly and Camden Local Governments.

The Metropolitan Strategy and each of its draft South West Subregional Strategies consist of seven areas for consideration, or strategies. Each of these strategies consists of a series of actions pertaining to the following fields:

- A Economy and Employment
- B Centres and Corridors
- C Housing
- D Transport
- E Environment, Heritage and Resources
- F Parks, Public Places and Culture
- G Implementation and Governance

The proposed rezoning generally accords with each of the above stated seven strategies as translated within the South West Subregional Strategy.

The 'Key Directions' for Housing South West have identified that the Camden Council will provide for approximately 10,274 new dwellings by 2031 and of this number, 8690 will be via greenfield development. While the site is not specifically mentioned in the MDP it will provide additional housing that will add to the dwelling targets without the loss of existing housing stock.

Clause SW C1.1.4 – identifies the need to retain a distinct edge to urban areas where they border rural land in consistent Camden LGAs. The proposal is compliant with this clause as it is consistent with the semi-rural character of the surrounding area as a Rural Residential subdivision.

Clause SW C2.1.1 – requires that new dwellings increase the region's performance against the target for State Plan Priority E5. The site is within an area where a public bus route is available and therefore is able to accommodate this requirement. The subject site is also within close proximity to Narellan which is identified as a strategic centre.

Clause SW C2.1.2 – the intent of this clause is to deliver a significant number of housing opportunities. The proposed rezoning will make a contribution to housing delivery without substantially altering the existing area of Grasmere.

Is the planning proposal consistent with a Council's Local Strategy, or other local strategic plan?

Camden 2040 is Camden Council's Strategic Plan for the People and Place of the Camden Local Government Area. It has an over-arching goal to achieve sustainability for the region. The Plan employs six key directions which guide activities to be adopted to achieve this goal. These six key directions are:

- 1. Actively managing Camden's growth*
- 2. Health urban and natural environments*
- 3. A prosperous economy*
- 4. Effective and sustainable transport*
- 5. An enriched and connected community*
- 6. Strong local leadership*

These key Directions are supported by a series of strategies to assist in various outcomes being achieved. The strategies have been developed having reference to the NSW Government's State Plan (NSW 2021) and associated Regional Action Plan. The strategies and desirable outcomes have been assessed against the planning proposal.

Key direction 1: Actively managing Camden's Growth

Outcomes:

- Camden has the best of both worlds*
- People can access what they need*
- There are housing choices*

The Planning Proposal is compliant with the outcomes for actively managing Camden's growth. It does not affect any heritage or character areas of Camden nor does it restrict accessibility to public space. The proposal will ultimately provide for additional housing for the region.

Key direction 2: Healthy Urban and Natural Environments

Outcomes:

- There is clean air and water, and bushland is protected*
- Nothing is wasted*
- There is community pride and amenity in our places*
- There are open spaces and places to play*
- People are healthy*

The planning proposal allows an efficient use of land which will form a healthy and positive addition to the surrounding neighbourhood as well as its future inhabitants. It will not impact negatively on biodiversity characteristics of the area.

Key direction 3: A Prosperous Economy

Outcomes:

- *The local economy is growing*
- *There are a variety of local job available*
- *There is a commitment to learning and skills*
- *People can access what they need*

The planning proposal supports the objectives underpinning a prosperous economy for Camden as it will enable new residences to the neighbourhood which in turn will in turn support the local economy.

Key direction 4: Effective and Sustainable transport

Outcomes:

- Roads are high quality, free flowing and safe
- We leave the car at home
- People breathe clean air

A traffic assessment has been provided which indicates that there will be no negative impacts on the street network in view of the indicative subdivision proposal. Consequently the proposal will be compliant with this objective.

Key direction 5: An enriched and connected community

Outcomes:

- *People feel connected, supported and that they belong*
- *There is community pride*
- *People feel safe*
- *People are healthy*

The additional dwellings as an outcome of the proposal will enable greater passive surveillance in the area which will promote the safety of the area. This will also ultimately facilitate greater social connections in the area.

Key direction 6: Strong Local Leadership

Outcomes:

- People have a say in the future
- It is well governed

The Planning Proposal is an appropriate outcome as it identifies the assets and constraints of the area and the response developed has taken into account these sensitivities of the site. In particular it maintains appropriate boundaries between the West Camden Water Recycling Plant through the development of appropriate zoning boundaries. The Planning Proposal is supported by relevant sub-consultant advice. The proposal will be exhibited for public comment and assessed by Council which conforms to the outcome of strong local leadership.

Is the planning proposal consistent with applicable State Environmental Planning Policies?

The following table outlines the potentially relevant State Environmental Planning Policies and their relevance to the Planning Proposal:

STATE ENVIRONMENTAL PLANNING POLICY		COMPLIANCE	COMMENT
State Policies			
SEPP No. 1	Development Standards	Yes	The rezoning proposal will not alter the application of this SEPP.
SEPP No. 14	Coastal Wetlands.	N/A	This policy does not apply to Camden LGA.
SEPP No. 15	Rural Land sharing Communities.	N/A	This policy does not apply to Camden LGA.
SEPP No. 19	Bushland in Urban Areas.	Yes	This policy applies to the Camden LGA, though there is no bushland present on the subject site.
SEPP No. 21	Caravan Parks.	N/A	This SEPP is relevant to specific development not permitted under this Planning Proposal.
SEPP No. 26	Littoral Rainforests.	N/A	No littoral rainforests identified on the subject land.
SEPP No. 29	Western Sydney Recreational Area.	N/A	This policy does not apply to Camden LGA.
SEPP No. 30	Intensive Agriculture.	N/A	The provisions of this SEPP relate to cattle feed lot proposals.
SEPP No. 32	Urban Consolidation (Redevelopment of Urban Land).	N/A	This policy does not apply to Camden LGA. This SEPP only applies to urban land.
SEPP No. 33	Hazardous and Offensive Development.	N/A	
SEPP No. 36	Manufactured Home Estates.	N/A	
SEPP No. 39	Spit Island Bird Habitat.	N/A	This policy does not apply to Camden LGA.
SEPP No. 44	Koala Habitat Protection.	N/A	This policy does not apply to Camden LGA.
SEPP No. 47	Moore Park Showground.	N/A	This policy does not apply to Camden LGA.
SEPP No. 50	Canal Estate Development.	N/A	This policy does not apply to Camden LGA.
SEPP No. 52	Farm Dams and Other Works in Land and Water Management Plan Areas.	N/A	This SEPP relates to artificial water bodies.
SEPP No. 55	Remediation of Land	Yes	The site is deemed suitable for the proposed development according to the Phase 1 Land Capability study prepared, see attachment H. The site will be subject to

			Phase 2 Land Capability assessment post gateway.
SEPP No. 59	Central Western Sydney Economic and Employment Area.	NA	This policy does not apply in Camden LGA.
SEPP No. 62	Sustainable Aquaculture	N/A	
SEPP No. 64	Advertising and Signage.	Yes	Any subsequent development applications must be compliant with these provisions
SEPP No. 65	Design quality of residential flat development.	N/A	
SEPP No. 70	Affordable housing (revised schemes).	N/A	This policy does not apply in Camden LGA.
SEPP No. 71	Coastal Protection.	N/A	This policy does not apply in Camden LGA.
SEPP 2009	Affordable Rental Housing	Yes	This SEPP is relevant to particular development categories. The Planning Proposal does not derogate or alter the application of the SEPP to future development
SEPP Index:	Building Sustainability BASIXs 2004	Yes	Any subsequent development applications will be compliant with these provisions
SEPP	Housing for Seniors or People with a Disability 2004	Yes	This SEPP is relevant to specific development that would be permitted under the Planning Proposal. Future development would need to comply with these provisions.
SEPP	Major Development 2005	N/A	
SEPP	(State and Regional Development) 2011	N/A	
SEPP	Development on Kurnell Peninsular 2005.	N/A	This policy does not apply in Camden LGA.
SEPP	Sydney Region Growth Centres 2006.	N/A	This policy does not apply to the subject site.
SEPP	Mining, Petroleum Production and Extractive Industries 2007.	Yes	The Planning Proposal does not derogate or alter the application of the SEPP to future development.
SEPP	Infrastructure 2007.	Yes	This SEPP is relevant to particular development categories. This Planning Proposal does not derogate or alter the application of the SEPP to future development.
SEPP	53 Transitional provisions 2011	N/A	
SEPP	Port Botany and Port Kembla 2013	N/A	This policy does not apply in Camden LGA
SEPP	Miscellaneous consent provisions 2007	Yes	This SEPP is relevant to particular development categories. The Planning Proposal does not derogate or alter the application of the SEPP to future development

SEPP	Penrith Lakes Schemes 1989	N/A	This policy does not apply in Camden LGA
SEPP	Kosciuszko National Park – Alpine Resort 2007.	N/A	This policy does not apply in Camden LGA.
SEPP	Rural Lands 2008.		This policy does not apply in Camden LGA.
SEPP	Exempt and complying code 2008	Yes	This SEPP is relevant to particular development categories. The Planning Proposal does not derogate or alter the application of the SEPP to future development.
SEPP	Sydney Drinking Water Catchment 2011	N/A	This policy does not apply in Camden LGA.
SEPP	(Urban Renewal) 2010	NA	
SEPP	Western Sydney Parklands	N/A	This policy does not apply in Camden LGA.
SEPP	(Western Sydney Employment Area) 2009	N/A	This policy does not apply in Camden LGA.
Deemed SEPPS (former Regional Plans)			
SREP 20	Hawkesbury Nepean River	Yes	The Planning Proposal is unlikely to alter or impact adversely upon the water quality and quantity within the Hawkesbury- Nepean river catchment.
Greater Georges River Catchment Metropolitan REP No.2		N/A	

Table 2: Consistency against State Environmental Planning Policies.

Is the planning proposal consistent with applicable Ministerial Directions (s.117 directions)?

