Ordinary Meeting of Council

27 February 2019

UNDER SEPARATE COVER ATTACHMENTS

ITEMS 12.3 & 12.4

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 1 PLANNING PROPOSAL LOT 3 DP 1074706 2016

Attachment 1 - Lot 3 DP 1074706 Planning proposal 2016

QPRC
Queanbeyan-Palerang Regional Council

Planning proposal, amendment of schedule 1 of the *Palerang Local Environmental Plan 2014* to allow the subdivision of Lot 3 DP 1074706 to create residential lots

Introduction

The planning proposal seeks to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* to allow a development application for the subdivision of Lot 3 DP 1074706 into six residential lots varying in size from 4-8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and a large area of native vegetation (approximately 27 hectares).

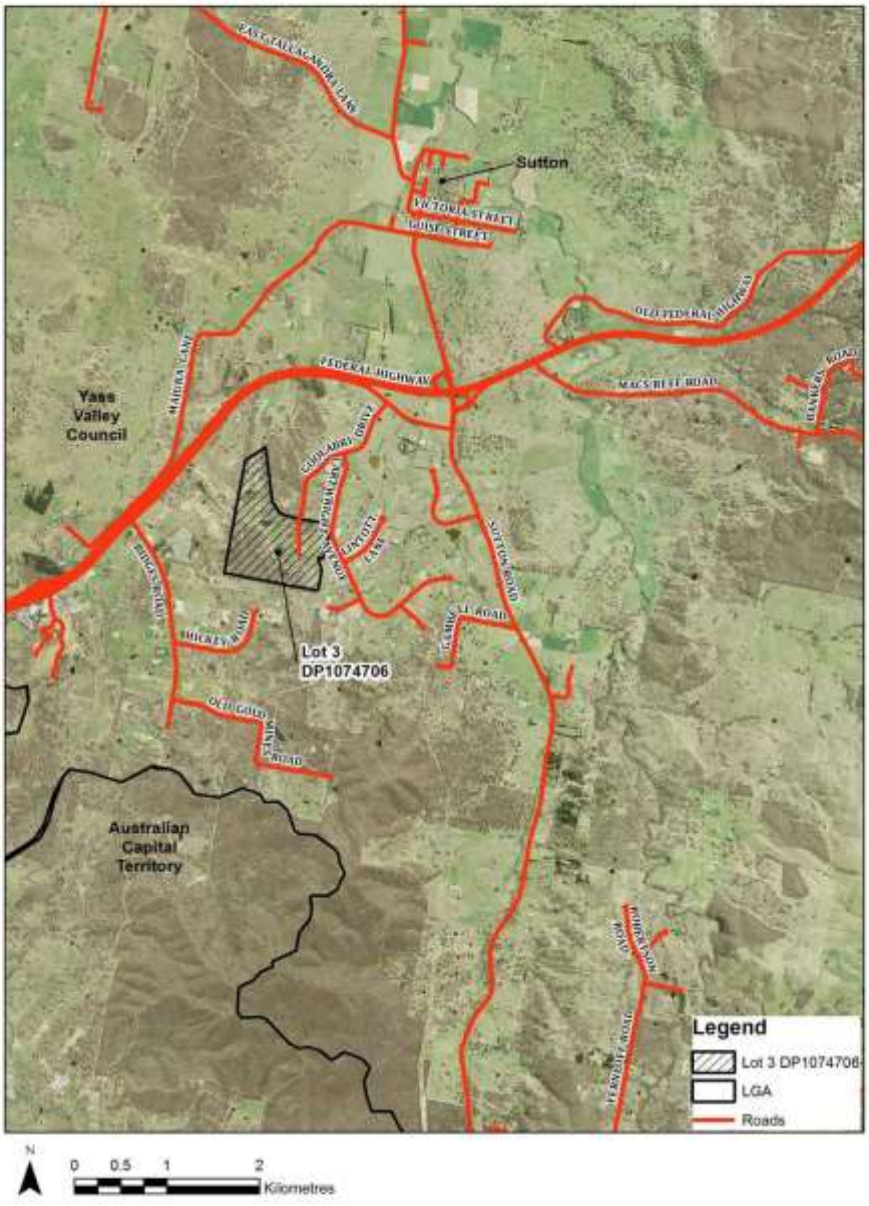
Reports for a non-potable water supply, on-site effluent disposal, flora and fauna, bushfire and Aboriginal cultural heritage were prepared for an earlier proposal for subdivision and these have been included with this planning proposal as relevant information, notwithstanding the difference in the proposed lot numbers between these reports and the planning proposal. The proposed number of lots as stated in this planning proposal is shown on map 3. If the planning proposal is gazetted (amending the *Palerang Local Environmental Plan 2014*), an application for the subdivision of the lot will be need to be submitted to Council for consideration. The final number of lots and layout will be determined as part of the subdivision application having considered matters such as road and entrance design, the management of native vegetation, Aboriginal cultural heritage and the on-site disposal of effluent.

Description of the land

Lot 3 DP 1074706 is 94.51 hectares and is located in the locality of Sutton. It is accessed from Goolabri Drive and Cartwright Avenue which connect via a service road to the Federal Highway and Sutton Road and is approximately fifteen minutes from Canberra and Queanbeyan. The lot is zoned E4 Environmental Living under the *Palerang Local Environmental Plan 2014*.

The lot currently contains a convention centre complex, disused golf course, one dwelling, several small dams and a large area of native vegetation. The land surrounding the lot is rural residential having been created as part of a subdivision in 2002 (an outline of this is provided below).

The land is gently undulating class 4 agricultural land (NSW Department of Primary Industries). The native vegetation has largely been previously cleared except for an area in the south-western corner of the lot (approximately 56 hectares, proposed to form the residual lot as shown in map 3 below). There are no reticulated water or sewer services to Lot 3 DP 1074706 or the adjacent residential lots. The maps below show the location of Lot 3 DP 1074706 and the proposed subdivision layout (refer to the above note).



Map 1 The location of Lot 3 DP 1074706, (regional view)

Source Queanbeyan-Palerang Regional Council and NSW Land and Property Information

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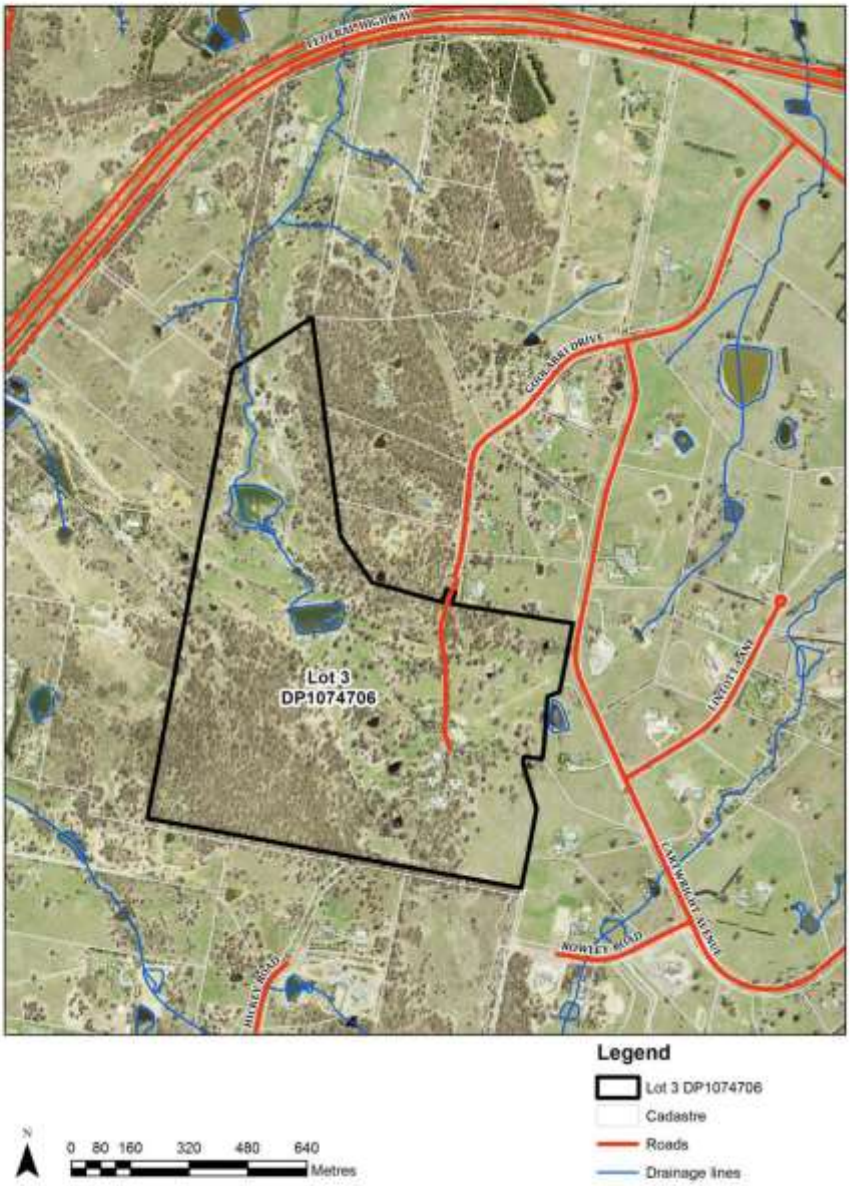

Map 2 The location of Lot 3 DP 1074706

Source Queanbeyan-Palerang Regional Council and NSW Land and Property Information

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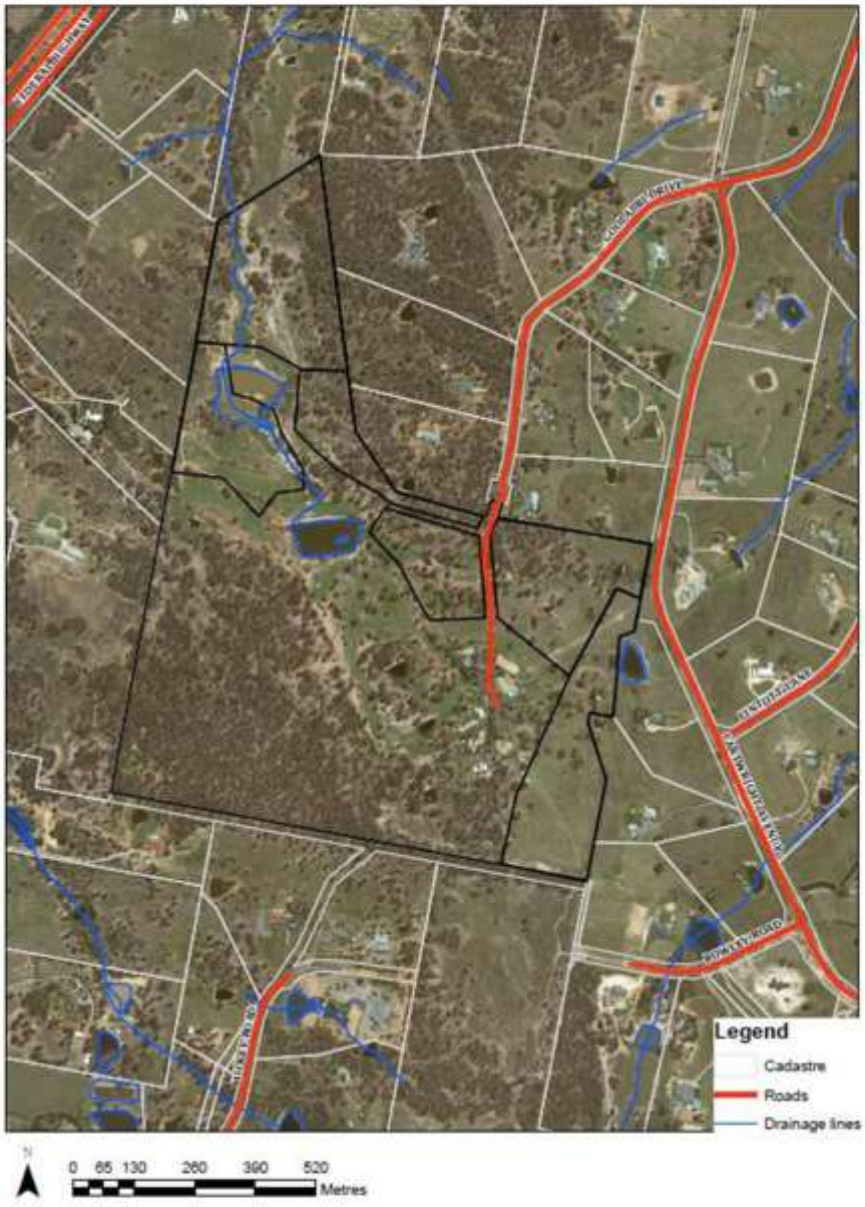
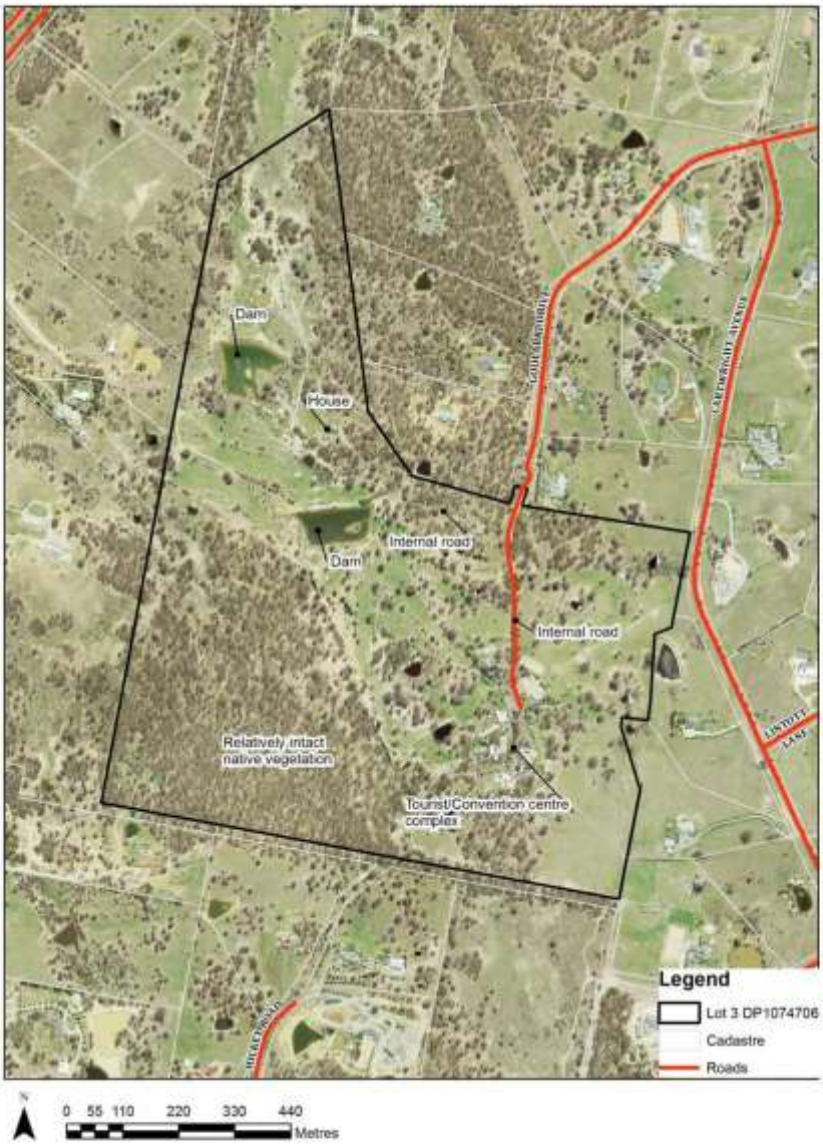
The map below shows the proposed subdivision layout.



Map 3 Proposed subdivision layout

Source Based on a map provided by Land Planning Solutions

The maps below illustrate the current landuses on Lot 3 DP 1074706, its land use zone and minimum lot size under the *Palerang Local Environmental Plan 2014*.