The following table outlines the Ministerial Directions under Section 117 of the EP&A Act and their relevance to the Planning Proposal:

Ministerial Direction	Compliance	Comment
1. Employment and Resources		
1.1 Business and Industrial Zones	N/A	
1.2 Rural Zones	No	The Planning Proposal is inconsistent with this Objective. The Planning Proposal proposed to rezone the land from RU1 - Primary Production and R5 - Large Lot Residential to R5 Large Lot Residential. The portion of RU1 proposed for large lot residential is inconsistent with this direction. Notwithstanding this, the proposal is considered acceptable for the following reasons:

		- The site neighbours land that is zoned R5 large lot residential. The subject site previously had a odour buffer imposed which restricted further development. The proposed development is now consistent with the revised odour impact and is compatible with adjoining development. - The site is relatively small by agricultural standards at 5.6ha.
1.3 Mining, Petroleum Production and Extractive Industries	Yes	Camden LGA has areas which are impacted by mining however the subject site is not located within one of these areas.
1.4 Oyster Aquaculture	N/A	
1.5 Rural Lands	N/A	The direction does not apply to Camden LGA
2. Environment and Heritage		
2.1 Environment Protection Zones	Yes	The proposal does not propose the removal or introduction of EPZ.
2.2 Coastal Protection	N/A	
2.3 Heritage Conservation	N/A	There are no known heritage items on the subject land.
2.4 Recreation Vehicle Areas	N/A	No recreation vehicle areas proposed.
3. Housing, Infrastructure and Urban Development		
3.1 Residential Zones	Yes	The proposed R5 zone permits rural residential development that is compatible with lands adjoining the site. The site is relatively unconstrained in terms of vegetation and riparian corridors. The revised odour impact and support from Sydney Water confirms the suitability of the site to include residential development. The proposed W – 4000sqm minimum lot size is consistent with the zone objectives of R5 – Large lot residential and the proposed Z2 – 4ha minimum lot size will limit the opportunity for additional residential lots to comply with the odour restriction. The site is considered to be consistent with this direction as the rezoning would encourage and facilitate housing to satisfy future

		needs on what will be a well serviced and located site.
3.2 Caravan Parks and Manufactured Home Estates	N/A	
3.3 Home Occupations	Yes	The proposal will not impact on this outcome from being achieved.
3.4 Integrating Land Use and Transport	Yes	The Planning Proposal is considered to be consistent with this Direction through: • The proposal will provide housing in a location that is serviced by an existing bus route. • Pedestrian and cycleway connections are provided directly adjoining the development.
3.5 Development Near Licensed Aerodromes	Yes	The proposal does not propose to introduce buildings of a height that would impact navigation to any airport. The Camden Airport masterplan indicates the current ANEF maps; which shows the subject site is not impacted,
3.6 Shooting Ranges	N/A	
4. Hazard and Risk		
4.1 Acid Sulphate Soils	N/A	This site is unlikely to be affected by Acid Sulphate Soils. Determinative advice will be provided with the development application.
4.2 Mine Subsidence and Unstable Land	N/A	Camden LGA has areas which are impacted by mine subsidence however the subject site is not located within one of these areas.
4.3 Flood Prone Land	N/A	The site is not listed on Council's mapping system as being flood prone land.
4.4 Planning for Bushfire Protection	Yes	Parts of the site are identified as being bushfire prone. The Bushfire study prepared for this Planning Proposal states that appropriate bushfire protection measures can be provided on site to adequately meet this direction.
5. Regional Planning		
5.1 Implementation of Regional Strategies	N/A	
5.2 Sydney Drinking Water Catchments	N/A	
5.3 Farmland of State and	N/A	

Regional Significance on the NSW Far North Coast		
5.4 Commercial and Retail Development along the Pacific Highway, North Coast	N/A	
5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	N/A	
5.6 Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1)	N/A	
5.7 Central Coast (Revoked 10 July 2008. See amended Direction 5.1)	N/A	
5.8 Second Sydney Airport: Badgerys Creek	N/A	
6. Local Plan Marketing		
6.1 Approval and Referral Requirements	Yes	The proposal as submitted is consistent with the objectives of this direction.
6.2 Reserving Land for Public Purposes	Yes	The proposal as submitted is consistent with the objectives of this direction.
6.3 Site Specific Provisions	Yes	The proposal as submitted is consistent with the objectives of this direction.
7. Metropolitan Planning		
7.1 Implementation of the Metropolitan Plan for Sydney	Yes	The Planning Proposal is consistent with the relevant actions from the draft South West Subregional Strategy.

Table 3: Compliance with Ministerial Directions

6.3 Section C - Environmental, Social and Economic Impact

Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The majority of the site is currently cleared grassland. The site slopes down towards the eastern boundary. It is considered that there are no critical habitats or threatened species located on the site which would be impacted by the proposal. In addition the site is not identified on Council's Environmentally Sensitive Lands map.

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

The site is not flood prone.

There are minimal environmental effects as a consequence of the planning proposal as the site is essentially cleared grassland. A bushfire assessment has been prepared which shows that bushfire can be appropriately managed (Appendix E).

When a development application is lodged for subdivision, opportunity will be provided for visual screening of the WRP through the development of an appropriate landscape plan.

In this regard any environmental hazards that impact the site are manageable and would not preclude consideration of a rezoning as proposed.

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

Social Effects

The Planning Proposal will allow the opportunity for development that is compatible with adjoining lands. It will allow the redevelopment of the site to accommodate 4 additional large residential lots. This will place a minor demand on existing social infrastructure and open space. The immediate locality is well serviced with open space facilities.

The provision of additional residential lots is a potential positive impact for the community as it provides housing choice and diversity.

Economic Effects

The size and nature of the proposed lots is compatible to surrounding development for which there is a proven market in Camden. Continuing this trend provides dual benefits including the potential for economic incentives, for local trade contractors engaged in building, landscape and vegetation management.

6.4 Section D - State and Commonwealth Interests

Is there adequate public infrastructure for the planning proposal?

The site is accessed indirectly via Werombi Road, which provides adequate access to service the proposed residential use.

The Planning Proposal will facilitate the redevelopment of the site to accommodate 4 additional large residential lots. This would place a minor demand on existing public infrastructure and recreational facilities.

Adequate sewer facilities are available on site. If necessary, some augmentation of existing facilities may be required and this can be adequately addressed as the site is developed.

What are the views of State and Commonwealth Public Authorities consulted in accordance with the Gateway determination, and have they resulted in any variations to the planning proposal?

Sydney Water has been notified of the Planning Proposal as the site is adjoining the Camden WRP. Their correspondence can be obtained at Appendix C. Sydney Water will be notified again during the public exhibition period.

Consultation with other Public Authorities will proceed in accordance with the gateway determination.

7.0 MAPPING

The following maps will need to be amended:

- Land Zoning Map No 004 to show R5 - Large Lot Residential
- Lot Size Map No 004 to show Z2 – 4ha and W – 4000sqm

8.0 DETAILS OF COMMUNITY CONSULTATION

The draft Planning Proposal recommends that the proposal be exhibited for a 28 day period in accordance with the provisions of the Environment Planning and Assessment Act 1979 and Regulations. During this time the community including affected and adjoining landowners will be invited to make a submission.

9.0 PROJECT TIMELINE

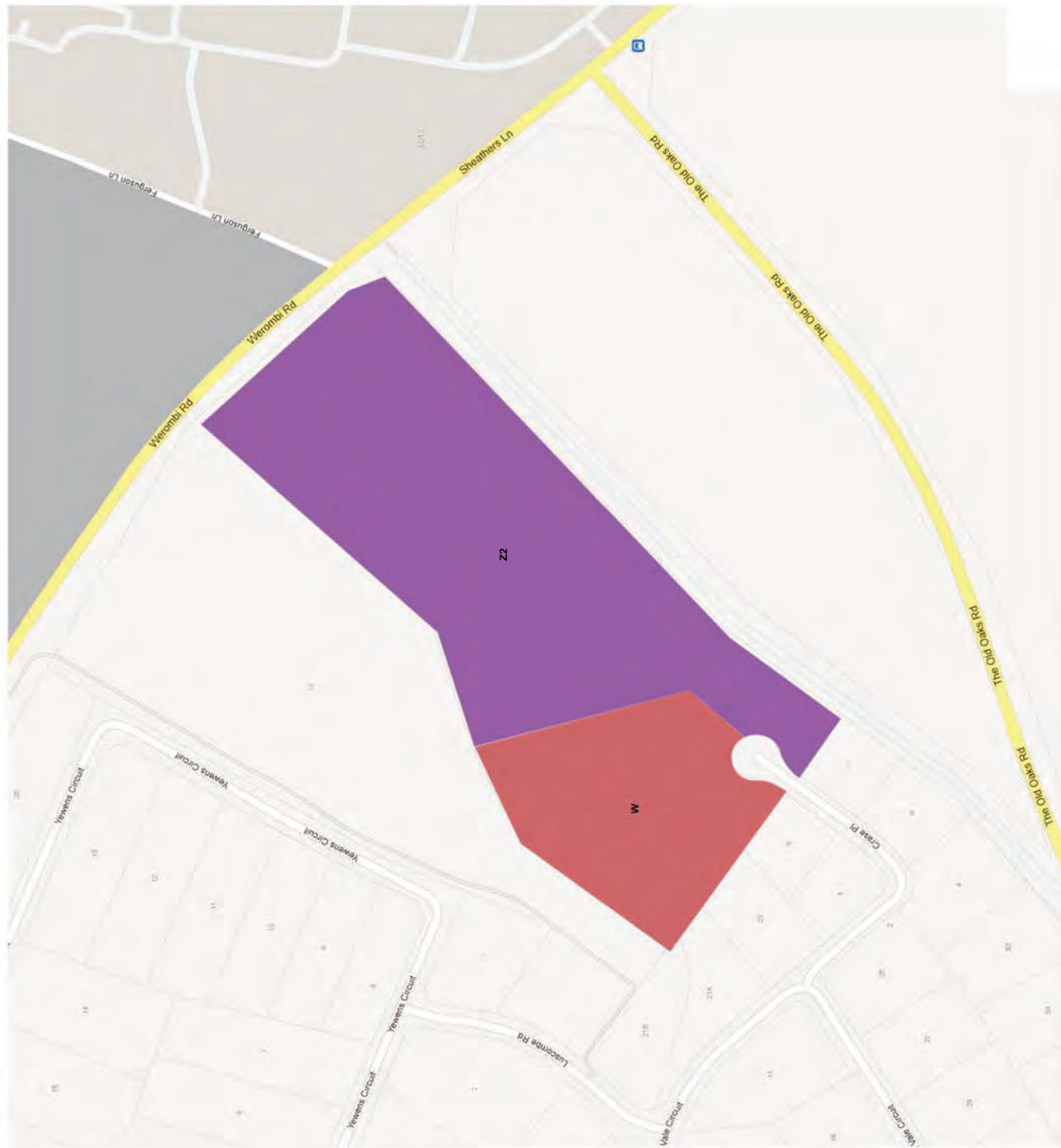
It is recommended that the timeframe for this Planning Proposal be 12 months. This will allow underpinning studies to be completed, assessed internally and for a public exhibition period.

Anticipated commencement date (date of Gateway determination)	June 2014
Anticipated timeframe for the completion of required technical information	August 2014
Timeframe for government agency consultation (pre and post exhibition as required by Gateway determination)	August 2014
Commencement and completion dates for public exhibition period	September 2014
Dates for public hearing (if required)	N/A
Timeframe for consideration of submissions	TBA
Timeframe for the consideration of a proposal post exhibition	TBA
Date of submission to the department to finalise the LEP	TBA
Anticipated date RPA will make the plan (if delegated)	TBA
Anticipated date RPA will forward to the department for notification	TBA

APPENDIX

APPENDIX A

Proposed Zoning and Minimum Lot Size provisions



LEGEND

W 4000m²

min 4ha



APPENDIX B

Correspondence from Sydney Water

APPENDIX C

Interaction with Sydney Water

APPENDIX C

Summary Timeline of Events

Date	Correspondence type	From	To	Conversation Content	Outcome	Actioned
1 Aug 2011	E-mail	Clive Hughes	Camden Council	Seeking relaxation of Council's odour limit - noting that it was imposed by Council and not Sydney Water which would allow a more logical location of the building envelope rather than its current location which is limited in opportunity.	Chris Lator of Council waiting for Sydney Water representative to return	
8 Aug 2011	E-mail		Sydney Water Richard Schuil	Making enquiries regarding the blanket exclusion zone of 400m around STP with the emphasis on actual wind patterns.		
11 Aug 2011	Phone and confirming e-mail		Sydney Water Rodney MacKenzie	Confirming earlier conversation that the site is due west of the STP and that the prevailing winds are south to north and therefor the site is not in the prevalent direction of winds arising from the STPmay result in a reduction of the odour zone	Confirmed receipt of e-mail	
21 Nov 2011	E-mail		Sydney Water Cassandra Loughlin	Following up on the relaxation of the odour exclusion zone. Advice offered that : - Upgrades to the STP occurred in 2009/10 and further upgrades are scheduled for 2012. - REF for the 2012 upgrade shows that the plume does not touch the subject site. - From 1999 to 2010 5 odour complaints were received and these were during periods when major upgrade works were proposed (Pg 53 of REF West Camden Water Recycling Plant Biosolids Treatment Upgrade and Amplification). - If a house were built within the (currently) identified building envelope, then this will impact on the view corridor to the nature reserve for all three property owners. - Any dwelling should be closer to the ridgeline on the south eastern border next to the now defunct Old Oaks Road.	24 Nov 2011 (CL) Sydney Water - the current approach is to use a combination of odour mitigation techniques and compatible landuses. SW will meet with Council to discuss SW approach to development proposals so that a consistent response is developed. When meeting is held with Council then the proposal will be discussed.	Meeting held with CL on 12 th December 2011
23 Jan 2012	E-mail	Cassandra Loughlin Sydney Water	Clive Hughes	Confirms the reviewed approach of managing impact of odour emissions ie mitigation works associated with compatible landuses. This approach is consistent with OEH guidelines and DPI. OEH – Assessment and management of odour from stationary sources in NSW: technical framework: http://www.environment.nsw.gov.au/air/odour.htm. DPI draft NSW Best Practice Odour Guidelines. Subject to further assessment, the building zone could be relocated to the suggested site however there is unlikely to be any support, at this stage, for rezoning or subdivision of the property.		
4 June 2012	E-mail	Clive Hughes	Sydney Water Cassandra Loughlin	Seeking a meeting with CL and Rod Mackenzie with regard to an alternate building envelope as it provides best views and privacy from other houses on the southern boundary. Rational is based on the e-mail of 21 November 2011. Opportunity to actively monitor odour risk would be to plant a 25m to 30m corridor of mixed aromatic natives providing a wind (odour) break and a visual separation between the source and the site.	Cassandra has left the section that works on developments near treatment plants and Rod has left Sydney Water. The matter has been forwarded to David Demer (on leave). The matter has been referred to Engineering and Environmental Services Group to provide advice/comments	
???	E-mail	Sydney Water David Demer	Clive Hughes	The required buffer from the STP is based on the 2 Odour Unit (2OU) contour and Sydney Water will only support compatible land uses such as industrial or farming. The position of the proposed building appears to be outside the 2OU contour boundary. If an application is lodged with Camden Council for development, then Sydney Water would make comment then.		
20 Aug 2012	E-mail	Sydney Water David Demer	Clive Hughes	Selected advice from an internal board paper.		

				Confirms that a strategy is being implemented to manage odour emissions from wastewater treatment plants through: 1. Odour mitigation works. Sydney Water is proactively managing odour emissions at our treatment plants by: ▪ implementing an Odour Management Strategy to address nuisance odours. ▪ reviewing actual and potential odour impacts from treatment plants on an ongoing basis. ▪ planning and implementing odour mitigation works to meet staging of future residential development. Sydney Water has a program of odour mitigation works to address the current impact of odour at our treatment plants. However, any odour mitigation works to accommodate urban growth will be funded by the benefiting developers. 2. Compatible land uses. To complement the odour mitigation works, Sydney Water will work with planning authorities to negotiate compatible land uses on land around treatment plants. This approach: • minimises costs to the community while accommodating population growth. • allows land to be used to its highest potential. Sydney Water's approach to managing odour emissions from wastewater treatment plants is consistent with the draft <i>NSW Best Practice Odour Guidelines</i> and the <i>Technical Framework: Assessment and Management of Odour from Stationary Sources</i>. The Framework is attached and the link to the Guideline is at: http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=a7HL_ZuG64o%3D&tabid=299&language=en-US		
21 st December 2013	Letter	Sydney Water	Clive Hughes	Acknowledges there is a revised odour contour however future upgrades the plant in the future, and the land use being proposed, may lead to future conflicts and therefore Sydney Water does not support subdivision of the site.		
24 th January 2013	Meeting			Outcome of the meeting with Sydney Water representatives (David Demer, Louisa Vorreiter and Adrian Miller) is that Siteplus will prepare alternate plans which show the housing in an alternative location. It was noted that odour flows downhill and tends to 'pool'. When alternative ideas are prepared, another meeting will be sought with Sydney Water to show an alternate option.		
21 st May 2013	Letter	Sydney Water	Clive Hughes	Advice provided by Sydney Water that it is satisfied that development can occur within the 400m contour and outside the 200m contour on the subject property on the basis that the dwellings are located no closer than 300m to the treatment plant. A copy of the plans and the advice is located in Appendix B of this document.		

APPENDIX D

Indicative Subdivision Layout



AERIAL
NTS

LEGEND



planning engineering landscape design management

100% PLANNING
IN THE PLANNING
PROCESS
Working with the Council
to ensure the project
meets all requirements
and is approved for
development.
100% PLANNING
IN THE PLANNING
PROCESS
Working with the Council
to ensure the project
meets all requirements
and is approved for
development.

REVISIONS

issue	issue date	issue description	des	dwn	app
G	08.01.14	Plan Adjustment as per Council's request- Lot Sizes	VM	EM	VM
F	26.11.13	Readjusted boundary layout	VM	EM	VM
E	30.10.13	Readjustment to indicative landscape and dwelling placement	VM	EM	VM
D	10.10.13	Inclusion of bushfire attack level info	VM	EM	VM
C	20.09.13	Adjusted plan to Sydney Water	VM	EM	VM
B	12.02.13	Plan Developed for Sydney Water	VM	EM	VM
A	17.05.13		VM	EM	VM



scale
AS SHOWN
AT A1
date
14.09.12

project
YEWENS ESTATE
GRASMERE

dwg title
AERIAL
PROJECT SITE

client
COWBRIDGE HOLDINGS PTY LTD
dwg no.
PM05/06
project no.
12/134

APPENDIX E

Bushfire Assessment

BUSHFIRE HAZARD ASSESSMENT FOR PROPOSED
REZONING OF 10 CRASE PLACE, GRASMERE

LOT 24 DP: 1086823

LGA: CAMDEN

OWNER: CLIVE HUGHES

PROJECT MANAGER: SITE PLUS PTY LTD

29 October 2013

Our ref: 995bf



Phone: (02) 4236 0954 Fax: (02) 4236 1410 Mobile: 0425 335 245 ABN: 6156 3609 153
Email: sean@harrisenvironmental.com.au Postal Address: PO Box 13, Wollaby Hill Rd, Jamberoo NSW 2533



HARRIS ENVIRONMENTAL CONSULTING:

FPA Business Certification number: BPD-BD-26927

ABN 6156 3609 153

ASSESSOR & QUALIFICATIONS

A handwritten signature in black ink that reads 'Kate Harris'.

Katherine Harris

BPAD – D Certified Practitioner: BPAD-D BPD-PD-26927
Grad Dip Bush Fire Protection, UWS
Grad Dip Enviro Mang (Herts, UK), Grad Dip Nat Res (UNE)
Bsc App Sc, Agriculture (HAC)

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SUMMARY

This Bushfire Hazard Assessment was prepared for the proposed rezoning of Lot 24 in DP 1086823, which is located on bushfire prone land.

This assessment outlines how compliance with Planning for Bushfire Protection (2006) can be achieved to assist in further subdivision design. It identifies the land which meets BAL 12.5 construction and APZ requirements, the key constraints and the general bushfire protection measures required.

Site specific bushfire protection measures are not provided at this stage although this assessment can be used to inform subsequent stages in the development assessment process.

1. INTRODUCTION

This Bushfire Assessment Report has been prepared by Harris Environmental Consulting for the proposed rezoning of Lot 24 DP 1086823, at 10 Crase Pl, Grasmere. This assessment is based on a site assessment carried out on the 23 September 2013.

This assessment has been prepared with all reasonable skill, care and diligence. The writers of this report recognizes the fact that no property and lives can be guaranteed to survive a bushfire attack and this proposal examines ways the risk can be reduced through consideration of the following legislation:

1. *Rural Fires Act 1997*;
2. *Environmental Planning and Assessment Act 1997*;
3. Building Code of Australia;
4. NSW Rural Fires Services, *Planning for Bushfire Protection*, 2006;
5. Australian Standard AS3959-2009 Construction of buildings in bushfire-prone areas.

Harris Environmental Consulting accepts no responsibility to third parties who use this report or part thereof. This assessment was undertaken using the terms of contract between Site Plus Pty Ltd and Harris Environmental Consulting. The authors allow the intellectual property within the assessment to be used, with the date of assessment acknowledged, and copyright will not be breached.

2. ASSESSMENT CRITERIA

This assessment addresses the bushfire protection requirements of Section 117 Direction 4.4 of *Environmental Planning and Assessment Act 1979*. It applies the Planning Principles for Rezoning to Residential Land in Bushfire Prone Areas from *Planning for Bushfire Protection* 2006 (PBP).

The Planning Principles for Rezoning to Residential Land in Bushfire Prone Areas are applied to the proposed development. These planning principles are listed on page 4 of the *Planning for Bushfire Protection Guidelines*, (NSW Rural Fire Service, 2006). This includes:

- a) **Access**; does the site have provision for a perimeter road with two way access which delineates the extent of the intended development?
- b) **Asset Protection Zones**; does the development have provision at the urban bushland interface for the establishment of adequate asset protection zones for future housing?
- c) **Minimum lot depths**; what will be the minimum residential lot depth to accommodate asset protection zones for lots on perimeter roads?
- d) **Perimeter exposed to hazard**; does the development minimise the area of developed land interfacing the hazard?
- e) **Inappropriate development in hazardous areas**; are there any site specific controls needed to address development or placement of combustible materials?