Map 4 Lot 3 DP 1074706 and its current landuses

Source Queanbeyan-Palerang Regional Council

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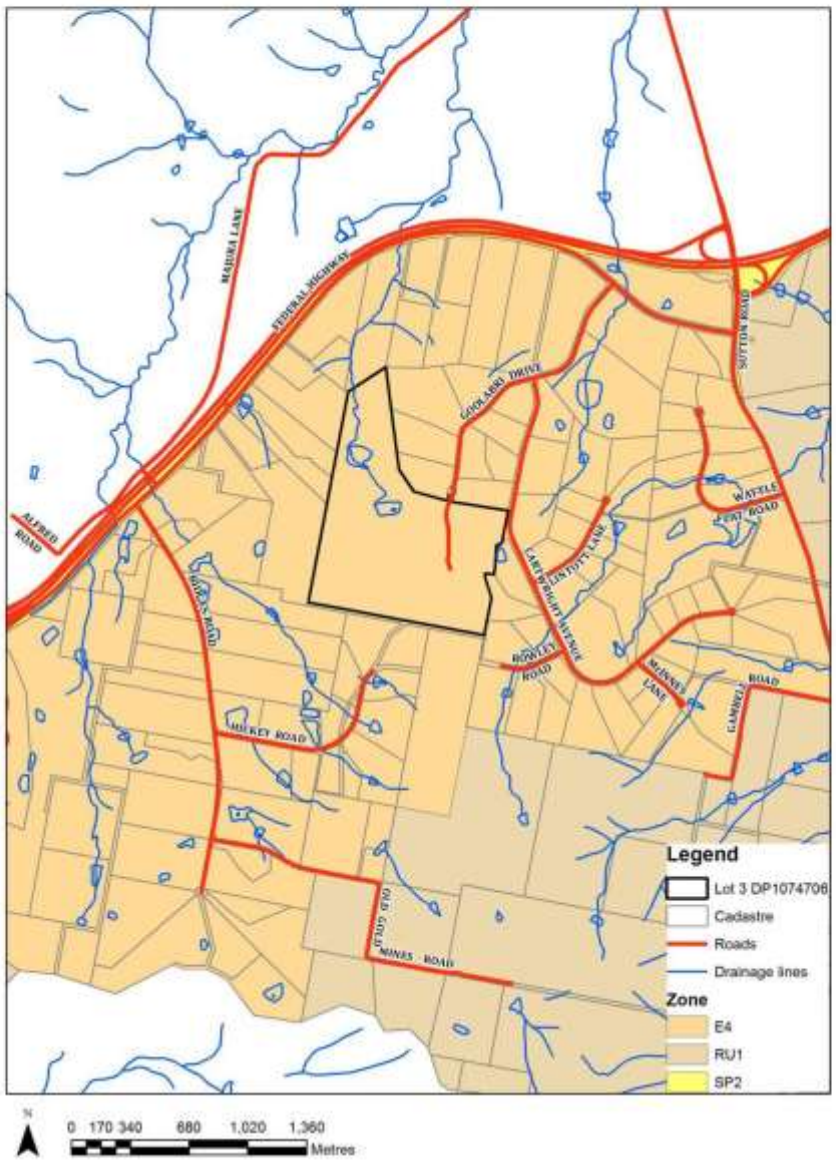

Map 5 Lot 3 DP 1074706 and the landuse zone

Source *Palerang Local Environmental Plan 2014*, Land Zoning Map

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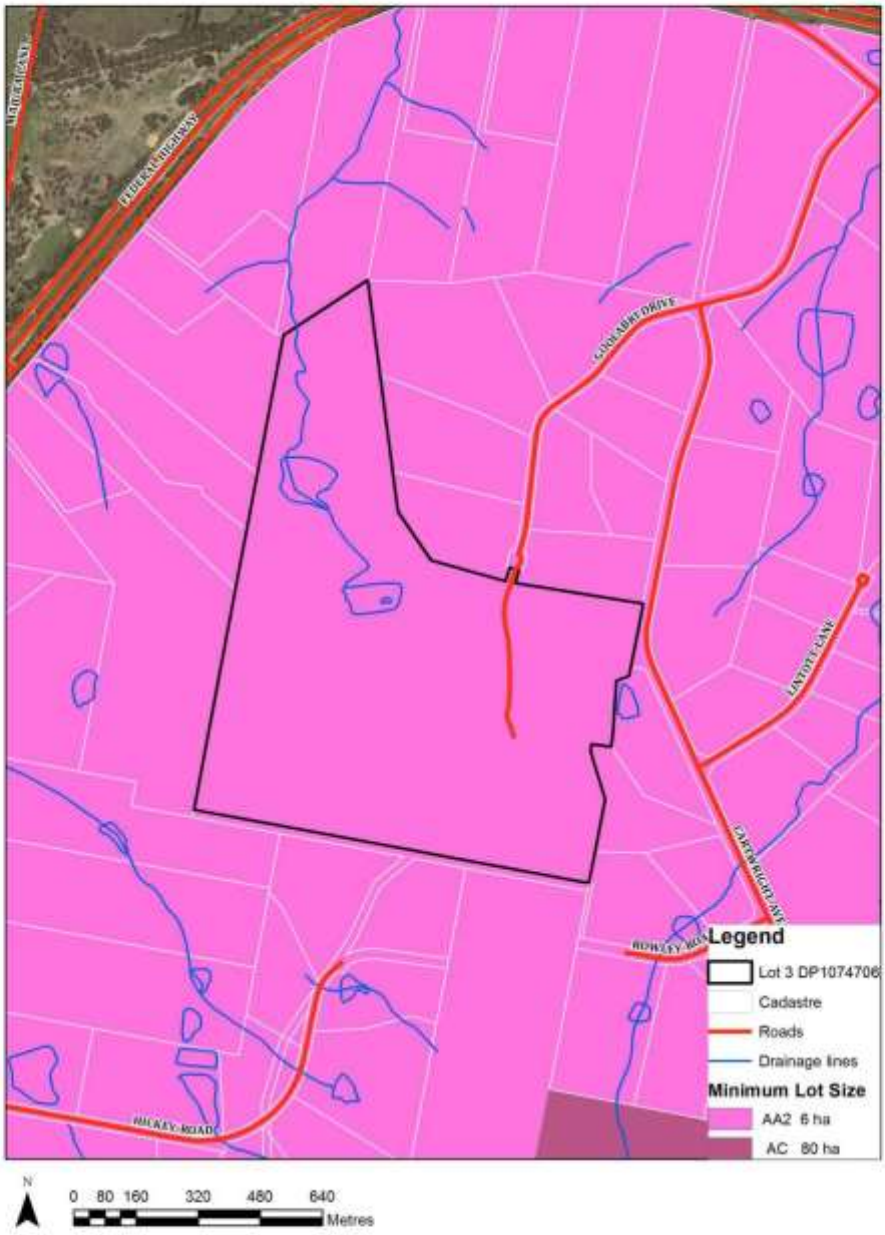

Map 5 Lot 3 DP 1074706 and the minimum lot size

Source *Palerang Local Environmental Plan 2014*, Lot Size Map

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Part 1 Intended outcome

Schedule 1 of the *Palerang Local Environmental Plan 2014* will allow the subdivision with development consent of Lot 3 DP 1074706 into six residential lots and one residual lot which will include the existing tourist/convention centre complex. The existing E4 Environmental Living subdivision provisions will apply to the subdivision of the land.

Part 2 Explanation of provisions

The amendment of Schedule 1 of the *Palerang Local Environmental Plan 2014* will allow the subdivision, with development consent of Lot 3 DP 1074706 to create six residential lots and a residue lot.

Part 3 Justification

Section A Need for the planning proposal

Question 1 Is the planning proposal a result of any strategic study or report

The planning proposal is not part of a strategic study or a report however, the subject lot is part of an existing rural residential area. The draft Rural Lands Study Report (p139) suggests that based on the uptake of rural residential lots in the western part of the former Palerang local government area that there is a need to plan for the creation of residential lots in the E4 landuse zone in similar numbers to the past decade.

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

A planning proposal to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* is the only means of achieving the intended outcome. The following paragraphs provide the background to the reason for the planning proposal:

Lot 3 DP 1074706 is zoned E4 Environmental Living under the *Palerang Local Environmental Plan* 2014 and was created as part of the "Sutton Acres" subdivision of Lot 2 and 3 DP 827113 and Lot 6 DP 234480 which was approved in 1998. Over a number of stages 60 lots were created.

The subject land was developed for the purposes of accommodation and a golf course in the late 1980s/early 1990s. The land was zoned 1(a) General Rural under the Yarrowlumla Local Environmental Plan 1986 and the Yarrowlumla Local Environmental Plan 1993 until the gazettal of the Yarrowlumla Local Environmental Plan (Amendment No.8) in March 1998. This amendment created a new rural residential zone 1(d1) Rural Residential Zone and applied the zone to land in the Sutton area that had been identified as suitable for rural residential development in Yarrowlumla Council's 1994 Rural Residential Local Environmental Study. The zone was later applied to the Royalla area by the Yarrowlumla Local Environmental Plan 1993 (Amendment No. 14).

Following the gazettal of Amendment No. 8 in March 1998, Council became aware that a number of planning controls that applied in the 1(d) Rural Residential Zone had inadvertently been omitted under the new 1(d1) zone. One of these was a control on further subdivision of large lots created

under the averaging provision. Council resolved to prepare an amendment to address this in July 1998, exhibited the draft plan during August and Yarrowlumla Local Environmental Plan 1993 (Amendment No. 29) was gazetted on 18 December 1998.

The 1(d1) subdivision controls applied a simple 6 hectare average lot size which was later applied to all residential land in Yarrowlumla under the Yarrowlumla Local Environmental Plan 2002. A feature of these controls was that there was only one opportunity for subdivision. Large lots created under the 1(d1) controls could not be further subdivided, even, if the first subdivision did not create the maximum number of lots that was permissible. The simpler (compared to those that applied in the 1(d) zone subdivision controls did not allow for staged subdivision approval.

In the case of the subject land, at the time of the subdivision of the rural properties 'Sutton Acres' and 'Goolabri Park' for rural residential development in 1998, the applicant wished to continue to operate the golf course and resort development on Goolabri Park and as a result a large (95 ha) lot was created to include the commercial development.

As Lot 3 DP 1074706 is within an existing rural residential area, the number of lots to be created is small, the existing road infrastructure will be utilised and the lots to be used for residential purposes are primarily in areas that have previously been disturbed, the subdivision of this lot is unlikely to have a detrimental impact on the environment or create an undesirable precedent.

Section B Relationship to strategic planning framework

Question 3 Is the planning proposal consistent with the objectives and actions of the applicable regional or sub-regional strategy and exhibited draft strategies

The *Sydney–Canberra Corridor Regional Strategy* applies to the whole of the former Palerang local government area. The document includes in its direction an increase in residential development across the region and livability. Page 3 of the Strategy states that it is projected that the region's population will be 183 350 by 2031...requiring an additional 25,200 dwellings. There is no specific mention of rural residential areas in the local government area. The proposed amendment and subdivision will contribute to this direction.

Question 4 Is the planning proposal consistent with a council's local strategy or other local strategic plan

There is no local strategic plan for the former Palerang local government area rural residential areas. A draft rural lands strategy which includes the consideration of rural residential land has been exhibited. The draft strategy does not include the identification of future rural residential areas. However, it should be noted that Lot 3 DP 1074706 is currently zoned E4 Environmental Living and that this planning proposal will not amend the landuse zone. The proposed lots will be within an established rural residential area.

The planning proposal is consistent with the *Palerang Community Strategic Plan 2013-32*, Focus Area 4: Rural and Urban Development. This focus area states that one of Council's roles is the review of the local environmental plan and to maintain a long-term planning approach that caters for diversity and choice in rural and village living.

Question 5 Is the planning proposal consistent with the applicable State Environmental Planning Policies

Name of State Environmental Planning Policy		*Consistency with the State Environmental Planning Policy*
21	Caravan Parks	Not applicable
30	Intensive Agriculture	Not applicable
33	Hazardous and Offensive Development	Not applicable
36	Manufactured Home Estates	Not applicable
44	Koala Habitat Protection	Applicable. A flora and fauna report has been prepared for the subdivision (as stated above). The report did not identify the site as containing koalas. Consistent
50	Canal Estates	Not applicable
55	Remediation of land	The proponent has stated that a "contaminated lands assessment has not been undertaken however based on land ownership knowledge there are no known contaminated sites on the land holding". Based on this statement it is not considered necessary to undertake a contaminated land assessment.
62	Sustainable Aquaculture	Not applicable
64	Advertising and Signage	Not applicable
65	Design Quality of Residential Flat Development	Not applicable
	SEPP (Housing for Seniors or People with a Disability) 2004	Not applicable
	SEPP (Building Sustainability Index : BASIX) 2004	Not applicable
	SEPP (Major Development) 2005	Not applicable
	SEPP (Mining, Petroleum Production and Extractive Industries) 2007	Not applicable
	SEPP (Infrastructure) 2007	Not applicable
	SEPP (Miscellaneous Consent Provisions) 2007	Not applicable
	SEPP (Rural Lands) 2008	Not applicable. The land is currently zoned E4 Environmental Living and this planning proposal will not amend the landuse zoning.

	Name of State Environmental Planning Policy	*Consistency with the State Environmental Planning Policy*
	SEPP (Exempt and Complying Development Codes) 2008	Not applicable
	SEPP (Affordable Rental Housing) 2009	Not applicable
	SEPP (Sydney Drinking Water Catchment) 2011	Not applicable

Question 6 Is the planning proposal consistent with applicable Ministerial Directions

	Name of direction	*Applicability and consistency with the direction*
1.1	Business and Industrial Zones	Not applicable
1.2	Rural Zones	Not applicable
1.3	Mining, Petroleum Production and Extractive Industries	Not applicable
1.4	Oyster Aquaculture	Not applicable
1.5	Rural Lands	Not applicable
2.1	Environment Protection Zones	Applicable and consistent
2.2	Coastal Protection	Not applicable
2.3	Heritage Conservation	Applicable. Refer to the section below regarding the heritage assessment of the site.
2.4	Recreation Vehicle Areas	Applicable and consistent
2.5	Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	Not applicable
3.1	Residential Zones	Applicable and consistent. The proposal is allowing a provision that was contained in a previous local environmental plan
3.2	Caravan Parks and Manufactured Home Estates	Applicable and consistent. The proposal is not rezoning the land.
3.3	Home Occupations	Applicable and consistent.
3.4	Integrating Land Use and Transport	Not applicable
3.5	Development near Licensed Aerodromes	Not applicable

	Name of direction	*Applicability and consistency with the direction*
3.6	Shooting ranges	Not applicable
4.1	Acid Sulfate Soils	Not applicable
4.2	Mine Subsidence and Unstable Land	Not applicable
4.3	Flood Prone Land	Not applicable
4.4	Planning for Bushfire Protection	Applicable and consistent. Refer to the section below.
5.1	Implementation of Regional Strategies	Applicable and consistent.
5.2	Sydney Drinking Water Catchments	Not applicable
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	Not applicable
5.4	Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable
5.5	Development in the vicinity of Ellalong,Paxton and Millfield (Cessnock LGA) (Revoked 18 June 2010)	-
5.6	Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1)	-
5.7	Central Coast (Revoked 10 July 2008. See amended Direction 5.1)	-
5.8	Second Sydney Airport: Badgerys Creek	Not applicable
5.9	North West Rail Link Corridor Strategy	Not applicable
6.1	Approval and Referral Requirements	Applicable and consistent.
6.2	Reserving Land for Public Purposes	Applicable and consistent.
6.3	Site Specific Provisions	Not applicable
7.1	Implementation of the Metropolitian Plan for the Sydney 2036	Not applicable

Section C Environmental, social and economic impact

Question 7 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

There is no critical habitat as listed in NSW legislation in the former Palerang local government area. A flora and fauna report has been prepared for the subdivision, refer to the appendices. The report assessed the proposed residential lots and not the residual lot that will contain the tourist accommodation/convention centre and a large area of native vegetation. However, the report is considered adequate as it is the residential lots that will be significantly impacted by the proposed subdivision.

A flora and fauna assessment was undertaken in March and April 2014 for the proposed subdivision. The report states (p5) "The general vegetation of the area is one of an open dry sclerophyll woodland (fig 3) of Yellow Box *E.melliodora*, Red Gum *E.blakelyi*, Brittle Gum *E.mannifera*, Scribbly Gum *E.rossii*, Broad-leaved Peppermint *E.divers* Red Stringybark *E.macrorhyncha*, with occurrences of Apple Box E.bridgesiana The sub-dominant tree layer is represented by Silver Wattle *Acacia dealbata*, Black Wattle *Acacia mearnsii*, with several individual occurences of Ballart *Exocarpus cupressiformis* and Black She-Oak *Allocasuraina littoralis*.."

The report states that remnant Yellow box-Blakely's Red Gum-Brittle Gum woodland still exists on the lower slopes to flat areas of the westerly aspects of the property. It is stated in the report (p5) the "remnant woodland trees on the property, in their current degraded state and low population numbers, does not meet the criteria for recognition as a Grassy Box woodland community.." On p11 of the report it states "The dry sclerophyll woodland and grasslands of the property have no threatened native plant or animal species, significant local native flora species; or any significant native animal habitat. No native fauna species were observed during the surveys except for a large population of Eastern Grey Kanagaroos *Macropus giganteus*.