- f) **Inappropriate placement of combustible materials in asset protection zones;** are there any site specific controls needed to prevent the inappropriate placement of combustible materials in asset protection zones?

3. SITE LOCATION AND PROPOSAL

3.1 Location

The general location is shown on Figure 1 and a broad scale aerial photograph is shown in Figure 2. Figure 3 provides a street map.

The subject site (Lot 24 DP 1086823) is located approximately 2 kilometres west of Camden and is accessed off Harben Vale Circuit. The whole south eastern boundary adjoins The Old Oaks Road. The north eastern boundary adjoins Werombi Road. The Camden Sewerage Treatment Plant is located on the other side of Werombi Road directly north east of the site. The northern boundary adjoins a series of water storage dams.

Figure 1 Location of property



Figure 2 Broadscale view of property location



Figure 3 Street map of subject site



3.2 Proposal

Lot 24, DP 1086823 is currently zoned RU1 Rural Landscape under the current Camden Local Environment Plan, and is proposed to be rezoned to R5 - Large Lot Residential. Indicative house lot layouts are identified in Figure 4 below to show how the proposal can comply with bushfire protection requirements. Final details of landscaping and boundaries will be determined when a DA is lodged.

Figure 4 Proposal



4. SITE DESCRIPTION

4.1 Mapped Bushfire Prone Land

The Camden Council map of Bushfire Prone Land (Figure 5) shows a small fraction of the property is mapped as Bushfire Prone Land. The mapped area is in the north east corner. However the site is located on grassland and the adjacent nature strip would be considered Bushfire Prone regardless of whether or not it has been mapped.

Figure 5 Bushfire Prone Land



4.2 Terrain

The subject lot faces the north west. The landform is undulating and slopes gently down towards the drainage line and three large water supply dams on the north westerly boundary. The house sites will be located on land close to the cul-de-sac on the south western side of the subject lot. See Figure 4.

4.3 Vegetation

Figure 6 shows the bushfire prone land within 100m of the area identified suitable for dwellings. The dominant vegetation formation is characterised as grassland. The only trees near to the site are located within the nature strip where the creek and water supply dams are, as shown in Photo 1. There is also a bike track within this riparian corridor. For bushfire assessment purposes, the trees in the riparian corridor are considered "Rainforest", as the total width measures approximately 40m and the PBP 2006 page 52, allows "*Riparian areas are those areas of vegetation which are no greater than 20m in width and are found on either bank of a river, creek or stream identified on a bush fire prone land map and treated the same as rainforest*". These trees are still juvenile as shown in Photo 2.

Photo 1 View of grassland and riparian corridor on north western elevation



Figure 6 Vegetation Formations within 100m of land identified as suitable for house sites

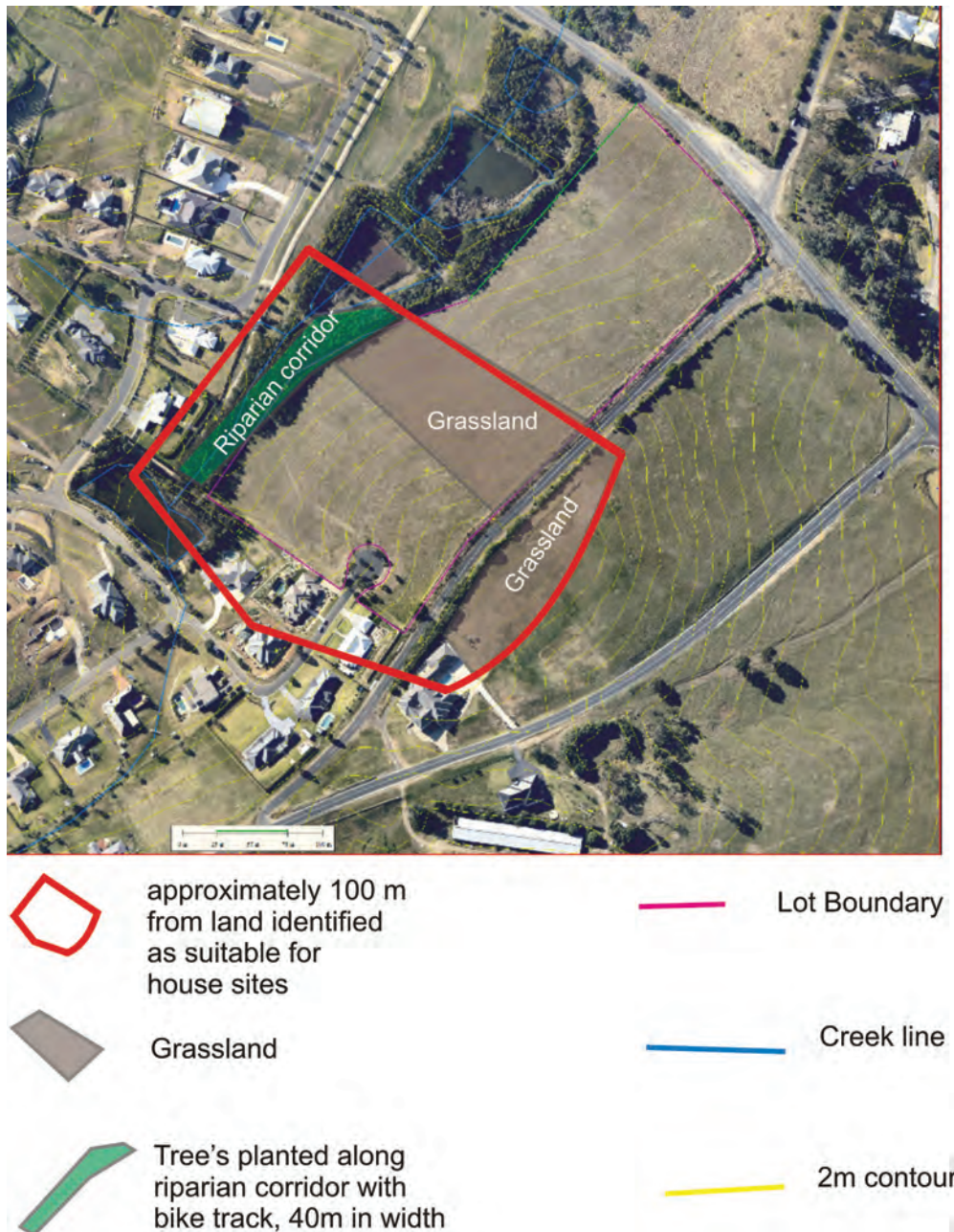


Photo 2 View of tree planting in riparian corridor and bike track



5. BUSHFIRE HAZARD ASSESSMENT

5.1 Methodology

A number of related factors determine the nature of the bushfire hazard. These are slope, vegetation type, distance from hazard, access and the regions fire rating index. The Fire Rating Index is determined by the NSW RFS for fire areas and council areas across NSW and assumed for a 1 in 50 year event (Table A2.3, RFS 2006). Camden LGA has an **FDI rating of 100** for a 1 in 50 year event.

Each of these factors has been considered in this assessment.

The assessment of the slopes and vegetation was carried out in accordance with the RFS Guidelines Planning for Bushfire Protection (2006), Appendix II and AS 3959:2009, Section 2.

5.2 Slope Assessment

The effective “slope” is the slope under the vegetation posing the bushfire threat. As fires travel slower down a hill, AS3959:2009 classifies all upslope as “flat”.

For this assessment, the slopes that would most significantly influence fire behavior were determined over a distance of 100m from the proposed development. This assessment was undertaken using a digital contour map with 2 metre contour intervals and assessed in the field, using a hand held clinometer.

Table 1 summarises the identified effective slope in accordance with the PBP (2006) to a distance of 100m.

Table 1 Slope and direction

NORTH	SOUTH	EAST	WEST
Downslope 5-10 degrees	Upslope/Level	Upslope	Downslope 5-10 degrees

The subject lot is located on an undulating side slope with a north westerly orientation. This assessment found that the slope influencing bushfire behavior on the north west falls into the PBP (2006) category of “downslope 5-10 degrees”. Photo 3 shows the downslope looking directly west from proposed indicative dwelling footprints. The east and south elevations falls into the PBP (2006) category of level/upslope. Photo 4 shows the upslope looking east from indicative dwelling footprints.

Photo 3 View looking west



Photo 4 View looking east



5.3 Defendable space/Asset Protection Zone

The Asset Protection Zone (APZ) provides a defendable space between the asset and the hazard. This ensures minimal separation for safe fire-fighting, reduced radiant heat, reduced embers and smoke.

The primary purpose of the APZ assessment is to determine a compliant (APZ required by Acceptable Solutions within Table A2.4 AS 3959-2009) location for building envelopes.

The building construction standard is based on the determination of the Bushfire Attack Level (BAL) in accordance with AS 3959:2009 'Construction of Buildings in Bushfire Prone Areas'. The BAL is based on known vegetation type (AS3959 – vegetation), effective slope and managed separation distance between the development and the bushfire hazard.

It is assumed that the highest bushfire attack level construction standard will be BAL 12.5. The following describes the BAL setbacks for each elevation:

North West: the BAL 12.5 setback is located 36m from the downslope 5-10 degree "rainforest";