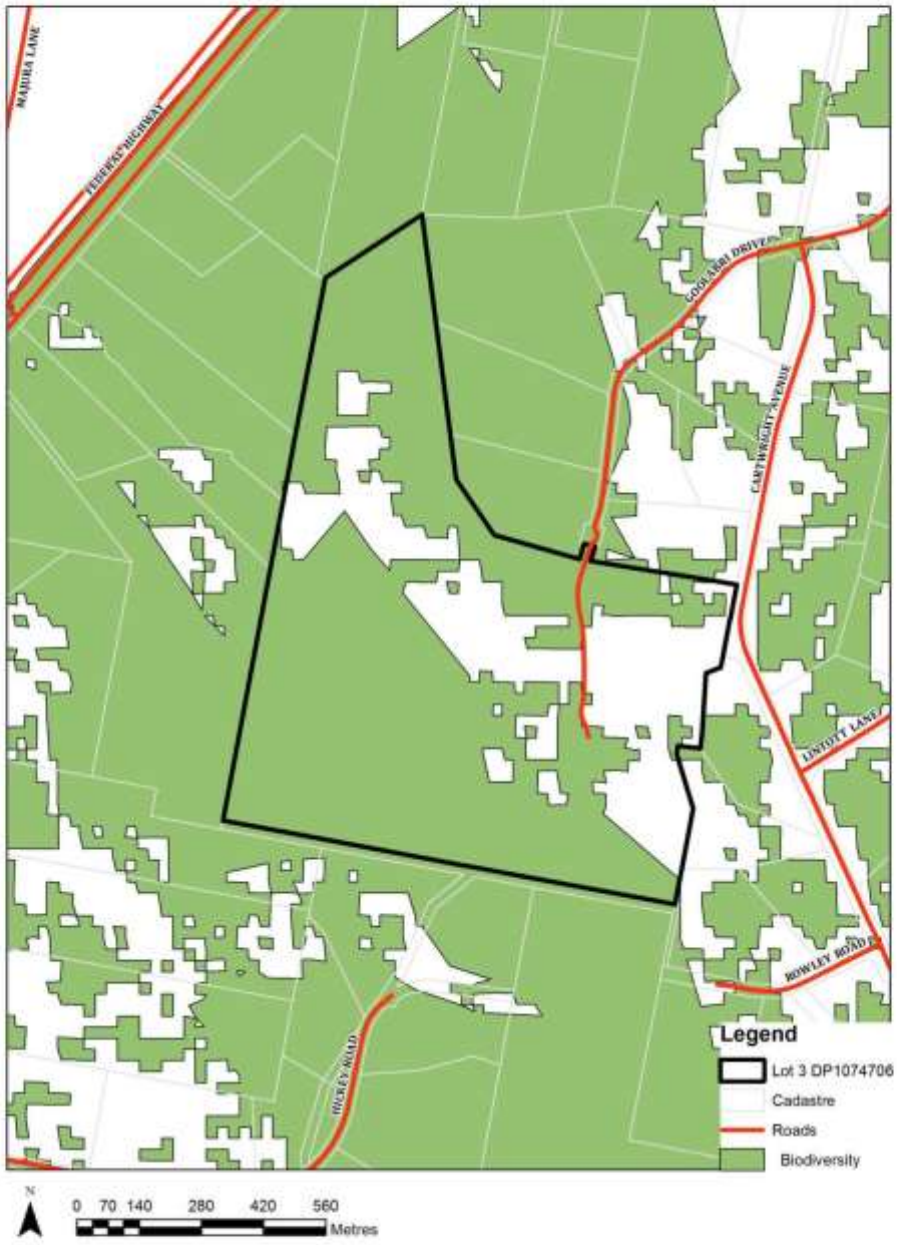
The Yellow Box-Red Box woodland (with other mixed gum species) that exists on the better soil areas of the property, is generally in a poor condition in terms of the understory species and groundcover, due to extensive clearing in the past and severe overgrazing over many years."...

In regard to the impact of the subdivision on native vegetation the report states "The subdivision of the property into 3 Lots will not have any significant impact on the Box-Gum Woodland as few native understory shrubs and few herbaceous groundstorey shrubs and few herbaceous groundstorey species representative of the woodland exist." (p11)

The *Palerang Local Environmental Plan 2014*, Terrestrial Biodiversity Map below shows the areas that contain native vegetation. The map is relatively consistent with the flora and fauna report. There is no need to amend the map.

Council's revised native vegetation map (2015) displays the vegetation on the lot including the 23 hectares of relatively intact native vegetation on the proposal residual lot as being Red Stringybark-Brittle Gum-Inland Scribbly Gum dry open forest on skeletal hills of the tablelands, South Eastern Highlands (Biometric Type MR 595). It should be noted that this information is derived from spatial data sets rather than a site assessment.

It is recommended that the planning proposal and the report be reviewed by the NSW Office of Environment and Heritage.



Map 6 Terrestrial Biodiversity

Source *Palerang Local Environmental Plan 2014*, Terrestrial Biodiversity Map

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Question 8 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed

Reports for the site have been prepared for Aboriginal cultural heritage, water supply and effluent disposal in relation to the subdivision, these are outlined below. A copy of each is attached to this planning proposal.

Aboriginal cultural and European heritage

An Aboriginal cultural heritage assessment was undertaken for the proposed subdivision in February 2014. It appears that the assessment relates only the proposed residential lots. However, the report is considered adequate as it is the residential lots that will be significantly impacted by the proposed subdivision.

The report states the following (P1):

"The proposed subdivision was previously surveyed for Aboriginal archaeological sites/objects in 1998 (Hughes 1998) and three Aboriginal objects were recorded (AHIMS Web Services #1124518, 7/02/2014). None of these sites will be impacted by the proposed development.

One small, disturbed, low density Aboriginal archaeological site ("Goolabri 1") was located on proposed Lot 3 during the field inspection. The site will not be directly or indirectly impacted by the proposed development activity...

Proposed Lot 1 of the subdivision contains a landscape feature (land within 200m of a watercourse) with the potential to contain Aboriginal objects/sites (refer DECCW 2010/12). This area would be directly impacted by fencing of the allotment, but there area is highly modified as a result of past land management practices and its archaeological potential is very low.

No historic (European) heritage sites or relics occur within the proposed subdivision...

There are no Aboriginal or historic cultural heritage constraints to the proposed subdivision of Lot 3 DP 1074706, Goolabri Road, Sutton."

It is recommended that the planning proposal and the report be reviewed by the NSW Office of Environment and Heritage.

Non-potable water supply

A report concerning the supply of non-potable water was prepared in February 2014 as part of the subdivision application. The report is included in the appendices. At the time of the preparation of the subdivision application and associated reports, the Yarrowlumla Local Environmental Plan 2002 (clause 18(1)(f)(1)) and Yarrowlumla Development Control Plan Rural Zones were in force and both required a non-potable water supply for each lot. Neither the *Palerang Local Environmental Plan 2014* or the *Palerang Development Control 2015* have this requirement. It is recommended that this report is reviewed as part of the application for subdivision.

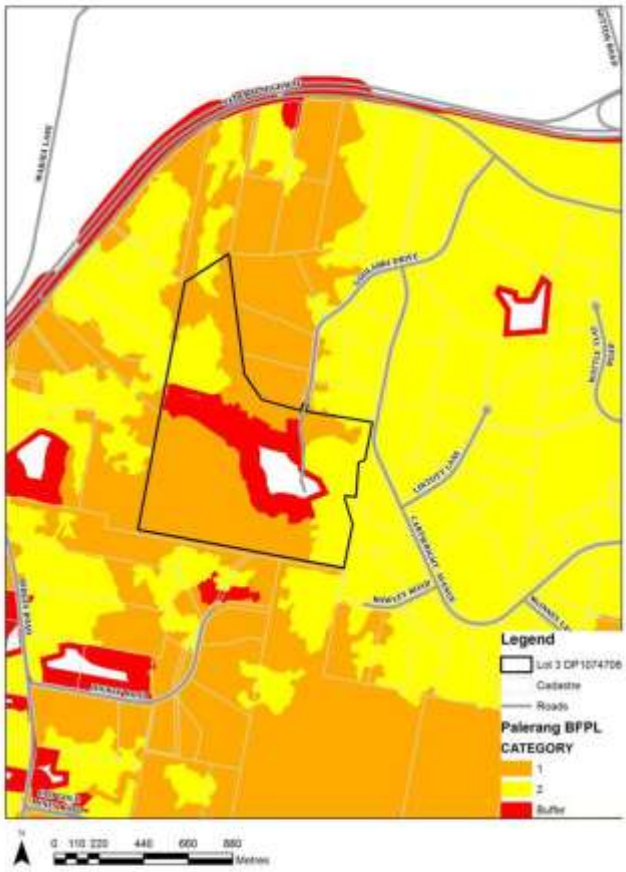
Effluent disposal

As there is no reticulated sewer scheme, on-site effluent disposal schemes are required for each dwelling. An assessment for on-site effluent disposal was prepared as part of the subdivision application for two lots (the other lots being the residual and already having a dwelling). The

report states "the sites are well suited to irrigation of secondary treated effluent from a NSW Health accredited treatment system. Other forms of effluent treatment and disposal may be suitable at particular locations, but should be addressed at the time of submitting building plans." (p1). It is recommended that this report is reviewed as part of the application for subdivision.

Bushfire

The bushfire map for the former Palerang local government is shown below. The majority of the lot is bushfire prone. As part of the subdivision application a bushfire report has been prepared, refer to the appendices for a copy of the report. The report states "Based on the above information it is considered that this development can comply with clause 44 of the Rural Fires Act, all aspects of building in fire prone area, and planning for bushfire protection" (p10). It is recommended that the planning proposal is referred to the NSW Rural Fire Service.



Map 7 Bushfire prone map

Source Queanbeyan-Palerang Regional Council

Question 9 Has the planning proposal adequately addressed any social and economic effects

The planning proposal will allow residential subdivision in an existing rural residential area. It is considered that the social and economic impacts would be minor.

Section D State and Commonwealth interests

Question 10 Is there adequate public infrastructure for the planning proposal

As the planning proposal relates to an existing rural residential area there are roads in place in the vicinity of the site of the planning proposal. The requirements for additional roads will be addressed as part of the subdivision application. The site does not have a water or sewer scheme managed by Council. The potable water and effluent disposal studies have been outlined above.

There is a primary school under ten kilometres from the rural residential area and buses to high schools in Queanbeyan and Canberra, fifteen minutes away. There are existing health facilities in Queanbeyan and Canberra.

Question 11 What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination

NSW or Commonwealth public authorities have not been consulted as this is a minor local issue.

Part 4 Mapping

There will be no mapping required.

Part 5 Community consultation

The Planning Proposal will be exhibited for 28 days. The following reports will be exhibited and reviewed (as outlined above).

- Flora and fauna
- Aboriginal cultural heritage
- Bushfire

The reports concerning on-site effluent disposal and non-potable water supply will be considered as part of the application for subdivision.

Part 6 Project timeline

stage	*completion date*
Anticipated commencement date (date of Gateway Determination)	August 2016
Anticipated timeframe for government agency consultation	end of September 2016
Anticipated commencement and completion dates for public exhibition period	November 2016
Anticipated timeframe for consideration of submissions	mid November 2016
Anticipated date of report to Council	End of December 2016
Anticipated date of submissions, Council report and recommendation to the NSW Department of Planning and Environment to finalise the draft local environmental plan	February 2017
Amended local environmental plan gazetted	March 2017

Appendices

Appendix A Water Supply

Appendix B Effluent Disposal

Appendix C Aboriginal Cultural Heritage

Appendix D Flora and Fauna

Appendix E Bushfire

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 2 PLANNING PROPOSAL LOT 3 DP 1074706 FEBRUARY 2019

Attachment 2 – Planning Proposal Lot 3 DP 1074706 February

QPRC

Planning Proposal

Amend *Palerang Local Environmental Plan 2014* to allow the subdivision of Lot 3 DP 1074706

(revised February 2019)

Ref:
TRIM - SF170608
ECM – PROJ0035/11/6

Offices: Council headquarters – 256 Crawford St
Bungendore Office – 10 Majara St
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Contact: **P:** 1300 735 025
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Table of Contents

Introduction

The planning proposal seeks to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* to allow a development application for the subdivision of Lot 3 DP 1074706 into no more than six residential lots varying in size from 4-8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and a large area of native vegetation (approximately 27 hectares).

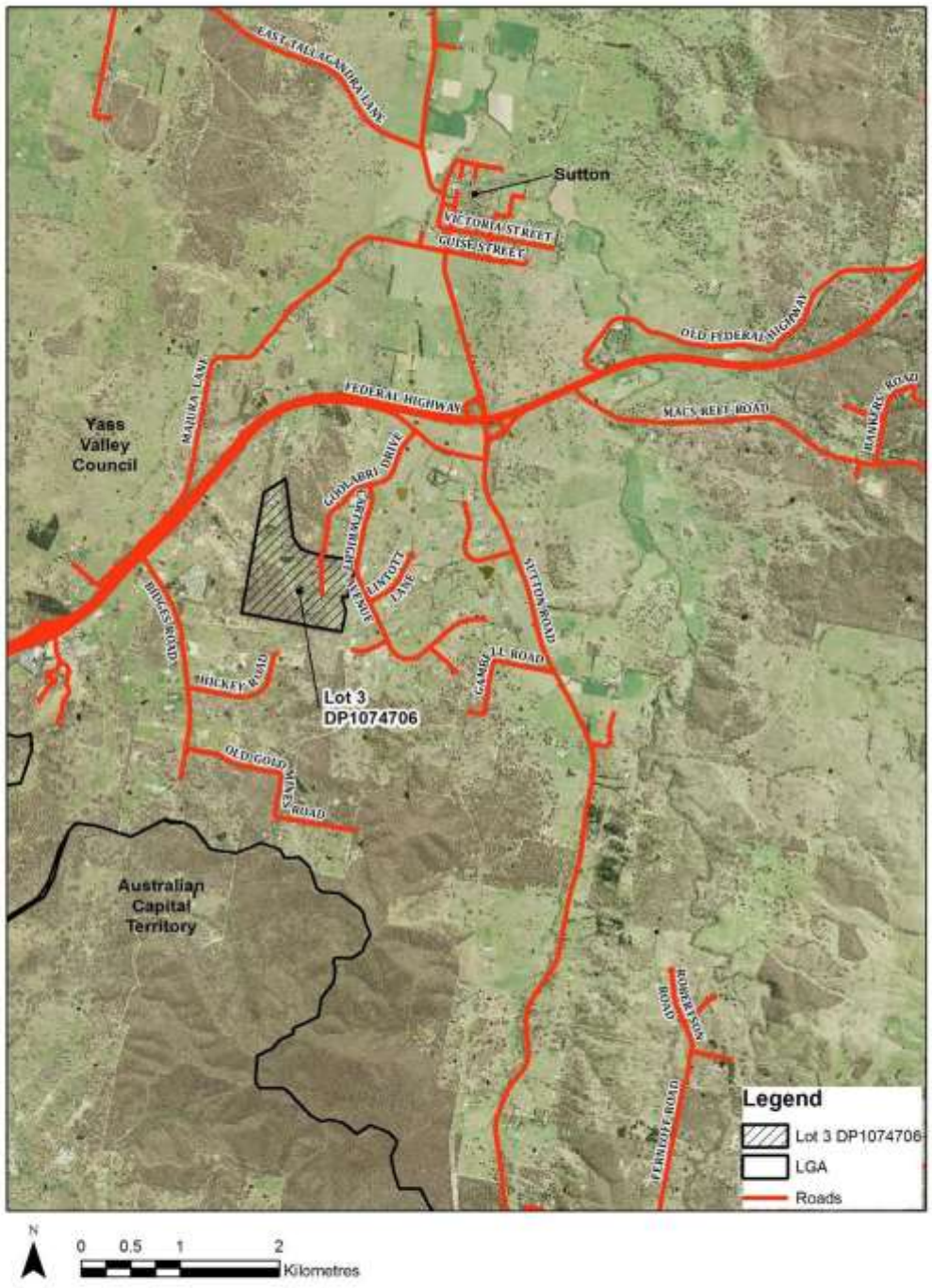
Reports for a non-potable water supply, on-site effluent disposal, flora and fauna, bushfire and Aboriginal cultural heritage were prepared for an earlier proposal for subdivision and these were included with the original planning proposal as relevant information, notwithstanding the difference in the proposed lot numbers between these reports and the planning proposal. Updated Bushfire, Aboriginal Cultural Heritage and Flora and Fauna assessments, have been prepared to meet comments provided by the NSW Office of Environment and Heritage and the NSW Rural Fire Service. The proposed number of lots as stated in this planning proposal is shown on map 3. If the planning proposal is gazetted (amending the *Palerang Local Environmental Plan 2014*), an application for the subdivision of the lot will be need to be submitted to Council for consideration. The final number of lots and layout will be determined as part of the subdivision application having considered matters such as road and entrance design, the management of native vegetation, Aboriginal cultural heritage and the on-site disposal of effluent.

Description of the land

Lot 3 DP 1074706 is 94.51 hectares and is located in the locality of Sutton. It is accessed from Goolabri Drive and Cartwright Avenue which connect via a service road to the Federal Highway and Sutton Road and is approximately fifteen minutes from Canberra and Queanbeyan. The lot is zoned E4 Environmental Living under the *Palerang Local Environmental Plan 2014.*

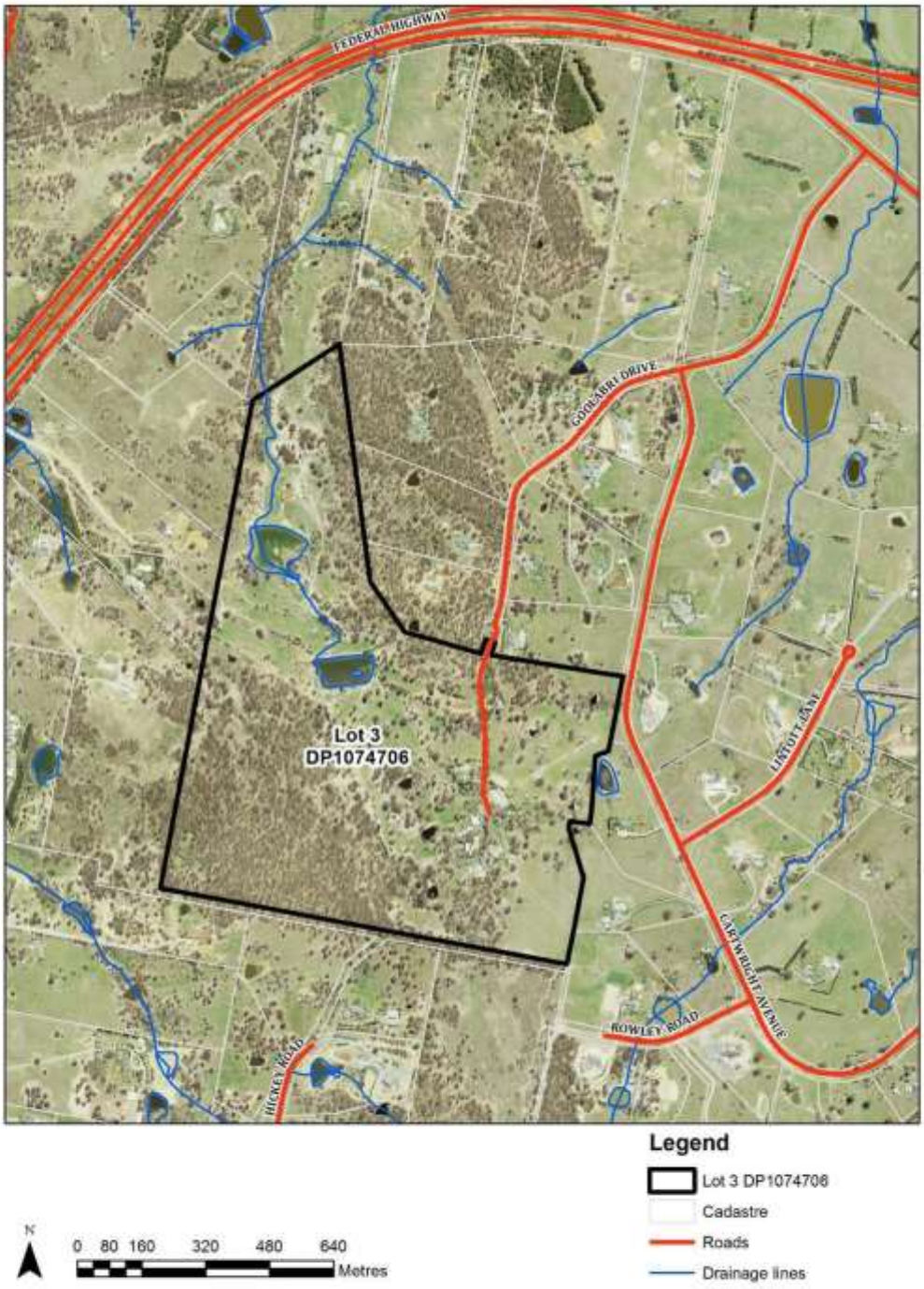
The lot currently contains a convention centre complex, disused golf course, several dwellings, several small dams and a large area of Native vegetation. The land surrounding the lot is rural residential having been created as part of a subdivision in 2002 (an outline of this is provided below).

The land is gently undulating class 4 agricultural land (NSW Department of Primary Industries). Areas of native vegetation have been previously cleared except for an area in the south-western corner of the lot (approximately 56 hectares, proposed to form part of the residual lot as shown in map 3 below). There are no reticulated water or sewer services to Lot 3 DP 1074706 or the adjacent residential lots. The maps below show the location of Lot 3 DP 1074706 and the proposed subdivision layout (refer to the above note).



Map 1 The location of Lot 3 DP 1074706, (regional view)

Source Queanbeyan-Palerang Regional Council and NSW Land and Property Information

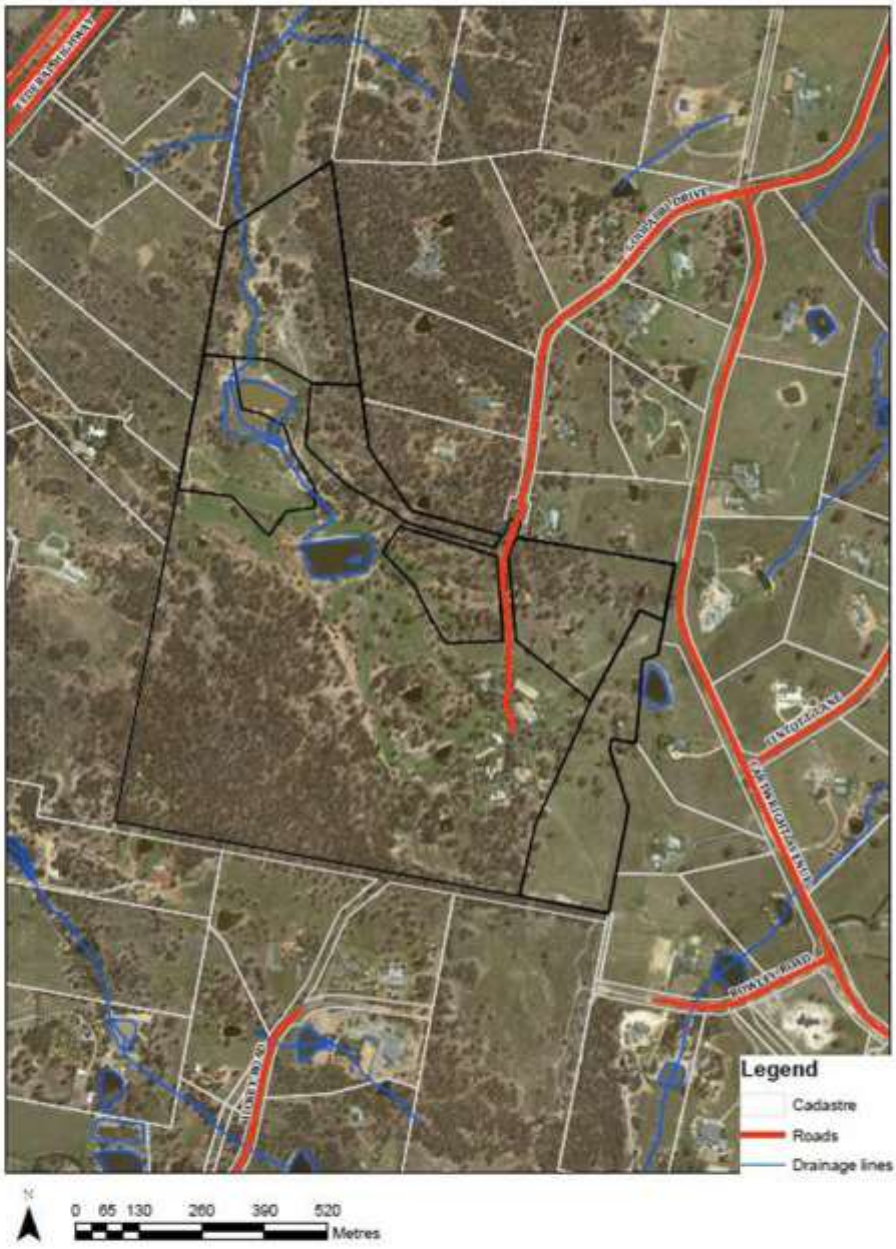


Map 2 The location of Lot 3 DP 1074706

Source Queanbeyan-Palerang Regional Council and NSW Land and Property Information

QPRC

The map below provides an indicative subdivision layout.



Map 3 Proposed subdivision layout

Source Based on a map provided by Land Planning Solutions

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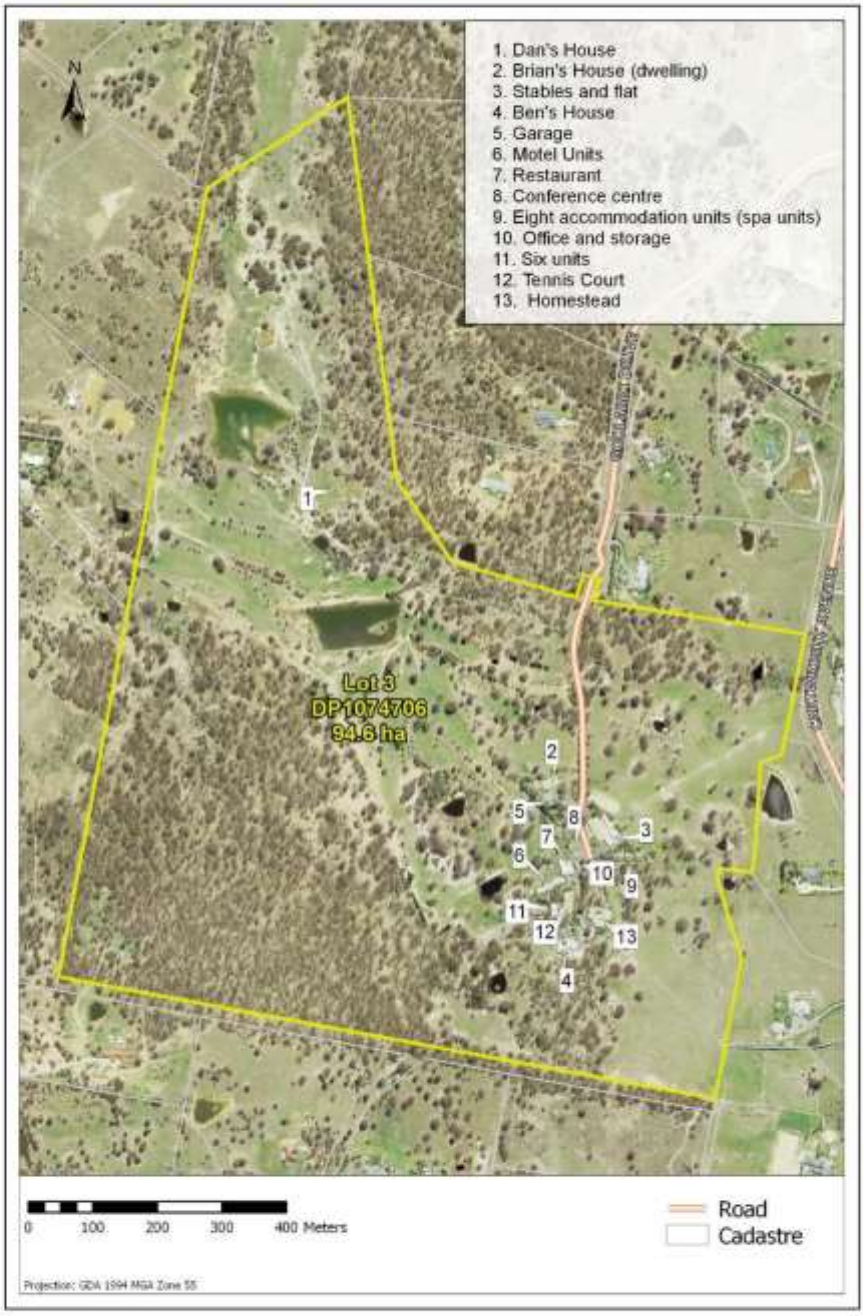
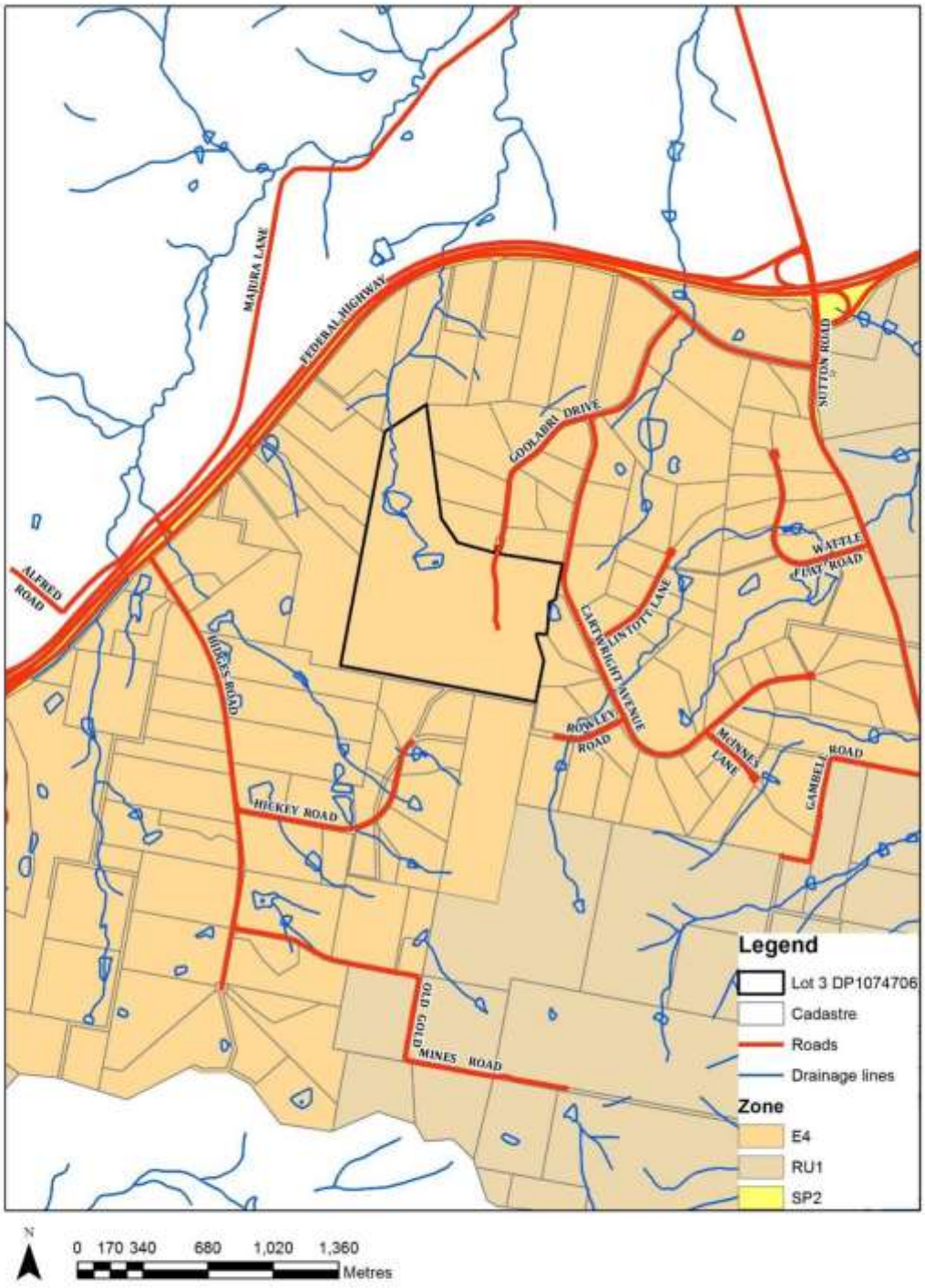