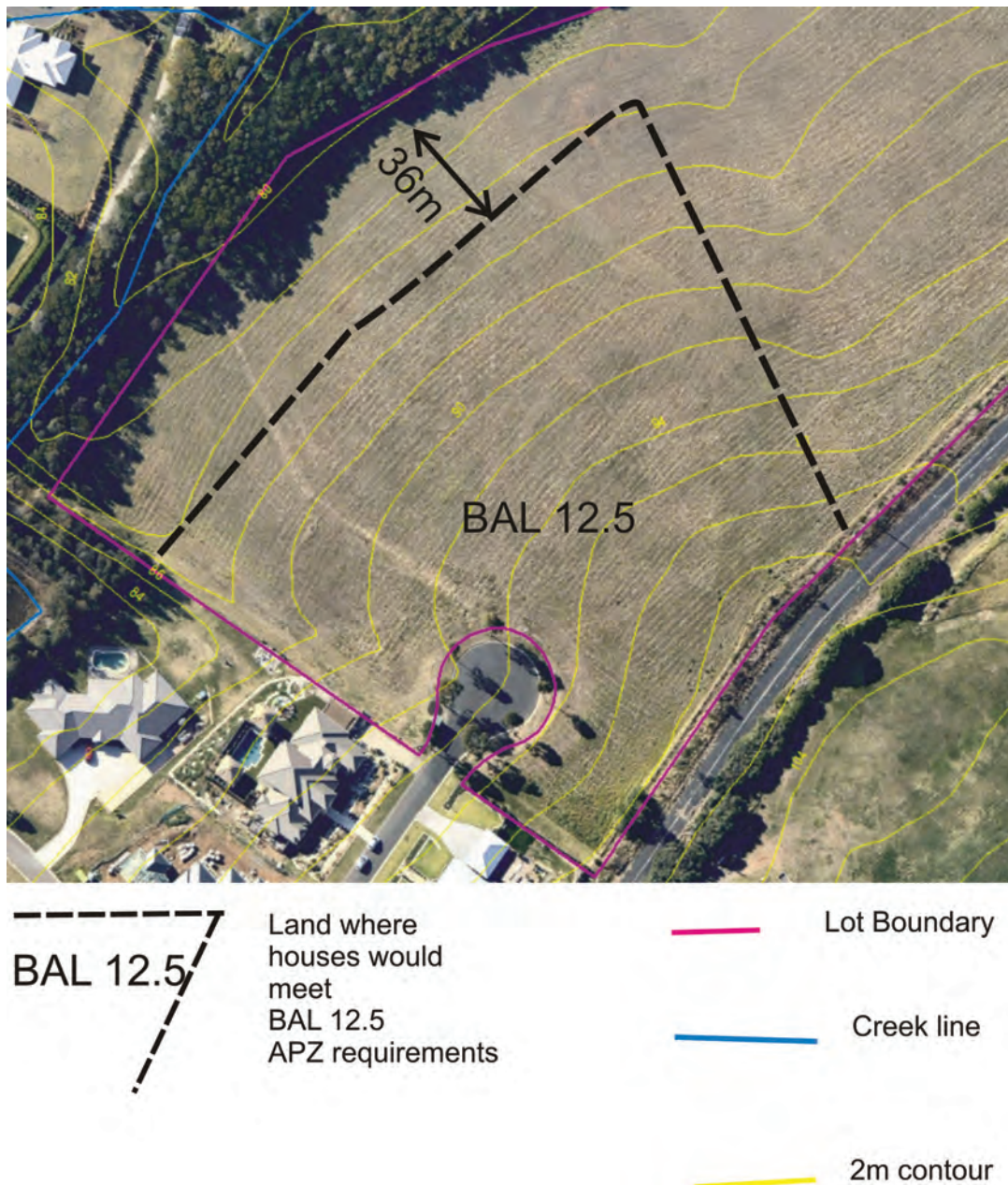
North East: the BAL 12.5 Setback is located along the 300m buffer line and assumes the grassland on the other side of this land could be "managed" as part of a APZ;

South West: Managed lands so no setback required;

South East: The Old Oaks Road provides an adequate buffer to the "Grassland" so no setback required.

Figure 7 shows BAL 12.5 APZ setbacks of land for the land identified as suitable for housing “

Figure 7 APZ Requirements of indicative dwelling footprints



5.4 Access

The proposed lots are all within 40m from an existing sealed 2-way public road.

5.5 Inappropriate Development in Hazardous Areas

Site specific controls will be required to address the development or placement of combustible materials within the building setbacks that is part of the APZ for lots. This will be based on the Bushfire Protection Measures in Appendix 5 of PBP (RFS, 2006) which includes:

- Avoid planting trees species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopy.
- Avoid planting deciduous species that may increase fuel at surface/ground level by the fall of leaves.
- Avoid climbing species to walls and pergolas.
- Locate combustible materials such as woodchips/mulch, flammable fuel stores (LPG gas bottles) away from the building.
- Locate combustible structures such as garden sheds, pergolas and materials such as timber furniture away from the building.
- Ensure any vegetation planted around the house is a suitable distance away so these plants do not come into physical contact with the house as they mature.
- The property should be developed to incorporate suitable impervious area surrounding the house, including courtyards, paths and driveways.

5.6 Water Supply and Utility Services

Adequate supply of water is essential for firefighting purposes. In addition, gas and electricity should be located so as not to contribute to the risk of fire or impede the firefighting effort. Water, electricity and gas are to comply with section 4.1.3 of PBP (2006).

5.7 Building Construction

The Australian Standard AS3959:2009 Construction of building in bushfire prone areas provides the relevant construction requirements for buildings in bushfire prone land. The proposed lot layout provides building envelopes for construction standard of BAL12.5.

6. SUMMARY

Based upon an assessment of the plans and information received for the proposal, it is recommended that:

- The APZ setbacks identified in this assessment will be required as a condition of development. The consent authority is required to ensure that a mechanism is established to ensure the setback is enforced.
- Water, electricity and gas are to comply with Section 4.1.3 of PBP (2006).
- Landscaping is to be undertaken in accordance with Appendix 5 of PBP (2006) and managed and maintained in perpetuity.
- Standard of access is to comply with standards for PBP (2006) 4.1.3.

7. REFERENCES

Keith, D. (2004) "Ocean Shores to Desert Dunes" Department of Environment and Conservation, Sydney

NSW Rural Fire Service (2006) *Planning for Bushfire Protection. A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners.*

NSW Rural Fire Service Standards for asset protection zones. Can be accessed from www.rfs.nsw.gov.au

Standards Australia (2009) *AS3959, Construction of buildings in bushfire-prone areas.*

Appendix I Methodology and process used to determine APZ

The PBP (2006) provides a methodology to determine the Asset Protection Zone required for residential dwellings. In addition, the Australian standard AS3959-2009 determines the appropriate setback for construction level BAL 29.

The following process was taken to assess the APZ required for this zoning proposal.

Determine vegetation formations

The PBP (2006) requires the assessment to:

(a) Determine vegetation formations:

- I. Identify vegetation within 140 metres in all directions;*
- II. Consult Table A2.1 to determine the predominant vegetation type; and*
- III. Select the predominant vegetation formation as described in Table A2.1.*

The vegetation formations classified in Table A2.1 of Planning for Bushfire Protection 2006 that could be included in Bushfire Prone Land area:

- Forest (wet and dry sclerophyll)
- Woodland
- Plantations (pine only)
- Forested wetlands
- Tall heaths
- Freshwater heaths
- Short heaths
- Alpine complex
- Semi-arid woodlands; and
- Rainforest.

However, Bushfire Prone Land does not include:

- a) Vegetation less than 1 ha, or a shape that provides a potential fire run to building of less than 50m is considered remnant vegetation, which is considered a low hazard. The same APZ and construction standards applied to rainforest are applied to remnant vegetation;
- b) The following are not considered in the assessment:
 - non-vegetated areas including roads, footpaths, cycleways, waterways buildings, rocky outcrops etc; and
 - reduced vegetation including maintained lawns, golf course fairways, playgrounds or sports fields, vineyards, orchards, cultivated ornamental gardens and commercial nurseries.

For this site, the Eucalypt vegetation is found as open forest that is consistent with what is deemed to be **Forest**.

Determine effective slope

The effective slope represents the slope most likely to influence fire behavior. The effective slope between the proposed development site and forest, measured over 100m, is divided into two categories:

- 5-10 degrees
- 10-15 degrees.

The steeper slopes are closer to the development within the southern part of the development. This is because the development is closer to the Megarritys Creek.

Where a large part of the 100m transect included slopes in the 10-15 degree range, it was assumed this was the dominant slope to influence fire behaviour. The land assessed in the 5-10 degree category includes a smaller proportion of slope in the 10-15 degree category, so it was much less likely that this slope would influence fire behaviour.

Determine appropriate fire weather

The Fire Rating Index is determined by the NSW RFS for fire areas and council areas across NSW and assumed for a 1 in 50 year event (Table A2.3, RFS 2006). Wollondilly LGA has an **FDI rating of 100** for a 1 in 50 year event.

Determine appropriate setback

The required Asset Protection Zone setback is calculated using the following Table 2.4.2 from the AS 3959 2009.

Minimum specifications for Asset Protection Zones

Appendix II Definition of Asset Protection Zones

The following summary from RFS (2001) and RFS (2006) is intended to help the owner to understand how the Inner and Outer Protection Zones are to be maintained.

Inner Protection Zone (IPA)

The inner component of an asset protection zone, consisting of an area maintained to minimal fuel loads and comprising a combination of perimeter road, fire trail, rear yard or reserve, so that fire path is not created between the hazard and the building. An IPA should provide a tree canopy of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 metres from an exposed window or door. Trees should have lower limbs removed up to a height of 2 metres above the ground.

).

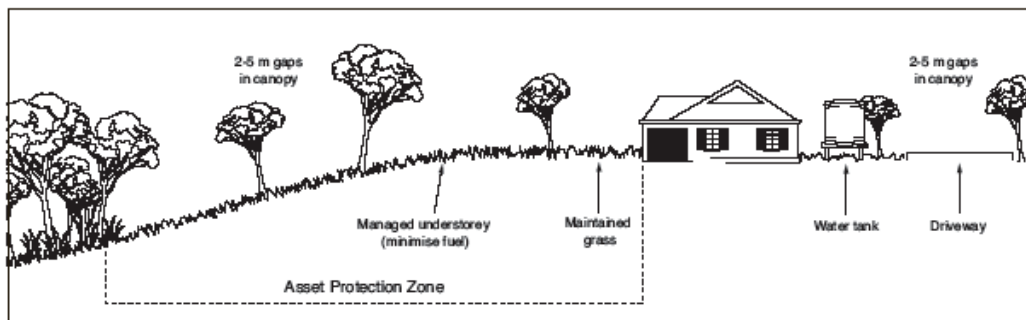


Figure A 2.1 Asset Protection Zone (setback) design

APPENDIX F

Sewer Augmentation Assessment



WorleyParsons

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24 January 2014

Ref: 301015-03400
File:

Site Plus Pty Ltd
2a Thomas Street
Wollongong NSW 2500

Attention Anne Trezise

Dear Anne

10 CRASE PLACE, GRASMERE (LOT 24 DP 1086823) SEWERAGE SERVICING INVESTIGATION

This letter outlines a preliminary sewerage servicing investigation prepared by WorleyParsons for the proposed residential development at 10 Crase Place, Grasmere (the property), also described as Lot 24 of DP 1086823.

The purpose of this letter is to provide advice to Site Plus Pty Ltd advising whether an appropriate sewerage servicing option is available for the indicative level of development. We understand that this advice will accompany a rezoning application for the property.

1. APPROACH

This sewerage servicing investigation has been developed and presented in the following phases:

- Review of background data and documentation;
- Confirmation of the proposed development layout and type;
- Review of existing sewerage infrastructure in the vicinity of the property, including an estimate of current sewer loading and total available capacity;
- Presentation of an indicative servicing option involving connection to a Sydney Water gravity sewer sewerage system that discharges to West Camden Water Recycling Plant (WRP).

2. SITE LOCATION

The subject property is located at the end of Crase Place, Grasmere in the Camden Local Government Area (LGA). The property is bound by Werombi Road to the north, The Old Oaks Road to the east, existing residential development to the south and an unnamed watercourse to the west. The West Camden WRP is located to the north-east of the site (refer to **Figure 1**).