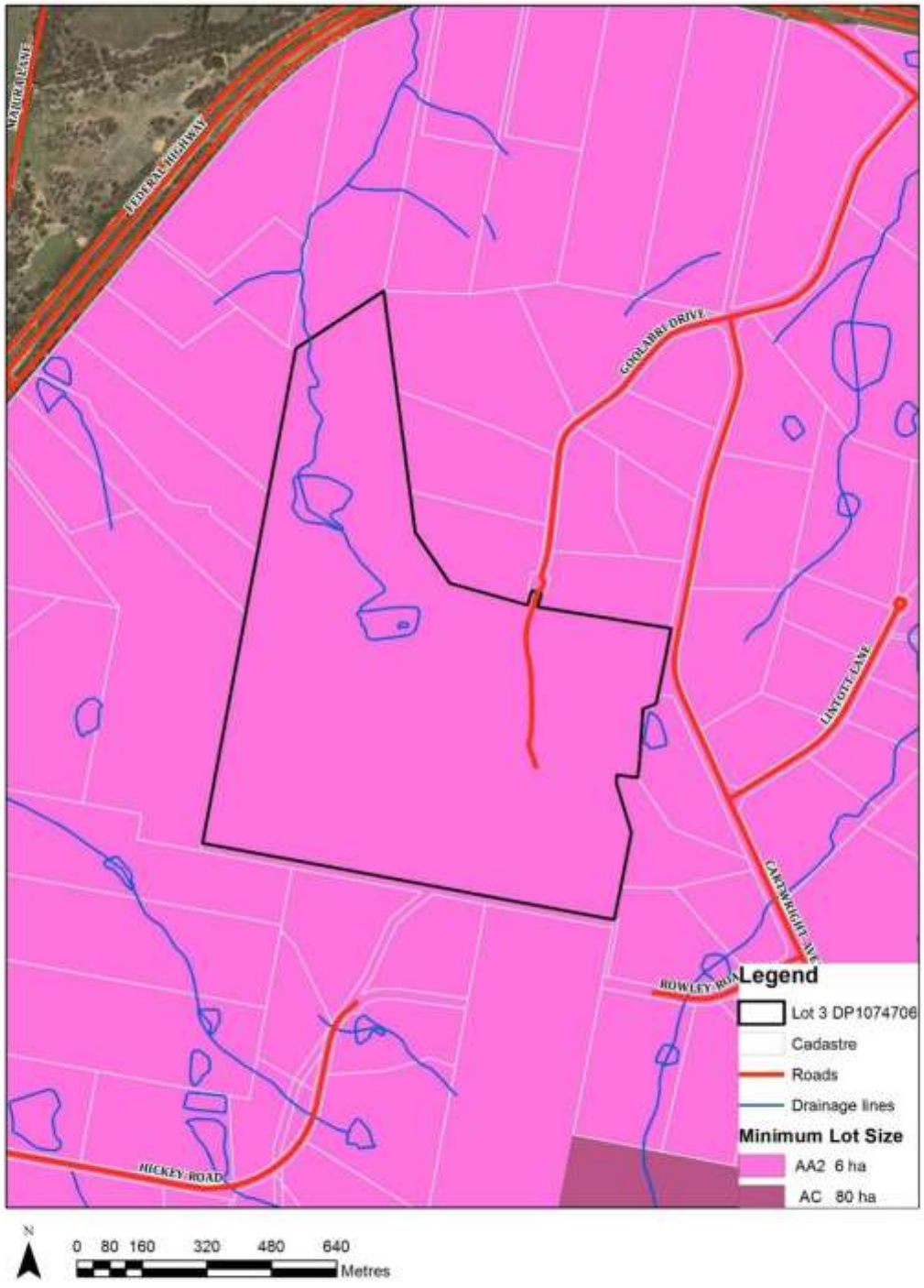
Map 4 Lot 3 DP 1074706 and its current landuses

Source Queanbeyan-Palerang Regional Council



Map 5 Lot 3 DP 1074706 and the landuse zone

Source *Palerang Local Environmental Plan 2014*, Land Zoning Map



Map 6 Lot 3 DP 1074706 and the minimum lot size

Source *Palerang Local Environmental Plan 2014*, Lot Size Map

Part 1 Intended outcome

Schedule 1 of the *Palerang Local Environmental Plan 2014* will allow the subdivision with development consent of Lot 3 DP 1074706 into no more than six residential lots and one residual lot which will include the existing tourist/convention centre complex. The existing E4 Environmental Living subdivision provisions will apply to the subdivision of the land.

Part 2 Explanation of provisions

The amendment of Schedule 1 of the *Palerang Local Environmental Plan 2014* will allow the subdivision, with development consent of Lot 3 DP 1074706 to create no more than six residential lots and a residue lot.

Part 3 Justification

Section A Need for the planning proposal

Question 1 Is the planning proposal a result of any strategic study or report

The planning proposal is not part of a strategic study or a report however, the subject lot is part of an existing rural residential area. The Rural Lands Study Report (p139) suggests that based on the uptake of rural residential lots in the western part of the former Palerang local government area that there is a need to plan for the creation of residential lots in the E4 landuse zone in similar numbers to the past decade.

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

A planning proposal to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* is the only means of achieving the intended outcome. The following paragraphs provide the background to the reason for the planning proposal:

Lot 3 DP 1074706 is zoned E4 Environmental Living under the *Palerang Local Environmental Plan* 2014 and was created as part of the "Sutton Acres" subdivision of Lot 2 and 3 DP 827113 and Lot 6 DP 234480 which was approved in 1998. Over a number of stages 60 lots were created.

The subject land was developed for the purposes of accommodation and a golf course in the late 1980s/early 1990s. The land was zoned 1(a) General Rural under the Yarrowlumla Local Environmental Plan 1986 and the Yarrowlumla Local Environmental Plan 1993 until the gazettal of the Yarrowlumla Local Environmental Plan (Amendment No.8) in March 1998. This amendment created a new rural residential zone 1(d1) Rural Residential Zone and applied the zone to land in the Sutton area that had been identified as suitable for rural residential development in Yarrowlumla Council's 1994 Rural Residential Local Environmental Study. The zone was later applied to the Royalla area by the Yarrowlumla Local Environmental Plan 1993 (Amendment No. 14).

Following the gazettal of Amendment No. 8 in March 1998, Council became aware that a number of planning controls that applied in the 1(d) Rural Residential Zone had inadvertently

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been omitted under the new 1(d1) zone. One of these was a control on further subdivision of large lots created under the averaging provision. Council resolved to prepare an amendment to address this in July 1998, exhibited the draft plan during August and Yarrowlumla Local Environmental Plan 1993 (Amendment No. 29) was gazetted on 18 December 1998.

The 1(d1) subdivision controls applied a simple 6 hectare average lot size which was later applied to all residential land in Yarrowlumla under the Yarrowlumla Local Environmental Plan 2002. A feature of these controls was that there was only one opportunity for subdivision. Large lots created under the 1(d1) controls could not be further subdivided, even, if the first subdivision did not create the maximum number of lots that was permissible. The simpler (compared to those that applied in the 1(d) zone subdivision controls did not allow for staged subdivision approval).

In the case of the subject land, at the time of the subdivision of the rural properties 'Sutton Acres' and 'Goolabri Park' for rural residential development in 1998, the applicant wished to continue to operate the golf course and resort development on Goolabri Park and as a result a large (95 ha) lot was created to include the commercial development.

As Lot 3 DP 1074706 is within an existing rural residential area, the number of lots to be created is small, the existing road infrastructure will be utilised and the lots will be used for residential purposes and are primarily in areas that have previously been disturbed, the subdivision of this lot is unlikely to have a detrimental impact on the environment or create an undesirable precedent provided that the indicative lot layout is amended to address the access to the proposed lot 1 and identified listed native vegetation.

Section B Relationship to strategic planning framework

Question 3 Is the planning proposal consistent with the objectives and actions of the applicable regional or sub-regional strategy and exhibited draft strategies

The *South East and Tablelands Regional Plan 2036* was released in July 2017 and applies to nine local government areas including Yass Valley, Snowy Monaro, Upper Lachlan, Wingecarribee and Queanbeyan-Palerang. One of the directions of the Plan are to provide a greater supply of housing supply and choice. Page 63 of the Plan states that the "Queanbeyan-Palerang Local Government Area is expected to require an additional 12,050 dwellings to accommodate 25,050 by 2036." The planning proposal is consistent with the applicable regional strategy.

Question 4 Is the planning proposal consistent with a council's local strategy or other local strategic plan

The Rural Lands Strategy developed a 20 year strategic direction for rural, rural residential and environmental land in the former Palerang local government area and was the principle output of the Rural Lands Study completed in early 2017. The strategy does not include the identification of future rural residential areas. However, it should be noted that Lot 3 DP 1074706 is currently zoned E4 Environmental Living and that this planning proposal will not amend the landuse zone. The proposed lots will be within an established rural residential area.

The planning proposal is consistent with the draft *Queanbeyan-Palerang Community Strategic Plan 2018-28*, Strategic Pillar 3 – Character, Key Goal 3.5 which requires that future planning of the region is well coordinated and provides for sustainable management.

Question 5 Is the planning proposal consistent with the applicable State Environmental Planning Policies

Name of State Environmental Planning Policy		Consistency with the State Environmental Planning Policy
44	Koala Habitat Protection	Applicable. A flora and fauna report has been prepared for the subdivision (as stated above). The report did not identify the site as containing koalas. Consistent
55	Remediation of land	The proponent has stated that a "contaminated lands assessment has not been undertaken however based on land ownership knowledge there are no known contaminated sites on the land holding". Based on this statement it is not considered necessary to undertake a contaminated land assessment.
	SEPP (Rural Lands) 2008	Not applicable. The land is currently zoned E4 Environmental Living and this planning proposal will not amend the land use zoning.
	SEPP (Vegetation in Non-Rural Areas) 2017	Applicable. The land is currently zoned E4 Environmental Living. The planning proposal seeks to permit with consent subdivision of the subject lot. Clearing of vegetation is not required for the planning proposal.

Question 6 Is the planning proposal consistent with applicable Ministerial Directions

	Name of direction	Applicability and consistency with the direction
1.1	Business and Industrial Zones	Not applicable
1.2	Rural Zones	Not applicable
1.3	Mining, Petroleum Production and Extractive Industries	Not applicable
1.4	Oyster Aquaculture	Not applicable
1.5	Rural Lands	Not applicable
2.1	Environment Protection Zones	Applicable and consistent

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	Name of direction	Applicability and consistency with the direction
2.2	Coastal Protection	Not applicable
2.3	Heritage Conservation	Applicable. Refer to the section below regarding the heritage assessment of the site.
2.4	Recreation Vehicle Areas	Applicable and consistent
2.5	Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	Not applicable
3.1	Residential Zones	Applicable and consistent. The proposal is allowing a provision that was contained in a previous local environmental plan
3.2	Caravan Parks and Manufactured Home Estates	Applicable and consistent. The proposal is not rezoning the land.
3.3	Home Occupations	Applicable and consistent.
3.4	Integrating Land Use and Transport	Not applicable
3.5	Development near Licensed Aerodromes	Not applicable
4.1	Acid Sulfate Soils	Not applicable
4.2	Mine Subsidence and Unstable Land	Not applicable
4.3	Flood Prone Land	Not applicable
4.4	Planning for Bushfire Protection	Applicable and consistent. Refer to the section below.
5.1	Implementation of Regional Strategies	Applicable and consistent.
5.2	Sydney Drinking Water Catchments	Not applicable
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	Not applicable
5.4	Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable
5.8	Second Sydney Airport: Badgerys Creek	Not applicable
5.9	North West Rail Link Corridor Strategy	Not applicable

QPRC

	Name of direction	Applicability and consistency with the direction
5.10	Implementation of Regional Plans	Applicable and consistent.
6.1	Approval and Referral Requirements	Applicable and consistent.
6.2	Reserving Land for Public Purposes	Applicable and consistent.
6.3	Site Specific Provisions	Not applicable
7.1	Implementation of the Metropolitian Plan for the Sydney 2036	Not applicable
7.2	Implementation of Greater Macarthur Land Release Investigation	Not applicable
7.3	Parramatta Road Corridor Urban Transformation Strategy	Not applicable
7.4	Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	Not applicable
7.5	Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
7.6	Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable
7.7	Implementation of Glenfield to Macarthur Urban Renewal Corridor	Not applicable

Section C Environmental, social and economic impact

Question 7 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

Good Environmental Systems prepared a Fauna and Flora Survey and Assessment Report in 2014 which considered the environmental impact of a 4 lot subdivision (3 new lots with 1 residual lot). This report along with the other supporting studies and the original Planning Proposal, for a subdivision consisting of 6 new lots and 1 residual lot was forwarded to the Office of Environment and Heritage (OEH) and the Rural Fire Services (RFS) for comment, as required by the Gateway Determination. In November 2016, the OEH responded with a requirement that an updated flora and fauna report be prepared to address the additional

information required including a map of the vegetation community types onsite and location any hollow bearing trees.

In 2018, Ecological Australia prepared a Flora and Fauna Study on Lot 3 DP 1074706 with the purpose of identifying the ecological values present on the site and to provide recommendations to minimize or mitigate impacts associated with the proposed 7 lot subdivision (6 new lots plus one residual lot). The report also noted that the site is mapped in the *South East and Tablelands Regional Plan 2036* as containing land of High Environmental Value and Conservation Corridor Land.

The report by Ecological Australia, identified and mapped 6 vegetation zones. These vegetation zones comprise of three vegetation communities:

- Plant Community Type (PCT) 1330 Yellow Box – Blakely's Red Gum grassy woodland;
- PCT1093 Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest; and
- Exotic pasture and Native/Exotic plantings which does not correspond to a PCT.

The report identified that the two native vegetation communities PCT 1330 and PCT 1093, are present in various degrees of condition and were therefore mapped as separate zones. The report (p9) notes that "One of the vegetation communities located within the subject land qualified as a Threatened Ecological Community under the *Environment Protection and Biodiversity Conservation Act* and/or *Biodiversity Conservation Act*" and that "All areas mapped as PCT1330 were considered of sufficient quality to meet the requirements for assessment as the *Biodiversity Conservation Act* listed EEC White Box Yellow Box Blakely's Red Gum Woodland". In addition, the report notes (p28) "the majority of this vegetation community met the condition requirements of the *Environment Protection and Biodiversity Conservation Act* listed community White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and DNG."

The report summarises the status of the vegetation on the site as follows "The patches of the community in *Environmental Protection and Biodiversity Conservation Act* are considered to represent a very high ecological constraint due to being a Critically Endangered Ecological Community (CEEC)". The definition of Critically Endangered Ecological Community is provided in Note 1 below. Any direct impacts to this CEEC would require referral to the Commonwealth Department of the Environment and Energy. The areas mapped as meeting only the BC Act listed EEC pose a high constraint, and offer opportunities for improvement through appropriate management. These areas of EEC shown in Figure 4 are considered to be validated boundaries and extent of High Environmental Value lands. Managing and enhancing these areas of EEC (both good condition and DNG), as well as the large remnant patch of PCT1093 within the remnant lot, for biodiversity outcomes, will contribute to the aim and actions outlined in the South East and Tableland Regional Plan 2017, Direction 15: Enhance biodiversity connections." (p28)

Note 1: Under the NSW *Biodiversity Conservation Act 2016*, an ecological community maybe listed as vulnerable, endangered or critically endangered. Clause 4.4 (1)of the *Biodiversity Conservation Act 2016* states that "A species is eligible to be listed as a critically endangered species if, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in Australia in the immediate future, as determined in accordance with criteria prescribed by the regulations."

The map below provides a summary of the ecological values of the site and includes the location of the threatened ecological communities (as per the *Environmental Protection and Biodiversity Conservation Act* and the *Biodiversity Conservation Act2016*) in relation to the indicative subdivision design. The map also indicates the location of hollow bearing trees, bird nests, termite mounds and large woody debris as requested by the Office of Environment and Heritage.

Map 7 Summary of Ecological Values

Source Sutton Planning Proposal Flora and Fauna Study (Figure 4; p30) by Eco Logical Australia

The report also mapped key fauna habitat components on the subject land including "26 hollow-bearing trees (HBTs), 8 termite mounds, large woody debris, Amyema sp. (mistletoe), bird nests, and farm dams and ephemeral creek lines." However, the report noted (p21) that "no threatened fauna species listed under either the *Biodiversity Conservation Act* or *Environment Protection and Biodiversity Conservation Act* were observed."

In order to mitigate or minimize the potential impact of the proposal on native fauna or flora the report (p33) recommends the following:

- "Design the proposal to avoid any impacts to hollow-bearing trees and the *Environment Protection and Biodiversity Conservation Act* listed Critically Endangered Ecological Community.
- Confine all impact areas (building envelopes, infrastructure footprints) to lands mapped as Vegetation Zone 6 Exotic Pasture and Native/Exotic Plantings. (refer map below)
- Waterway crossings should be designed and constructed in accordance with the national guidelines.
- Updating and finalising the Vegetation Management Plan for the subject land, with a particular emphasis on managing and restoring the areas of TEC, establishing the vegetated riparian zone and retaining remnant mature trees.
- Develop a Construction Environmental Management Plan to address potential pollution and contamination issues, which could arise during construction, and to incorporate Unexpected Find and Pre-clearing and Clearing Supervision procedures (particularly focused on avoiding impacts to hollow-dependent fauna)."

The map below indicates the areas of vegetation zones across the site inconjection with the indicative subdivsion layout.

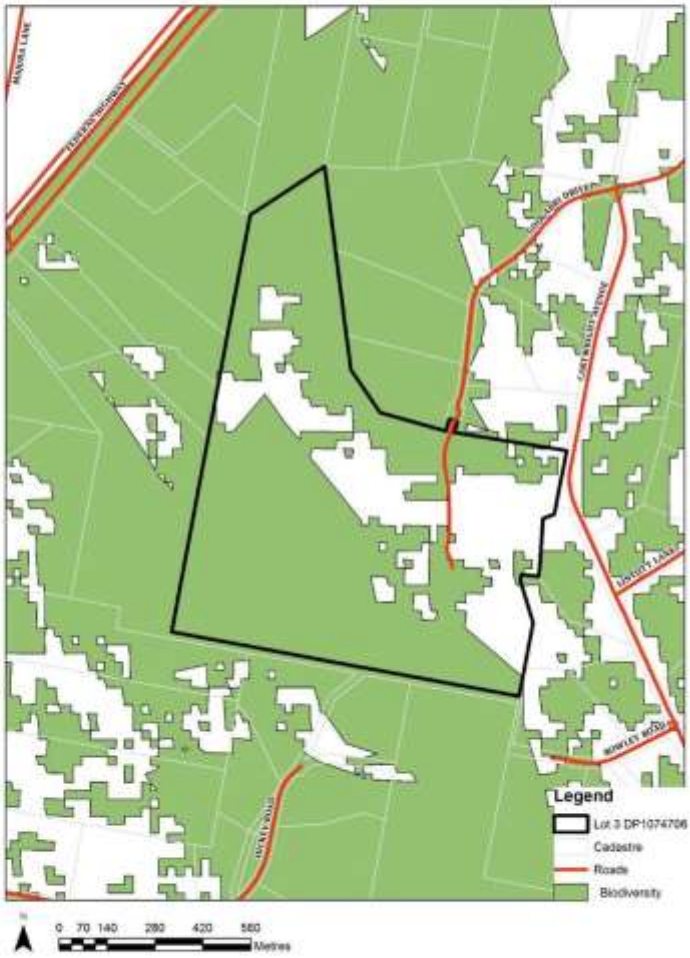
Map 8 Vegetation zones

Source Sutton Planning Proposal Flora and Fauna Study (Figure 2; p12) by Eco Logcal Australia

In summary, while the current informal road network within the site provides access to each of the proposed lots, the most likely access to Lot 1 is through Critically Threatened Ecological Communities. As any requirement to upgrade this access is likely to cause fragmentation of this patch of Threatened Ecological Community the current indicative layout for lot 6 is not supported.

While the indicative subdivision layout (particularly Lot 1) is not supported, an indicative lot layout has been provided which demonstrates that sufficient building envelopes and impact areas, infrastructure footprints) can be provided for up to 6 additional lots plus the residual Lot on land mapped as vegetation zone 6.

The *Palerang Local Environmental Plan 2014,* Terrestrial Biodiversity Map below shows the areas that contain native vegetation. The map is relatively consistent with the flora and fauna report. There is no need to amend this map.



Map 9 Terrestrial Biodiversity

Source Palerang Local Environmental Plan 2014, Terrestrial Biodiversity Map

Question 8 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed

Reports for the site have been prepared for Aboriginal cultural heritage, water supply and effluent disposal in relation to the subdivision, these are outlined below.

Aboriginal cultural and European heritage

While an Aboriginal cultural heritage assessment was undertaken in February 2014 and submitted with the Planning proposal for a proposed subdivision, the Office of Heritage and Environment have required that a new archaeological survey be undertaken and that the report includes information about the length and placement of survey transects.

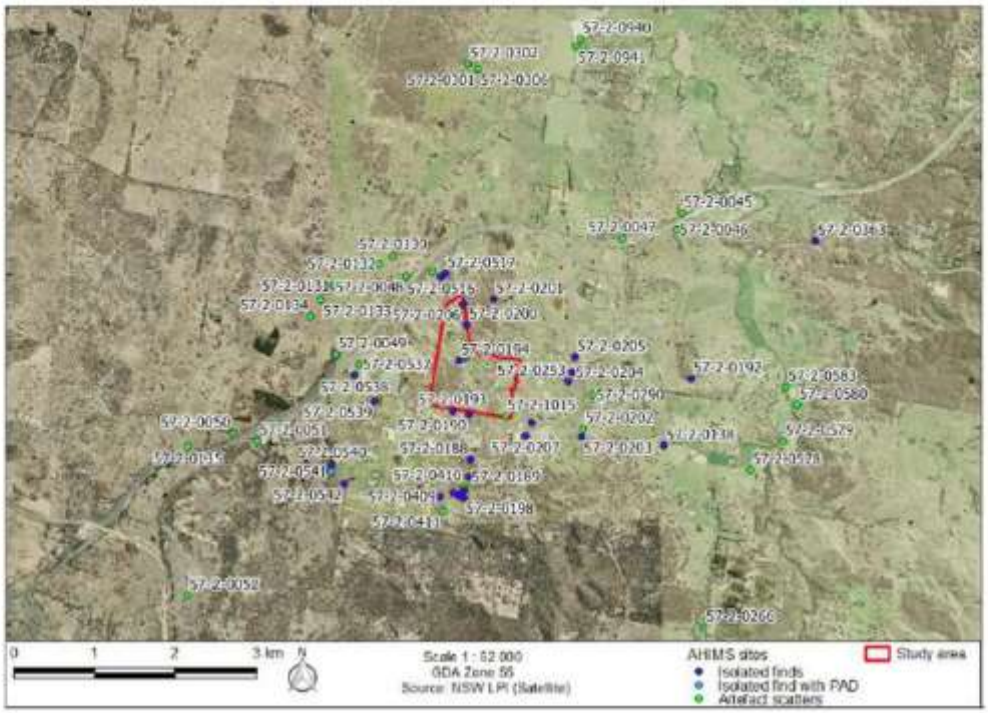
A final Aboriginal Cultural Heritage Impact Assessment report was submitted by OzArk EHM in May 2018. This report (p iv) notes that a "desktop assessment found that four Aboriginal site recordings previously registered with AHIMS were located within the study area. These sites are an artefact scatter Goolabri 1 (57-2-1015) and three isolated finds, IA9 (57-2-0206), IA10 (57-2-0200), and IA3 (57-2-0194)". However, field investigations have now established that AHIMS IA3 (57-2-0194) is not located within the study area.

A visual inspection of the study area was undertaken by OzArk Principal Archaeologist, Ben Churcher, on 15 March 2018 to ground-truth the findings of the desktop assessment. The report (p iv) states that "artefact scatter Goolabri 1 (#57-2-1015) was located and found to still be visible in the landscape. No evidence of IA9 (#57-2-0206) or IA10 (#57-2-0200) could be found, however, the AHIMS locations match the site description in the report and it must be assumed that the artefacts are obscured and that the sites remain valid."

The report (piv) advises that "No new Aboriginal sites were identified during this assessment and no landforms of archaeological potential were assessed as being present."

The report concluded (piv) that "all Aboriginal objects present in the study area could be avoided" and that "works associated with the proposal are not expected to harm Aboriginal cultural heritage items or places." However, to ensure the highest level of protection for the area's Aboriginal cultural heritage values, the report made a number of recommendations that are relevant to the works being conducted onsite and should be applied to any development consent.

The map below indicates the Aboriginal site recordings previously registered with AHIMS.



Map 10 Aboriginal sites registered with AHIMS

Source Aboriginal Cultural Heritage Impact Assessment (Figure 4-1; p15) by OzArk

Non-potable water supply

A report concerning the supply of non-potable water was prepared in February 2014 as part of the subdivision application. At the time of the preparation of the subdivision application and associated reports, the Yarrowlumla Local Environmental Plan 2002 (clause 18(1)(f)(1)) and Yarrowlumla Development Control Plan Rural Zones were in force and both required a non-potable water supply for each lot. Neither the *Palerang Local Environmental Plan 2014* nor the *Palerang Development Control Plan 2015* have this requirement. It is recommended that this report is reviewed as part of the application for subdivision.

Effluent disposal

As there is no reticulated sewer scheme, on-site effluent disposal schemes are required for each dwelling. An assessment for on-site effluent disposal was prepared as part of the subdivision application for two lots (the other lots being the residual and already having a dwelling). The report states "the sites are well suited to irrigation of secondary treated effluent from a NSW Health accredited treatment system. Other forms of effluent treatment and disposal may be

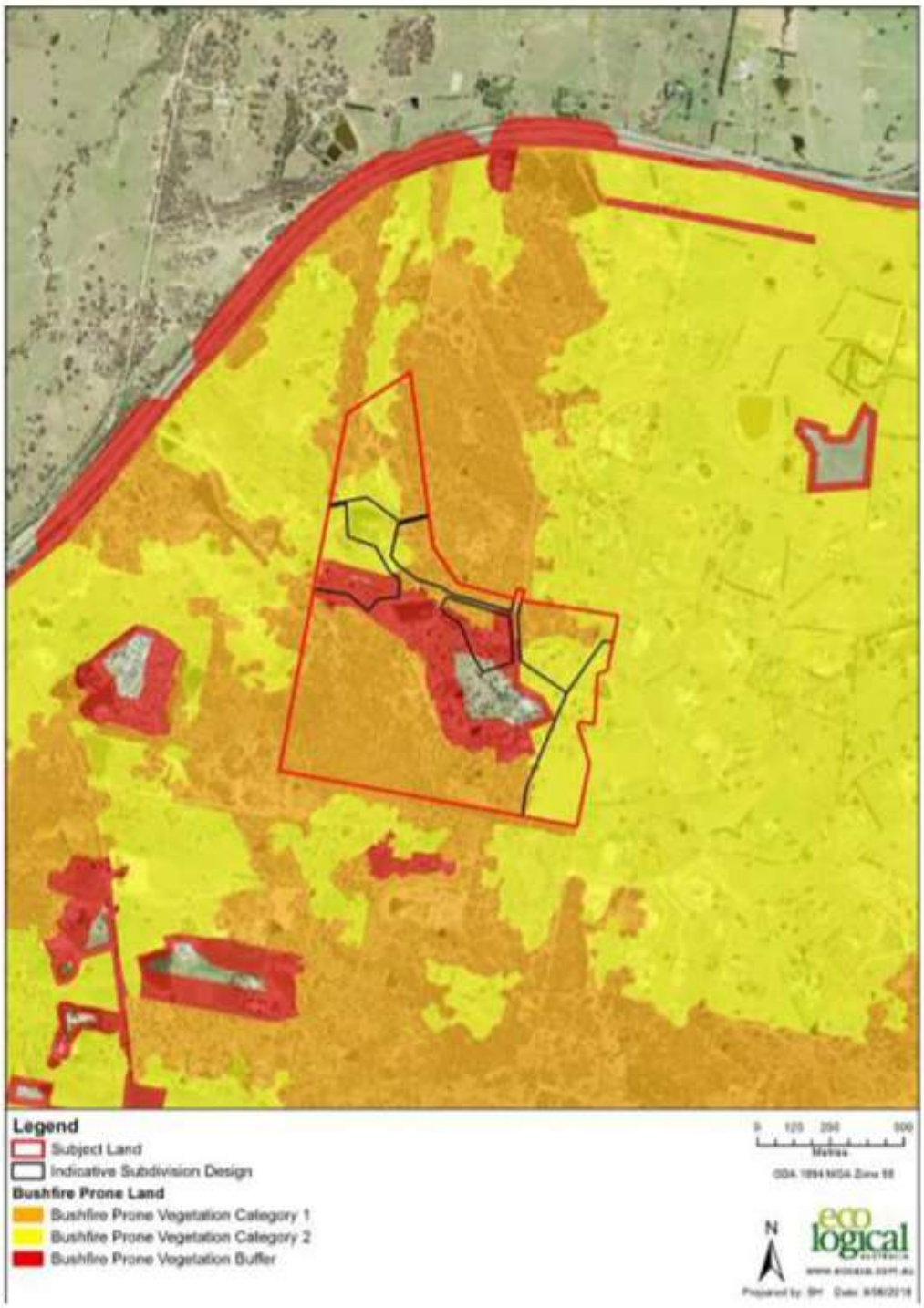
suitable at particular locations, but should be addressed at the time of submitting building plans." (p1). It is recommended that this report is reviewed as part of the application for subdivision.

Bushfire

The bushfire map for the former Palerang local government is shown below. The majority of the lot is bushfire prone. A bushfire report was prepared for a subdivision application of the subject lot as discussed in the introduction of this document. The report states "Based on the above information it is considered that this development can comply with clause 44 of the Rural Fires Act, all aspects of building in fire prone area, and planning for bushfire protection" (p10). It is recommended that the planning proposal is referred to the NSW Rural Fire Service.

The planning proposal and bushfire report was submitted to the Rural Fire Services (RFS) for comment in October 2016. The RFS advised that, on the basis of the information provided, they were not in a position to properly assess the application and requested that additional information be provided.

In June 2018, Ecological Australia prepared a Bushfire Protection assessment based on the subdivision of Lot3 DP 1074706 into 6 residential lots and 1 residual lot (refer Appendix C). As requested by the Rural Fire Services the assessment was calculated from the "Planning for Bushfire Protection 2006" (RFS2006). The report concluded that the planning proposal can comply with the acceptable solutions within '*Planning for Bush Fire Protection 2006*'. The need for a second access road will need to be considered at the subdivision stage.



Map 11 Bushfire prone map

Source Bushfire Protection Assessment June 2018 (Figure 2 on p 4) by Eco Logical Australia.

Question 9 Has the planning proposal adequately addressed any social and economic effects

The planning proposal will allow residential subdivision in an existing rural residential area. It is considered that the social and economic impacts would be minor.

Section D State and Commonwealth interests

Question 10 Is there adequate public infrastructure for the planning proposal

As the planning proposal relates to an existing rural residential area there are roads in place in the vicinity of the site of the planning proposal. The requirements for additional roads will be addressed as part of the subdivision application. The site does not have a water or sewer scheme managed by Council. The potable water and effluent disposal studies have been outlined above.

There is a primary school under ten kilometres from the rural residential area and buses to high schools in Queanbeyan and Canberra, fifteen minutes away. There are existing health facilities in Queanbeyan and Canberra.

Question 11 What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination

The Gateway determination requires consultation with the following government agencies:

- NSW Rural Fire Services
- Office of Environment and Heritage

Both agencies have been consulted and have requested revised reports with additional information. Council has received this revised reports.

Part 4 Mapping

There will be no mapping required.

Part 5 Community consultation

The Planning Proposal will be exhibited for 28 days. The following reports will be exhibited and reviewed (as outlined above).

- Flora and fauna
- Aboriginal cultural heritage
- Bushfire

The reports concerning on-site effluent disposal and non-potable water supply will be considered as part of the application for subdivision.

Part 6 Project timeline

Stage	Completion date
Date of Gateway determination	4 August 2016
Initial government agency consultation	Completed end of September 2016
Revised consultant reports	Completed June 2018
Report to Council with amended planning proposal	27 February 2019
Government agency consultation	March 2019
Anticipated commencement and completion dates for public exhibition period	April/May 2019
Anticipated timeframe for consideration of submissions	May 2019
Anticipated date of report to Council review of submissions	22 May 2019
Request to Parliamentary Counsel to draft the LEP	21 June 2019
Amended local environmental plan gazetted	Friday 2 August 2019

Appendices

Appendix A Aboriginal Cultural Heritage, May 2018

Appendix B Flora and Fauna, January 2018

Appendix C Bushfire, June 2018

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 3 GATEWAY DETERMINATION ORIGINAL AUGUST 2016

Attachment 3 - Gateway Determination Original August 2016

NSW GOVERNMENT | Planning & Environment

Our ref: 16/01230

Peter Tegart
General Manager
Queanbeyan Palerang Regional Council
PO Box 90
QUEANBEYAN NSW 2620

Attention: Sue Robb

Dear Mr Tegart

Planning Proposal PP_2016_QPREG_002_00 – Alteration of Gateway Determination

I refer to Planning Proposal PP_2016_QPREG_002_00 to amend the Palerang Local Environmental Plan (LEP) 2014 to permit the subdivision of Lot 3 DP 1074706 in to 6 residential lots and 1 residue lot.

I have determined as the delegate of the Minister, in accordance with section 56(7) of the *Environmental Planning and Assessment Act 1979* to alter the Gateway determination dated 4 August 2016 for PP_2016_QPRC_002_00 to provide an extension until 4 February 2018 to enable the LEP to be made. The Alteration of the Gateway Determination is enclosed.

If you have any questions in relation to this matter, I have arranged for Ms Meredith McIntyre to assist you. Ms McIntyre can be contacted on 6229 7912.

Yours sincerely

26/6/17

Karen Armstrong
Director Regions, Southern
Planning Services

Encl:
Alteration to Gateway Determination

Planning and Environment - Southern Region
PO Box 5475 Wollongong NSW 2520 | | T 02 4224 9450 | F 02 4224 9470 | **www.planning.nsw.gov.au**

NSW GOVERNMENT | Planning & Environment

Alteration of Gateway Determination

Planning proposal (Department Ref: PP_2016_QPREG_002_02)

I, the Director Regions, Southern, at the Department of Planning and Environment as delegate of the Minister for Planning, have determined under section 56(7) of the *Environmental Planning and Assessment Act 1979* (the Act) to alter the Gateway determination dated 4 August 2016 for the proposed amendment to the Palerang Local Environmental Plan 2014 as follows:

1. Delete:

   "condition 5"

   and replace with:

   a new condition 5 "The timeframe for completing the LEP is to be 18 months from the date of the Gateway Determination"

Dated 26TH day of JUNE 2017

Karen Armstrong

Karen Armstrong
Director Regions, Southern
Planning Services
Department of Planning and Environment

Delegate of the Minister for Planning

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 4 GATEWAY DETERMINATION EXTENSION TO 4 AUGUST 2019

Attachment 4 - Gateway Determination ext to 4 August 2019

NSW GOVERNMENT Planning & Environment

Alteration of Gateway Determination

Planning proposal (Department Ref: PP_2016_QPREG_002_00)

I, the Director Regions, Southern at the Department of Planning and Environment, as delegate of the Minister for Planning, have determined under section 3.34(7) of the *Environmental Planning and Assessment Act 1979* to alter the Gateway determination dated 4 August 2016 (as since altered 26 June 2017 and 27 April 2018) for the proposed amendment to the Palerang Local Environmental Plan 2014 as follows:

1. Delete:

   "condition 5"

   and replace with:

   a new condition 5 "The time frame for completing the LEP is by 4 August 2019"

Dated 7th day of August 2018.