Figure 1: Extent of the property at 10 Crase Place, Grasmere

(Image from <http://maps.six.nsw.gov.au/> (15/10/13))

3. PROPOSED DEVELOPMENT

Site Plus is currently preparing a rezoning application for the property to accommodate up to four low density residential dwellings outside the 300 metre odour control buffer for West Camden WRP. The indicative layout of these dwellings is shown below in **Figure 2**.



Figure 2: Indicative proposed development layout

Source: Site Plus



The indicative development layout presented in **Figure 2** has been derived from an iterative process. Following the upgrade of West Camden WRP, a layout had initially been prepared for Sydney Water that showed the 'odour boundary' could be adjusted. This odour boundary is currently a constraint on potential future development of the site. Sydney Water advised that they had no issue with the development of the site if it occurred beyond 300 metres of the boundary of the WRP. Sydney Water's response amends the odour buffer from 400 metres to 300 metres. This enabled the indicative development envisaged in **Figure 2** from which this investigation has been prepared.

4. EXISTING SEWERAGE INFRASTRUCTURE

The subject property is neighboured by an existing residential area, with subdivided lots connected to a gravity sewerage system that discharges to West Camden WRP. A review of Dial Before You Dig (DBYD) information has revealed that a DN150 PVC sewer main runs within the south-western boundary of the proposed property (as marked in **Attachment A**).

The sewer passes through the neighbouring residential area before draining to the West Camden WRP inlet works. The overall capacity of the existing gravity sewerage system that services the site and surrounding residential area is governed by a DN150 PVC concrete encased sewer, located about 300 metres north of 10 Crase Place, near Werombi Rd.

The details of this sewer main were obtained from Sydney Water's HYDRA asset database and analysed using the Sydney Water Sewerage Flow Schedule (September 2013 Edition). The grade of the sewer was found to be 1.13% with a maximum capacity of 16.5 L/s.

The grade of the sewer main immediately adjacent to the property was determined by comparing survey and DBYD data, and was found to vary between 12%-14%. At this grade the total capacity of the sewer main is found to be 53.91 L/s.

The results of the pipe capacity calculations are shown in **Table 1**.



Table 1: Comparison of sewer loadings

	No. of lots ¹	Design Flow (L/s) ²	EP ²	Max Design Flow (L/s) ³
Pre-Development (Existing) Conditions	90	12.32	315	16.5
Future Conditions (Existing + Proposed)	94	12.78	329	16.5

Notes:

- ¹ Estimated number of lots currently connected to sewer main, as shown on Sydney Water DBYD Map. The neighbouring residential area contains 90 residential lots including both developed and undeveloped sites. This analysis assumes that all lots have been developed.
- ² Equivalent Population, based on 3.5 EP per Lot as per WSA 02-2002-2.2 Table A1
- ³ Calculated using the Sydney Water Sewerage Flow Schedule (EP Calculations) (Updated September 2013)

As shown above, the existing loading falls is within capacity of the existing sewer.

Future Development

The addition of the four proposed dwellings presents a 3.7% increase in design flow. The total proposed loading on the sewer main in terms of design flow is 12.78 L/s, within the maximum of 16.5 L/s (approximately 80% of its maximum design flow).

The results of the calculations show that there is adequate capacity to cater for the four additional dwellings within the existing DN150 PVC sewer main, both in terms of design flow and EP.

5. PROPOSED SERVICING OPTION

A preliminary servicing option has been prepared by WorleyParsons and involves the installation of a DN150 gravity sewer to connect each dwelling to the existing sewer main. It shows that a gravity line be placed along the rear boundary of each property to maximise land use and connect to the existing sewer main with the property boundary, approximately 40 metres downstream of the existing sewer and maintenance hole. This indicative arrangement is shown in **Attachment A**.

We note that the indicative proposed layout shows the building envelope in close proximity to the existing maintenance hole within the boundary of Lot 1 (as shown in **Attachment A**) and the final placement / location of a dwelling should take this into consideration. It is likely that this dwelling will be subject to SWC building over or adjacent to sewer requirements, such as piling of dwelling



foundations and concrete encasement of the existing sewer. Access to this maintenance hole should be considered during the design of the proposed dwelling.

6. CONCLUSION

Following a desktop review of background documentation and an investigation of existing sewerage infrastructure capacity, we advise the following regarding sewerage servicing for the proposed development of 10 Crase Place, Grasmere:

- The existing sewerage system appears to have sufficient capacity DN150 PVC concrete encased sewer main, located approximately 300 metres north of the property, and is currently being used at approximately 80% of its estimated design flow capacity.
- There is adequate capacity in the existing sewerage infrastructure, including a sewer main to the south-west of the property, to accommodate the addition of the four proposed dwellings.

WorleyParsons would also like to bring the following points to Site Plus' attention:

- Proximity of the proposed indicative building envelope for Lot 1 in relation to the existing sewer and maintenance hole may be subject to "GUIDELINES FOR BUILDING OVER/ADJACENT TO SYDNEY WATER WATER AND WASTEWATER ASSETS"

7. DISCLAIMER

WorleyParsons has undertaken a desktop study of the overall catchment and has only assessed the key pipes in the existing sewerage system for rezoning purposes only. This report is not intended to provide any approval for connection to Sydney Water systems.

Only Sydney Water can provide approval for connection to the sewerage network.

The servicing option proposed is a concept only and may not be suitable for the final subdivision of the site. The property owner should apply to Sydney Water for a Section 73 Certificate following rezoning of the site and subsequent preparation of Development Application documentation. The developer will need to engage a Water Servicing Coordinator for the Section 73 certificate and to progress the approval, design and construction of an extension of Sydney Water's sewer system.



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We trust that this report meets your requirements. Please do not hesitate to contact the undersigned on (02) 8456 7263 should you require any further information or clarification of any issue.

Regards

Reviewed by

WorleyParsons

Tim MICHEL

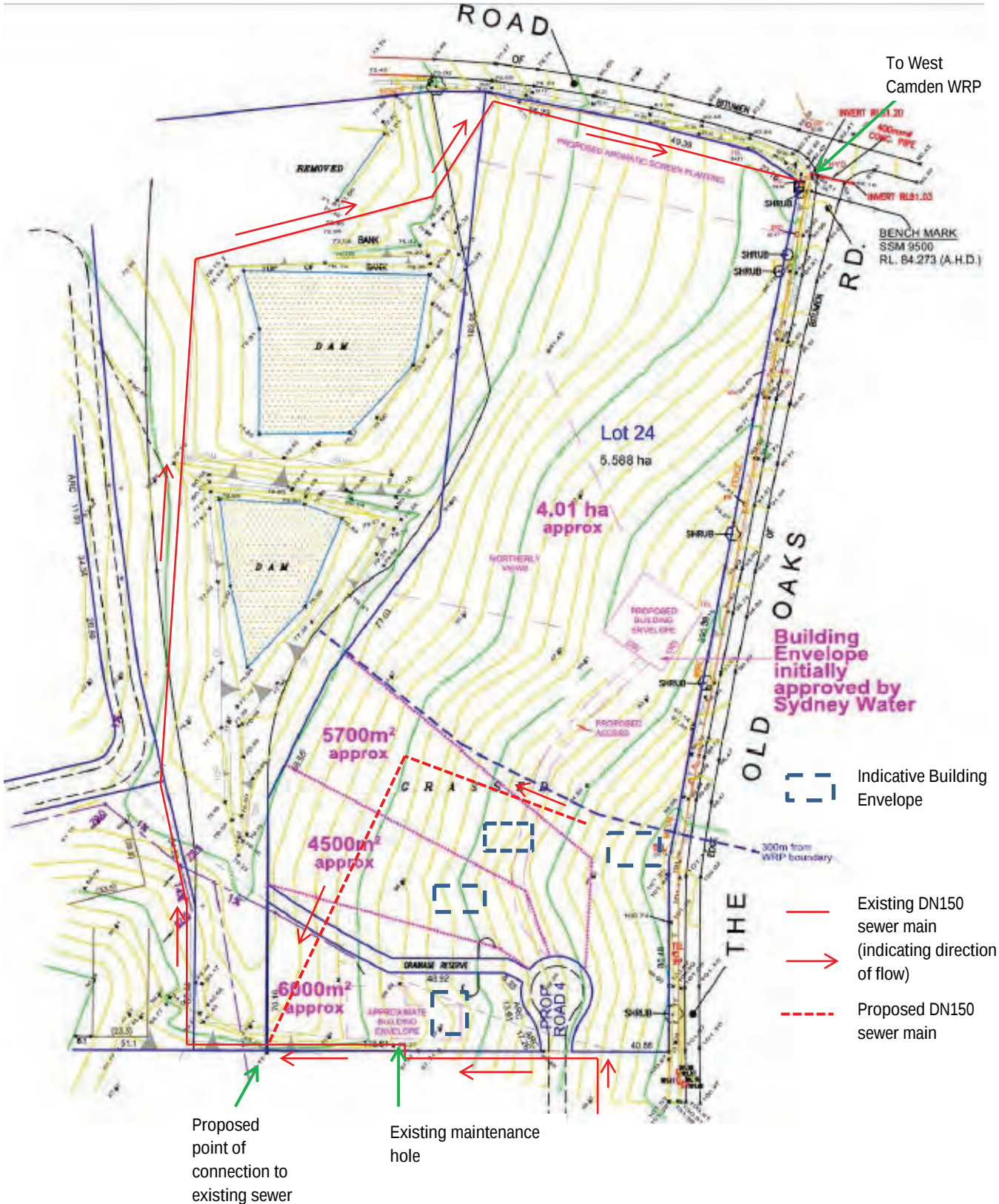
Engineer, Water and Environment

Warren BRAZEL

Senior Civil Engineer

Enclosed:

Attachment A Indicative layout of proposed development



APPENDIX G

Traffic Assessment

Cowbridge Holdings
Lot 24 DP 1086823 Crase Place, Grasmere
Traffic Report
Project No 12134 – November 2013



TRAFFIC REPORT FOR
PLANNING PROPOSAL
AT Lot 24 DP 1086823
Crase Place, Grasmere

Prepared For

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By

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ACN 104 315 095

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3.3 Existing Traffic.....	5
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FIGURES

FIGURE 2.1	Area Investigated for 2001 re-zoning proposal
FIGURE 3.1	Site Location
FIGURE 3.2	Indicative Subdivision Plan

APPENDICIES

APPENDIX A	Bus Route/ Timetable
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1.0 SUMMARY

This Traffic Report assesses the traffic impacts relating to a Planning Proposal to enable subdivision of the site into four residential allotments. The legal description of the site is Lot 24 DP 1086823.