Sarah Lees
Director Regions, Southern
Planning Services
Department of Planning and Environment

Delegate of the Minister for Planning

PP_2016_QPREG_002_00 (IRF/4303)

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 5 ABORIGINAL CULTURAL HERITAGE REPORT

Attachment 5 - Aboriginal cultural heritage report

View of study area at Lot 3 DP1074706.

ABORIGINAL CULTURAL HERITAGE IMPACT ASSESSMENT

Planning Proposal for Lot 3 DP 1074706 (PROJ0035/11/6)

Sutton, NSW

Queanbeyan-Palerang Regional LGA

May 2018

Report Prepared by

OzArk Environmental & Heritage Management Pty Ltd

for Queanbeyan-Palerang Regional Council

Environmental and Heritage Management P/L

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DOCUMENT CONTROLS

Proponent	Queanbeyan-Palerang Regional Council		
Client			
Project No / Purchase Order No			
Document Description	Aboriginal Cultural Heritage Impact Assessment: *Planning Proposal for Lot 3 DP 1074706 (PROJ0035/11/6), Sutton NSW.*		
	Name	Signed	Date
Clients Reviewing Officer			
Clients Representative Managing this Document		OzArk Person(s) Managing this Document	
Location		OzArk Job No.	
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Draft V2.0 Report Draft for release to client (Series V2._ = OzArk and Client edits)		V2.0 BC incorporates client edits 3/5/18	
FINAL V3._once latest version of draft approved by client		V3.0 BC finalises 7/5/18 V3.1 BC amends 7/5/18	
Prepared For		Prepared By	
Sue Robb Program Co-ordinator Strategic East Queanbeyan-Palerang Regional Council		Ben Churcher Principal Archaeologist OzArk Environmental & Heritage Management Pty. Limited 145 Wingewarra Street (PO Box 2069) Dubbo NSW 2830 P: 02 6882 0118 F: 02 6882 6030 ben@ozarkehm.com.au	

Acknowledgement

OzArk acknowledge Traditional Owners of the area on which this assessment took place and pay respect to their beliefs, cultural heritage and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

EXECUTIVE SUMMARY

OzArk Environmental & Heritage Management has been engaged by Queanbeyan-Palerang Regional Council (the proponent) to complete an Aboriginal heritage assessment for the planning proposal (PROJ0035/11/6) for Lot 3 DP1074706 on Goolbari Drive, Sutton NSW (the study area). The planning proposal seeks to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* to allow a development application for the subdivision of Lot 3 DP1074706 into six residential lots varying in size from 4–8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and approximately 27 hectares of native vegetation (the proposal). The proposal is situated within the Queanbeyan-Palerang Local Government Area.

The desktop assessment found that four Aboriginal site recordings previously registered with AHIMS were located within the study area. These sites are an artefact scatter Goolabri 1 (57-2-1015) and three isolated finds, IA9 (57-2-0206), IA10 (57-2-0200), and IA3 (57-2-0194). However, consultation of the original report found that the AHIMS coordinates for IA3 (57-2-0194) are wrong and that the site is not located in the study area.

A visual inspection of the study area was undertaken by OzArk Principal Archaeologist, Ben Churcher, on 15 March 2018 to ground-truth the findings of the desktop assessment. The artefact scatter Goolabri 1 (#57-2-1015) was located and found to still be visible in the landscape. No evidence of IA9 (#57-2-0206) or IA10 (#57-2-0200) could be found, however, the AHIMS locations match the site description in the report and it must be assumed that the artefacts are obscured and that the sites remain valid.

No new Aboriginal sites were identified during this assessment and no landforms of archaeological potential were assessed as being present.

It was determined that all Aboriginal objects present in the study area could be avoided. As such, works associated with the proposal are not expected to harm Aboriginal cultural heritage items or places.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1) The proposed work may proceed at Lot 3 DP 1074706 without further archaeological investigation under the following conditions:
    a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent, archaeologically sensitive landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.

b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.

2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. However, during the course of works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 3**) should be followed;
3) Contractors involved with any ground clearing/excavation work associated with the proposal should be provided with the location of Goolabri 1 (57-2-1015), IA9 (57-2-0206) and IA10 (57-2-0200) and all efforts made to avoid these sites;
4) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal artefacts (see **Appendix 4**) and are aware of the legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and the contents of the *Unanticipated Finds Protocol*.
5) This report should be sent to the Registered Aboriginal Parties (RAPs) as a courtesy and to ensure that they are informed that the current assessment will not be progressing further as an Aboriginal Heritage Impact Permit is not required.

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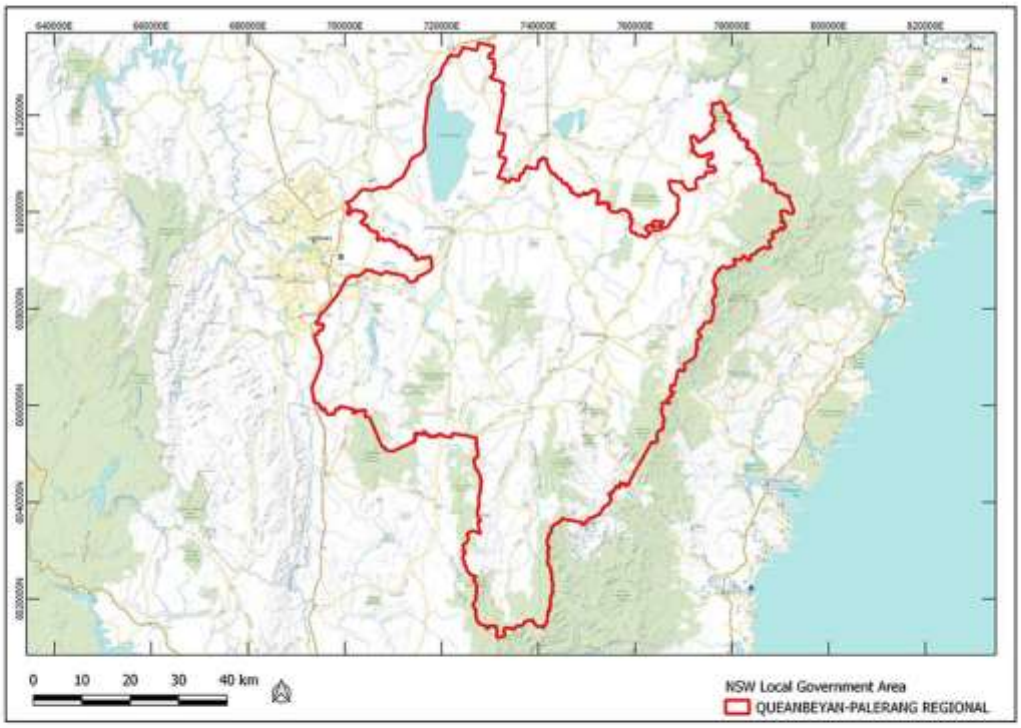
1 INTRODUCTION

1.1 BRIEF DESCRIPTION OF THE PROPOSAL

OzArk Environmental & Heritage Management has been engaged by Queanbeyan-Palerang Regional Council (the proponent) to complete an Aboriginal heritage assessment for the planning proposal (PROJ0035/11/6) for Lot 3 DP1074706 on Goolbari Drive, Sutton NSW (the study area). The planning proposal seeks to amend Schedule 1 of the *Palerang Local Environmental Plan 2014* (Palerang LEP) to allow a development application for the subdivision of Lot 3 DP1074706 into six residential lots varying in size from 4–8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and approximately 27 hectares of native vegetation (the proposal). The proposal is situated within the Queanbeyan-Palerang Local Government Area (LGA) (**Figure 1-1** and **Figure 1-2**).

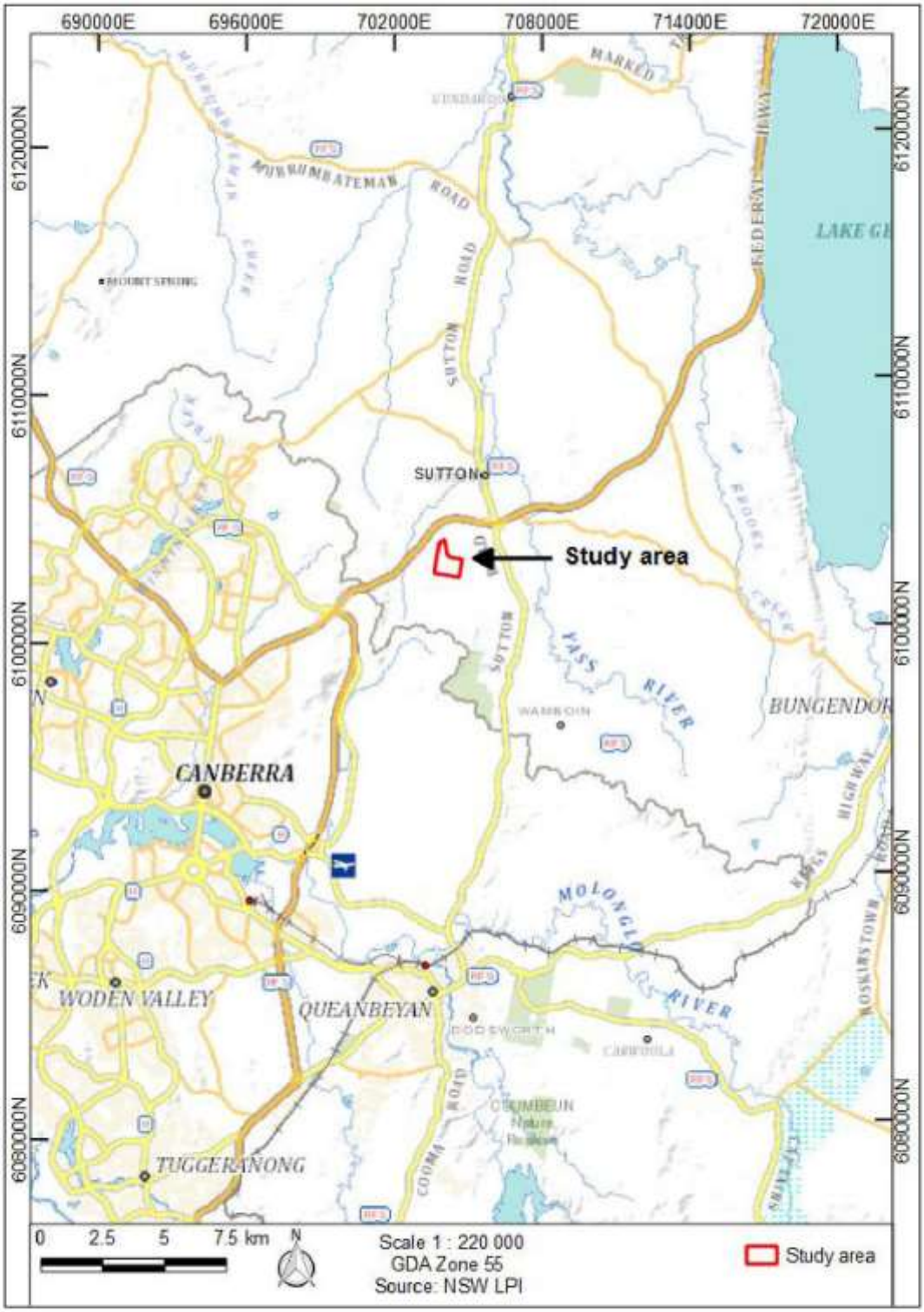
Figure 1-1: Location of the proposal – Queanbeyan-Palerang Regional LGA.



1.2 PROPOSED WORK

The proposal seeks to amend Schedule 1 of the Palerang LEP to allow a development application for the subdivision of Lot 3 DP1074706. As such, there is no proposed work associated with the proposal and any subdivision of Lot 3 DP1074706 will require a separate development application.

Figure 1-2: Location of the study area.



1.3 STUDY AREA

Lot 3 DP1074706 comprises 94.51 hectares of land located 3.5 kilometres (km) southwest of Sutton, NSW. It is accessed from Goolabri Drive and Cartwright Avenue which connect via a service road to the Federal Highway and Sutton Road. The lot is currently zoned E4 Environmental Living under the Palerang LEP.

The lot currently contains a convention centre complex, disused golf course, one dwelling, several small dams and an area of native vegetation (**Figure 1-3**). The land surrounding the lot is rural residential having been created as part of a subdivision in 2002.

Figure 1-3: Aerial showing the Study Area.

1.4 RELEVANT LEGISLATION

Cultural heritage is managed by a number of state and national Acts. Baseline principles for the conservation of heritage places and relics can be found in the *Burra Charter* (Australia ICOMOS 2013). The *Burra Charter* has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The *Burra Charter* generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a state level.

A number of Acts of parliament provide for the protection of heritage at various levels of government.

1.4.1 State legislation

Environmental Planning and Assessment Act 1979 (EP&A Act)

This Act established requirements relating to land use and planning. The framework governing environmental and heritage assessment in NSW is contained within the following parts of the EP&A Act:

- **Part 3:** Planning Instruments
    - **Division 3.4:** Making of environmental planning instruments for local areas' Local Environment Plans (LEPs)
- **Part 4:** Local government development assessments, including heritage
    - **Division 4.1:** Approvals process for state significant development
- **Part 5:** Environmental impact assessment on any heritage items which may be impacted by activities undertaken by a state government authority or a local government acting as a self-determining authority
    - **Division 5.1:** Approvals process for state significant infrastructure.

National Parks and Wildlife Act 1974 (NPW Act)

Amended during 2010, the NPW Act provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises NSW, being habitation both prior to and concurrent with the occupation of that area by persons of European extraction, and includes Aboriginal remains.

An Aboriginal place is defined under the NPW Act as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

As of 1 October 2010, it is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, such as:

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit* (AHIP) under Section 90 of the Act;

- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object; or
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

Under Section 89A of the Act, it is a requirement to notify the Office of Environment and Heritage (OEH) Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on Aboriginal Heritage Information Management System (AHIMS).

1.4.2 Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Matters of National Environmental Significance listed under the EPBC Act include the National Heritage List and the Commonwealth Heritage List, both administered by the Commonwealth Department of the Environment and Energy. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to National/Commonwealth heritage places.

1.4.3 Applicability to the proposal

It is noted there are no Commonwealth or National heritage listed places within the Study Area, and as such, the heritage provisions of the EPBC Act do not apply (see **Table 4-1**).

Part 3 of the EP&A Act that regulates the making of an environmental plan.

Any Aboriginal sites within the Study Area are afforded legislative protection under the NPW Act.

1.5 ASSESSMENT APPROACH

The current assessment follows the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010).

Field assessment and reporting followed the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011).

2 THE ARCHAEOLOGICAL ASSESSMENT

2.1 PURPOSE AND OBJECTIVES

The purpose of the current study is to identify and assess heritage constraints relevant to the proposal.

2.1.1 Aboriginal archaeological assessment objectives

The current assessment will apply the Code of Practice, in the completion of an Aboriginal archaeological assessment, in order to meet the following objectives:

Objective One: Undertake background research on the study area to formulate a predicative model for site location within the study area;

Objective Two: Engage with the local Aboriginal community to determine the cultural values of the study area;

Objective Three: Identify and record objects or sites of Aboriginal heritage significance within the study area, as well as any landforms likely to contain further archaeological deposits; and

Objective Four: Assess the likely impacts of the proposed work to Aboriginal cultural heritage and provide management recommendations.

2.2 DATE OF ARCHAEOLOGICAL ASSESSMENT

The fieldwork component of this assessment was undertaken by Ben Churcher, OzArk Principal Archaeologist, on the Thursday 15 March 2018.

2.3 ABORIGINAL COMMUNITY INVOLVEMENT

The archaeological investigation has followed Aboriginal community consultation as per the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRs). During November 2017 the proposal was advertised and potential interested parties were contacted and invited to register their interest in the proposal (**Appendix 1**). As a result, there are 10 individuals or groups that are regarded as Registered Aboriginal Parties (RAPs) for the proposal (**Table 2-1**).

Table 2-1: Registered Aboriginal Parties for the proposal.