Currently development of the site has been limited in part because the West Camden Water Recycling Plant (WRP) is located in close proximity to the subject site. This has resulted in an odour buffer of 400m applying to the site from the boundary of the WRP. Indicative plans have been developed, and have received Sydney Water's agreement, which shows that the location of the odour buffer can be adjusted if development occurs beyond 300m from the boundary of the WRP.

The Planning Proposal is to rezone the subject site from RU1 Primary Production to R5 Large Lot Residential. Whilst the site is currently vacant, the existing zoning boundaries allow the erection of one dwelling

In our opinion, the Planning Proposal to enable the subdivision of the site will have no impact on traffic generation or infrastructure requirements.

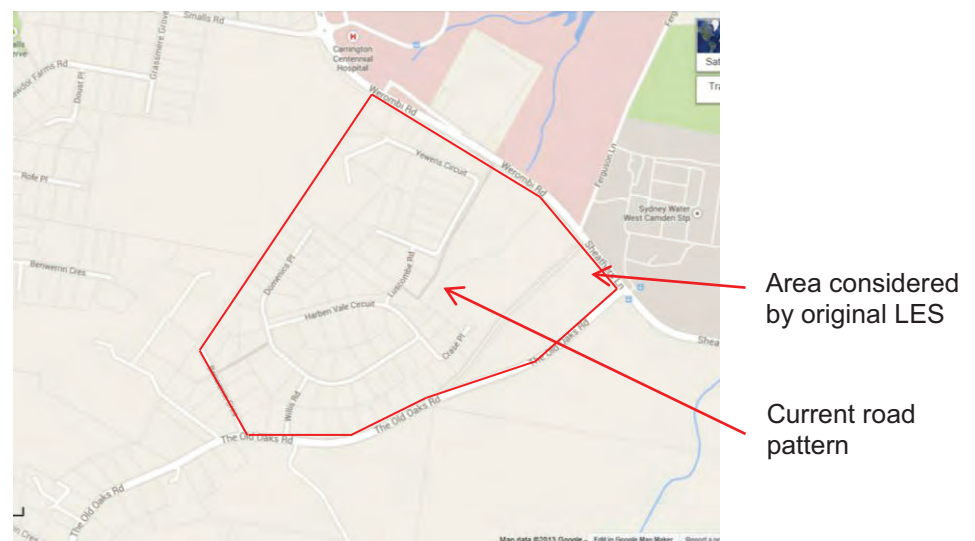
2.0 INTRODUCTION

In 2001 a Local Environmental Study (LES) was prepared by Planning Workshop Australia to support a rezoning of (five) 5 properties to permit residential zonings in Grasmere. The land area comprising these five properties in the LES is outlined in red in Figure 2.1. The Planning Proposal received support and the current road pattern is a result of the rezoning and re-subdivision of the site as shown in Figure 2.1.

To support the rezoning proposal, a range of studies were undertaken including a traffic report. One outcome of the traffic report's observations was that The Old Oaks Road was described as intersecting with Werombi Road at a T-junction. This (historic) T-junction was less than adequate for a 80km/hr as it was located within a cutting on a bend and on the crest of a hill. The road has been subsequently realigned so that it intersects with Sheathers Lane further to the east - this infrastructure work has been completed.

The subject site carries one dwelling entitlement.

Figure 2.1 Area Investigated for 2001 re-zoning proposal



2.1 Scope of Works

This report specifically considers the traffic impacts associated with a Planning Proposal to enable the creation of 4 lots on the subject site. In considering this assessment, it is noted that one dwelling entitlement currently exists on the site. The planning proposal to enable further subdivision of the site will create an additional 3 dwelling entitlements.

The intent of this assessment is to consider the traffic generation and capacity of the existing street system to accommodate rezoning of the site to enable additional subdivision of the site. The assessment builds on the original documentation provided in the 2001 LES.

3.0 TRAFFIC GENERATION

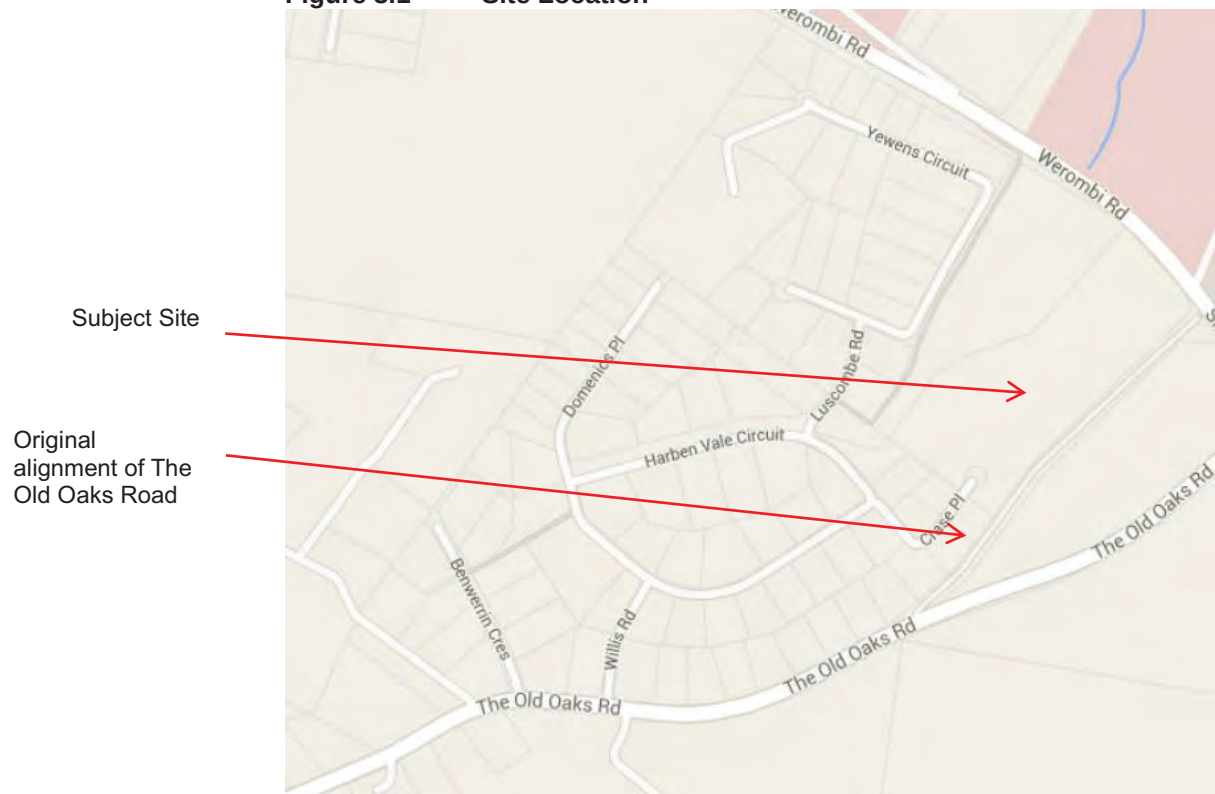
3.1 Locality

Werombi Road is classified as a 'collector' road and provides access to the West Camden Water Recycling Plant, the Carrington Aged Care and the Camden Farms, University of Sydney. This road has an approximate length of 16km from Cawdor Road in Camden to Silverdale Road, Werombi. It is a sealed, single lane road. Werombi Road provides the northern boundary of the site and there will be no access to the site from this road.

The Old Oaks Road is also a sealed, single lane road. A portion of this road has been realigned to accommodate the previous LES investigations. The Old Oaks Road intersects with Sheathers Lane further to the east.

The subject site is located at the end of a cul-de-sac which is indirectly accessed from The Old Oaks Road, Grasmere. It is accessed via Willis Road and Harben Vale Circuit. The location of the subject site within the local street system and the original alignment of The Old Oaks Road is shown in Figure 3.1.

Figure 3.1 Site Location



Source: www.google.com.au

3.2 Proposed Use

The report is prepared in response to a Planning Proposal to rezone the subject site to enable future subdivision of the site. Indicative plans showing the potential subdivision of the site into 4 lots is shown indicatively in Figure 3.2.

Development of the site is currently limited by an odour buffer boundary. The plans shown in Figure 3.2 have been derived from an iterative process. Initially plans had been prepared for Sydney Water following the upgrade of the WRP which showed the 'odour boundary' could be adjusted. Sydney Water advised they had no issue with the development of the site if development occurred beyond 300m of the boundary of the WRP. Sydney Water's response essentially amends the odour buffer from 400m to 300m. This enables the indicative development envisaged in Figure 3.2 from which all investigations have occurred.

Figure 3.2 Indicative Subdivision Plan



Source: Siteplus

3.3 Existing Traffic

Grassmere Estate is currently subdivided into ninety-four (94) lots and the subdivision pattern can be seen in Figure 3.1. Fourteen (14) of these lots have frontage to The Old Oakes Road or Benwerrin Crescent. The remaining eighty (80) lots use Willis Road to enter Grassmere Estate.

The LES prepared in 2001 estimated the number of lots that could be developed was 80. To determine the level of traffic generation, the original LES relied on a traffic survey undertaken by Camden Council for Ellis Lane. The survey showed that for the 157 dwellings which had direct access to Ellis Lane, approximately 1,350 vehicles were recorded on the weekday. This equated to the RTA's 'Guide to Traffic

Generating Developments' which gave a standard rate of 9 trips/day for urban areas.

On this basis, a range of 8.5-9 trips per day was adopted for the 2001 LES and translated to approximately 700 vehicle trips per day (vpd). It was considered that the existing road system would not be exceeded as there was ample spare capacity in the road system.

The capacity as the road system also took into account potential future development in the area including Ellis Lane and Grasmere. It was noted that much of the development occurring in the area would use Werombi Road to travel between Cawdor and Camden. Ultimately the LES concluded that with full development of Ellis Lane and Grasmere, it would result in an additional 3,000 to 3,250 vpd. Even with full development, the net increase in traffic flow was unlikely to create any demand for road or intersection capacity improvements.

3.4 Additional Traffic

The *Guide for Traffic Generating Developments* for dwelling houses is 8.5- 9 vpd. This Planning Proposal anticipates a 4 lot subdivision which would generate an average of 35 vpd.

It is noted that the proposed R5 Large Lot Residential zone permits attached dual occupancy development. If each of the indicative lots were developed for dual occupancy, then the average traffic generation would be 70 vpd.

In the context of traffic capacity within the existing road system, the previous studies have found that there is ample capacity for the level of development anticipated. The additional traffic generated by the planning proposal and the subsequent subdivision of the site into 4 lots is not considered a significant impact on the traffic system within the Grasmere Estate nor the traffic system in the extended area. Again it is considered that even with full development, the net increase in traffic flow will not create a demand for road or intersection capacity requirements.

3.5 Public Transport Provisions

There are buses servicing the area, which have stops closest to the subject site along Sheathers Lane adjacent the intersection with The Old Oaks Road. These run approximately on the hour along three different routes. Copies of these bus routes are found in Appendix A.

4.0 CONCLUSION

This Planning Proposal is seeking the rezoning of Lot 24 DP 1086823 Crase Place Grasmere to enable future subdivision of the site.

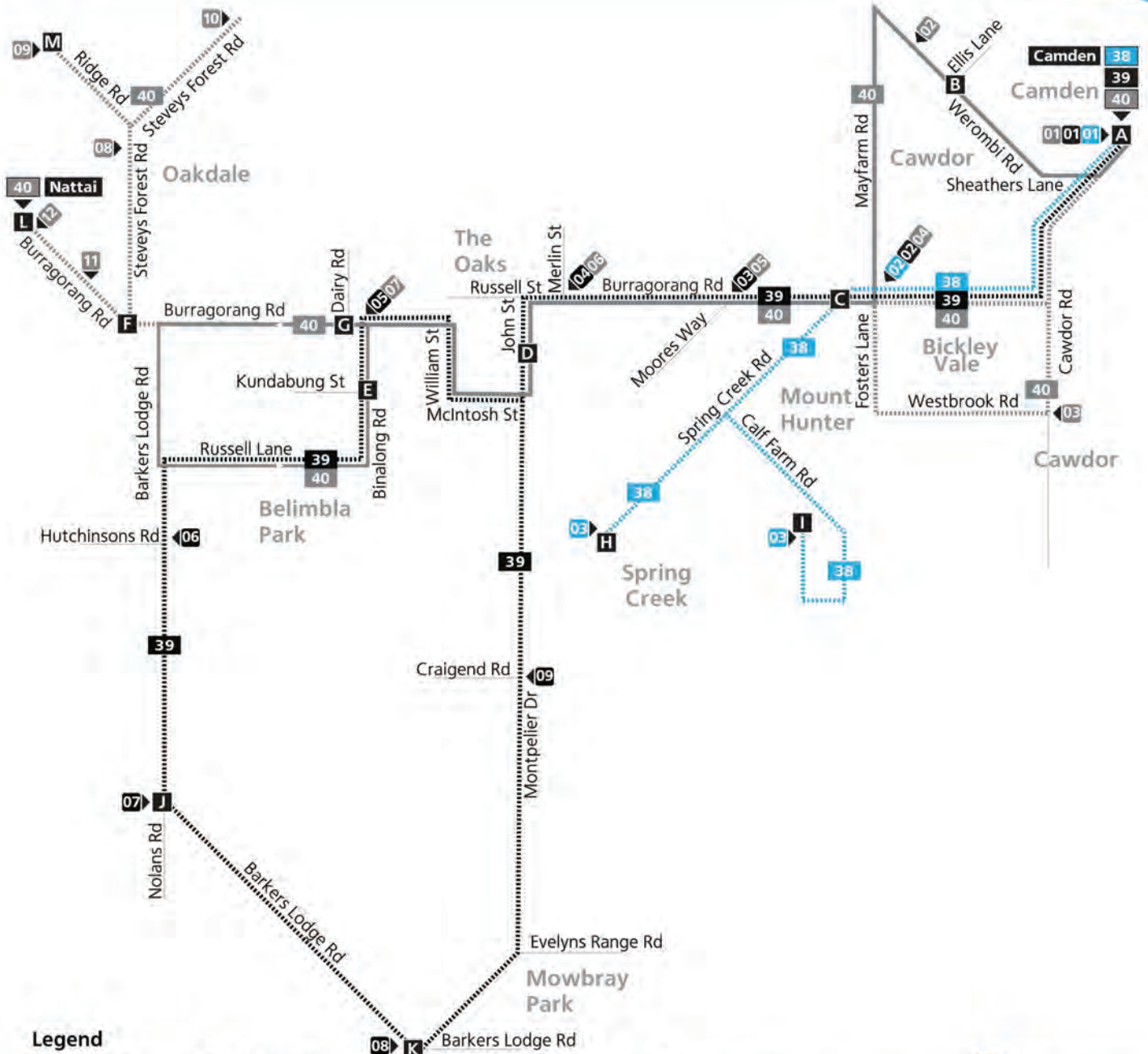
The impact of future development has been considered in the context of the existing street system and infrastructure requirements which might arise. In applying the Traffic Generating Development Guidelines to the potential for development of the site, it has been concluded that the average 35 vpd arising out of the development of the site can be easily catered for within the existing road network and capacity of the street system. Furthermore, no additional infrastructure works are required arising from this Planning Proposal.

APPENDIX A

Bus Route/ Timetable



Warragamba to Camden



Legend

- Bus route
- Bus route number
- Timing point
- Section point

Diagrammatic Map
Not to Scale



Monday to Friday Oakdale, Belimbla Park & The Oaks to Camden

Monday to Friday					
L Nattai					
G Oakdale Burrarorang Road & Dairy Road	09:44	09:45	09:46	09:47	09:48
F Oakdale Burrarorang Road & Steeys Forest Road	09:50	09:51	09:52	09:53	09:54
E Belimbla Park Binalong Road & Kundabung Street	09:57	09:58	09:59	10:00	10:01
D The Oaks John Street & Mary Street	10:04	10:05	10:06	10:07	10:08
C Mt Hunter Burrarorang Road & Spring Creek Road	10:11	10:12	10:13	10:14	10:15
B Ellis Lane Werombi Road & Ellis Lane	10:18	10:19	10:20	10:21	10:22
A Camden John Street & Argyle Street	10:25	10:26	10:27	10:28	10:29
Connecting bus departs Camden	10:31	10:32	10:33	10:34	10:35
Connecting bus arrives Campbelltown Station	10:38	10:39	10:40	10:41	10:42
Campbelltown train departs via East Hills line	10:45	10:46	10:47	10:48	10:49
Campbelltown train departs via Liverpool line	10:51	10:52	10:53	10:54	10:55

Monday to Friday (continued...)					
L Nattai					
G Oakdale Burrarorang Road & Dairy Road	11:01	11:02	11:03	11:04	11:05
F Oakdale Burrarorang Road & Steeys Forest Road	11:07	11:08	11:09	11:10	11:11
E Belimbla Park Binalong Road & Kundabung Street	11:14	11:15	11:16	11:17	11:18
D The Oaks John Street & Mary Street	11:21	11:22	11:23	11:24	11:25
C Mt Hunter Burrarorang Road & Spring Creek Road	11:28	11:29	11:30	11:31	11:32
B Ellis Lane Werombi Road & Ellis Lane	11:35	11:36	11:37	11:38	11:39
A Camden John Street & Argyle Street	11:42	11:43	11:44	11:45	11:46
Connecting bus departs Camden	11:48	11:49	11:50	11:51	11:52
Connecting bus arrives Campbelltown Station	11:55	11:56	11:57	11:58	11:59
Campbelltown train departs via East Hills line	12:01	12:02	12:03	12:04	12:05
Campbelltown train departs via Liverpool line	12:07	12:08	12:09	12:10	12:11

Monday to Friday (continued...)

Route Number					
L Nattai					
G Oakdale Burrarorang Road & Dairy Road	19:19	19:20	19:21	19:22	19:23
F Oakdale Burrarorang Road & Steeys Forest Road	19:25	19:26	19:27	19:28	19:29
E Belimbla Park Binalong Road & Kundabung Street	19:31	19:32	19:33	19:34	19:35
D The Oaks John Street & Mary Street	19:37	19:38	19:39	19:40	19:41
C Mt Hunter Burrarorang Road & Spring Creek Road	19:44	19:45	19:46	19:47	19:48
B Ellis Lane Werombi Road & Ellis Lane	19:51	19:52	19:53	19:54	19:55
A Camden John Street & Argyle Street	19:58	19:59	20:00	20:01	20:02
Connecting bus departs Camden	20:04	20:05	20:06	20:07	20:08
Connecting bus arrives Campbelltown Station	20:11	20:12	20:13	20:14	20:15
Campbelltown train departs via East Hills line	20:18	20:19	20:20	20:21	20:22
Campbelltown train departs via Liverpool line	20:24	20:25	20:26	20:27	20:28

Saturday

Route Number					
G Oakdale Burrarorang Road & Dairy Road	08:16	08:17	08:18	08:19	08:20
F Oakdale Burrarorang Road & Steeys Forest Road	08:22	08:23	08:24	08:25	08:26
E Belimbla Park Binalong Road & Kundabung Street	08:28	08:29	08:30	08:31	08:32
D The Oaks John Street & Mary Street	08:34	08:35	08:36	08:37	08:38
C Mt Hunter Burrarorang Road & Spring Creek Road	08:41	08:42	08:43	08:44	08:45
B Ellis Lane Werombi Road & Ellis Lane	08:52	08:53	08:54	08:55	08:56
A Camden John Street & Argyle Street	09:02	09:03	09:04	09:05	09:06
Connecting bus departs Camden	09:08	09:09	09:10	09:11	09:12
Connecting bus arrives Campbelltown Station	09:15	09:16	09:17	09:18	09:19
Campbelltown train departs via East Hills line	09:24	09:25	09:26	09:27	09:28
Campbelltown train departs via Liverpool line	10:03	10:04	10:05	10:06	10:07

Monday to Friday Camden to Spring Creek, Mowbray Park & Ridge Road

Monday to Friday					
A Camden John Street & Argyle Street	07:39	07:40	07:41	07:42	07:43
D The Oaks John Street & Mary Street	07:45	07:46	07:47	07:48	07:49
C Spring Creek End Calf Farm Road	07:51	07:52	07:53	07:54	07:55
F Spring Creek End Spring Creek Road	07:57	07:58	07:59	08:00	08:01
E Camden John Street & Argyle Street	08:03	08:04	08:05	08:06	08:07

Monday to Friday

Monday to Friday					
A Camden John Street & Argyle Street	15:23	15:24	15:25	15:26	15:27
D The Oaks John Street & Mary Street	15:29	15:30	15:31	15:32	15:33
C Mowbray Park Binalong Road & Kundabung Street	15:35	15:36	15:37	15:38	15:39
F Mowbray Park Binalong Road & Spring Creek Road	15:41	15:42	15:43	15:44	15:45
E The Oaks John Street & Mary Street	15:47	15:48	15:49	15:50	15:51
A Camden John Street & Argyle Street	15:53	15:54	15:55	15:56	15:57

Monday to Friday

Monday to Friday					
A Camden John Street & Argyle Street	00:04	00:05	00:06	00:07	00:08
D The Oaks John Street & Mary Street	00:10	00:11	00:12	00:13	00:14
C Mowbray Park Binalong Road & Kundabung Street	00:16	00:17	00:18	00:19	00:20
F Mowbray Park Binalong Road & Spring Creek Road	00:22	00:23	00:24	00:25	00:26
E The Oaks John Street & Mary Street	00:28	00:29	00:30	00:31	00:32
A Camden John Street & Argyle Street	00:34	00:35	00:36	00:37	00:38