Name of individual/group	Contact person
Buru Ngunawal Aboriginal Corporation	Wally Bell
King Brown Tribal Group	Carl Brown
Didge Ngunawal Clan	Lillie Carroll and Paul Boyd
Corroboree Aboriginal Corporation	Steve Johnson and Marylyn Johnson
Gulgunya Ngunawal Heritage Aboriginal Consultancy (GNHAC)	Glen Freeman
Muragadi Heritage Indigenous Corporation	Jesse Carroll Johnson and Vickylee Paddison

Name of individual/group	Contact person
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Turrise (Carroll)
Murra Bidgee Mullangari	Ryan Johnson
Thunderstone Cultural & Land Management Services Aboriginal Corporation	Tyronne Bell
Ngambri Local Aboriginal Land Council	

On 19 January 2018 a draft survey methodology was sent to all RAPs inviting comment on the methodology and inviting them to share any cultural values connected with the study area (**Appendix 1**). At the conclusion of the required 28 day review period, no comments were received that necessitated a change to the survey methodology.

No Aboriginal community members accompanied the visual inspection. In addition, there are no known cultural values or Aboriginal sites pertaining directly to the location of the proposal.

Following the visual inspection it was determined that an AHIP was not required. As such, the ACHCRs were discontinued without the RAPs having the opportunity to comment on this report. Thus Stage 4 of the ACHCRs was not completed for this proposal.

2.4 OZARK INVOLVEMENT

2.4.1 Field assessment

The fieldwork component of the heritage assessment was undertaken by:

- Principal Archaeologist: Ben Churcher (BA [Hons], Dip. Ed.).

2.4.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report preparation by Tom Dooley (OzArk Project Archaeologist);
- Report author is OzArk Principal Archaeologist, Ben Churcher (BA [Hons], Dip. Ed.).

3 LANDSCAPE CONTEXT

An understanding of the environmental contexts of a study area is requisite in any Aboriginal archaeological investigation (DECCW 2010). It is a particularly important consideration in the development and implementation of survey strategies for the detection of archaeological sites. In addition, natural geomorphic processes of erosion and/or deposition, as well as humanly activated landscape processes, influence the degree to which these material culture remains are retained in the landscape as archaeological sites; and the degree to which they are preserved, revealed and/or conserved in present environmental settings.

3.1 TOPOGRAPHY

The landscape comprising the study area falls within the South Eastern Highlands bioregion in the Southern Tablelands of NSW, bounded by the Australian Alps and South Western Slopes bioregions to the south and west (NSW NPWS 2003: 203). The South Eastern Highlands Bioregion covers the dissected ranges and plateau of the Great Dividing Range and extends to the Great Escarpment in the east and to the western slopes of the inland drainage basins (NSW NPWS 2003: 203). Topographically, the dominant features of the bioregion are plateau remnants, granite basins with prominent ridges and deeply entrenched waterways with narrow valleys and only a few terrace features (NSW NPWS 2003: 204).

The topography of the study area and immediate surrounds is flat to slightly undulating and comprises two landscape units as identified by Mitchell (2002) as the Dalton Hills and the Upper Murrumbidgee Channels and Floodplain (**Figures 3-1**). The Dalton Hills landscape is characterised by linear ranges and undulating to steep hills (Mitchell 2002: 86). General elevation across the landscape is 500 to 700 metres, with a local relief of less than 100 metres (Mitchell 2002: 86). The Upper Murrumbidgee Channels and Floodplain landscape comprises the terraces and rare source bordering dunes adjacent the channels and wide floodplains of the Murrumbidgee and Molonglo Rivers. General elevation across the landscape ranges up to 600 (Mitchell 2002: 112).

Figure 3-2 presents representative photographs of the general landscape of the study area.

Figure 3-1: Landscape classifications of the study area (source State Government of NSW and Office of Environment and Heritage 2016)

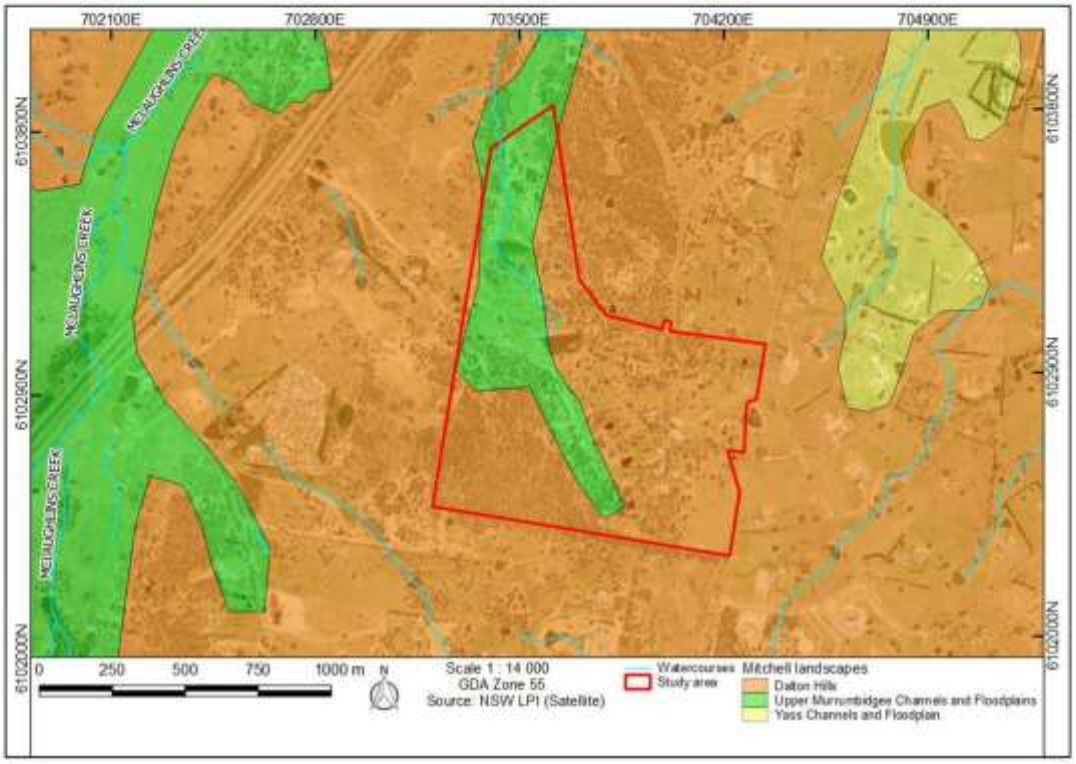


Figure 3-2: Representative photographs of study area.

1. View of the disused golf course within the central portion of the study area.

2. View of native vegetation in the north-eastern portion of the study area.

3.2 GEOLOGY AND SOILS

The South Eastern Highlands are part of the Lachlan fold belt that runs through the eastern states. The region contains a wide range of bedrock types that exercise a strong influence on topography with low ranges or lines of residual hills are formed by bedding, folds and faults (NSW NPWS

2003: 203–204). The region comprises a complex series of metamorphosed Ordovician to Devonian sandstones, Palaeozoic granites, and Tertiary basalts, shales and volcanic rocks. The lithic sequence is highly mineralised and contains many large base metal and gold deposits of economic importance (NSW NPWS 2003: 204). Lithic profiles for the Dalton Hills landscape are characterised by folded Ordovician quartz, quartzite, greywacke, slate, chert, and rhyolite (Mitchell 2002: 86).

Sedimentology across the Dalton Hills landscape is dominated by texture-contrast, red soils on upper slopes grading to harsh yellow clay subsoils (Mitchell 2002: 86). The Upper Murrumbidgee Channels and Floodplain landscape is characterised by alluvial sands, gravels and uniform brown loam by channels and on floodplains with yellow texture-contrast soil on terraces (Mitchell 2002: 112).

3.3 HYDROLOGY

The major waterways of the South Eastern Highlands bioregion include the Lachlan, Macquarie, Murray, Murrumbidgee, Shoalhaven and Snowy Rivers (NSW NPWS 2003: 203).

Significant water resources within the landscape surrounding the study area include the Yass River (approximately 3.3 kilometres to the east), and McLaughlins Creek (approximately 1.6 kilometres to the north). The study area contains no hydrological features, apart from ephemeral modified drainages and dams.

3.4 VEGETATION

General vegetation within the Dalton Hills landscape of the study area is characterised by the presence of yellow box, white box, grey box, red stringybark, scribbly gum and grassy woodlands which have now been extensively modified by European agricultural grazing and cultivation (Mitchell 2002: 86). The Upper Murrumbidgee Channels and Floodplain landscape unit incorporates open woodland of yellow box, red stringybark, black cypress pine and Blakely's red gum on terraces and dunes (Mitchell 2002: 112).

Sizeable portions of the study area have been previously cleared, now dominated by the derived grasses and weeds of the South Eastern Highlands with scattered shrubs and stands of immature regrowth also present. The south-western portion of the study area, however, supports an open woodland of predominantly immature native trees and other native vegetation (**Figure 3-2**).

3.5 CLIMATE

The South East Highlands bioregion is dominated by a temperate climate characterised by warm summers and no dry season (NSW NPWS 2003: 203). The Southern Tablelands sub-region of New South Wales, within which the study area lies, has a mild to cool, dry continental climate,

situated in the boundary region between the summer maximum rainfall zone to the north and the winter maximum rainfall zone to the south (Packard 1986).

Mean annual temperature in the immediate area is 15 to 19°C with average maximum monthly temperatures reaching 28°C in summer months and minimum monthly temperatures dropping to -0.1°C in winter months. Mean annual rainfall is 384.2 millimetres. Rainfall tends to be summer dominant with maximum monthly averages of 64.5 millimetres; however, rainfall persists through winter months with maximum averages of 30.4 millimetres.

3.6 LAND–USE HISTORY AND EXISTING LEVELS OF DISTURBANCE

The lot currently contains a convention centre complex, disused golf course, one dwelling, horse yards and several small dams. The establishment of these previous activities has subjected the study area to moderate-high degrees of ground disturbance across large areas. Such disturbance may possibly have led to the displacement of artefacts and archaeological deposits had they existed within the study area. In addition, certain site types, such as culturally modified trees, may have been removed during the land clearance phase in the area, thereby distorting the archaeological landscape by removing certain site types.

The land surrounding the lot is rural residential having been created as part of a subdivision in 2002. The lot is zoned E4 Environmental Living under the Palerang LEP.

3.7 CONCLUSION

The environmental context of the study area shows that the sloping topography, lack of hydrological resources and the relatively low resource potential of grassy woodland vegetation all suggest that this was not a location conducive to significant Aboriginal occupation in the past. While the study area may have been used for traversal of the landscape or for opportunistic resource exploitation, such activities are short-lived and sporadic, and unlikely to result in the formation of archaeological deposits.

4 ABORIGINAL ARCHAEOLOGY BACKGROUND

4.1 ETHNO-HISTORIC SOURCES OF REGIONAL ABORIGINAL CULTURE

The study area lies within the territory of the *Ngungawal* (also referred to as *Ngunnawal*) speaking Aboriginal people, belonging to the *Ngarigo*, *Wolgal* or *Wolgalu* language group, spoken throughout the Australian Alps to Omeo in northern Victoria (Cooke 2010; Witter 1980). The available ethnographic data has been reviewed by Flood (1980), who suggests population densities in the area were approximately one person per 22 square kilometres.

The language and cultural groups recorded throughout the region run roughly in bands, parallel with the coast, with coastal people called *Katungal*, "the sea". The people inland from the coast were called *Paiendra*, "tomahawk", useful in their well wooded homelands, taking possums for food and skins. The *Bemeringal*, "mountain people", which includes the *Ngungawal* people of south-eastern NSW and Canberra region, were generally taller and more robust than the plains people and remarkably athletic (Cooke 2010). Following from such, it has been suggested that the *Ngungawal* people in this region were highly mobile and lived mostly in dispersed small groups who during summer would travel to the higher elevations of mountain territories to access Bogong Moth collecting grounds (Cooke 2010; Flood 1980).

Bogong Moths, which were processed into easily transportable, high fat content cakes, provided an abundant, easy food source for the *Ngungawal* people who would take advantage of this summer banquet to invite their neighbours to feasts and ceremonies (Cooke 2010; Flood 1980; Witter 1980). Important business could be conducted, betrothals sealed, goods exchanged and alliances strengthened.

European settlement began in the Yass River Valley soon after it was explored in 1820 by explorers Charles Throsby and Joseph Wild (McDonald 1985; Packard 1986). These early explorers of the region noted that the local Aborigines referred to the Yass River Valley as *Candariro* meaning "blue crane", and it is suggested that the term is the origin for naming of the township of Gundaroo (McDonald 1985).

4.2 REGIONAL ARCHAEOLOGICAL CONTEXT

The study area is situated in the Southern Tablelands of NSW within the Yass River Valley. The study area is located approximately 20 kilometres north of the Australian Capital Territory (ACT) border and Canberra region.

The Moth Hunters: Aboriginal prehistory of the Australian Alps (1980) presents the findings of a wide ranging study of the prehistory of the "Southern Uplands", a region which included all of the Southern Tablelands, conducted by Dr Josephine Flood in the early 1970s. Prior to this time, the Southern Tablelands region had received minimal archaeological attention.

For the region, Flood (1980: 158) identified a range of factors which influenced the location of campsites, including:

- All sites lay within one kilometre, the majority being within 100 metres, of a river, creek, spring or lake;
- All camps were situated so as to have a good view and not to be vulnerable to attack;
- High site and artefact frequencies have been correlated with the geographic occurrence of specific resources; particularly stone procurement locations, and
- Site size, in terms of area and artefact numbers, was found to roughly correlate with altitude; the largest camps occurring along river valleys in the tablelands and the smallest sites being at the highest elevations.

In general, the artefacts recorded at sites in the Southern Tablelands region indicate that the most firmly documented Aboriginal occupation has been within the last 5,000 years (Koettig 1986: 6). However, Flood (1980: 280) reported scattered stone artefacts were found in Aeolian sands of Pleistocene age in Fernhill Gully near Lake George that have been dated to between 17,000 and 24,000 years BP (years before present) (Packard 1986: 12).

The range of archaeological sites identified include open sites, quarries, carved trees, burial sites and scarred trees, however, the latter appear to be rare owing to extensive clearing of vegetation associated with agricultural and mining activities in the area. Of the five site types which Flood (1980: 162–170) recognised in the region, only two, large lowland bases and medium size lowland camps, are likely to be found in the Southern Tablelands (Packard 1986: 10–13).

4.3 LOCAL ARCHAEOLOGICAL CONTEXT

4.3.1 Previous studies in the study area

Previous studies have conducted archaeological assessments within the current study area.

Hughes (1998) surveyed the proposed extent of a previous subdivision over an area including a portion of the current extent of Lot 3 DP1074706. This study identified ten isolated quartz artefacts and a single artefact scatter comprised of two quartz cores, a retouched flake and five quartz manuports. Two of these isolated quartz artefacts were recorded within the current study area.

Saunders (2014) conducted an assessment of a previous subdivision of Lot 3 DP1074706. This study recorded a single low density artefact scatter of four artefacts in a shallow erosive feature, including two quartz flakes, a chert flake, and a quartz retouched flake. Saunders further noted high levels of ground disturbance for substantial portions of the study area.

4.3.2 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the study area. The results of this search are summarised in **Table 4-1** and presented in detail in **Appendix 2**.

Table 4-1: Aboriginal heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
Commonwealth Heritage Listings	3 April 2018	NSW	No places listed on either the National or Commonwealth heritage lists are located within the study area.
National Native Title Claims Search	3 April 2018	Queanbeyan-Palerang Regional Council	No Native Title Claims cover the study area.
OEH AHIMS	10 January 2018	8km x 8km centred on the study area	67 sites returned within the search area.
Local Environment Plan (LEP)	3 April 2018	Palerang LEP of 2014	None of the Aboriginal places noted occur near the study area.

The AHIMS search returned 67 registered sites as located within the sixty-four square kilometres covered by the search. All recordings are artefact sites with the majority being artefact scatters (**Table 4-2**).

Table 4-2: AHIMS site types and frequencies.

Site Type	Number	% Frequency
Isolated find	30	45
Artefact scatter	36	54
Artefact scatter with potential archaeological deposit (PAD)	1	1
Total	**67**	**100**

Four previously recorded sites are registered within the study area according to the AHIMS coordinates (**Figure 4-1**). These sites are an artefact scatter (Goolabri 1 57-2-1015) recorded by Saunders (2014) and three isolated finds (IA9 [57-2-0206], IA10 [57-2-0200], and IA3 [57-2-0194]) recorded by Hughes (1998) (see **Section 4.3.1**). However, upon consultation of the Hughes (1998) report, it was determined that the AHIMS record pertaining to IA3 (57-2-0194) is in error. The record for 57-2-0194 appears to be an incorrect duplicate of AHIMS record 57-2-0203, also named IA3 and located at the correct location according to Hughes 1998. Hughes 1998 maps IA9 and IA10 (57-2-0206 and 57-2-0200) as located within the study area. **Figure 4-2** shows the correct AHIMS location for IA3 (57-2-0203) against the incorrect location (57-2-0194).

In addition to the three sites known to exist within the study area, site 57-2-0365 (FHSR1) is a low density artefact scatter consisting of two artefacts that was recorded by Patricia Saunders 25 metres to the west of the study area.

Figure 4-3 shows all sites within or close to the study area that were the c=focus of the visual inspection.

Figure 4-1: Aerial showing the location of AHIMS sites in relation to the study area.

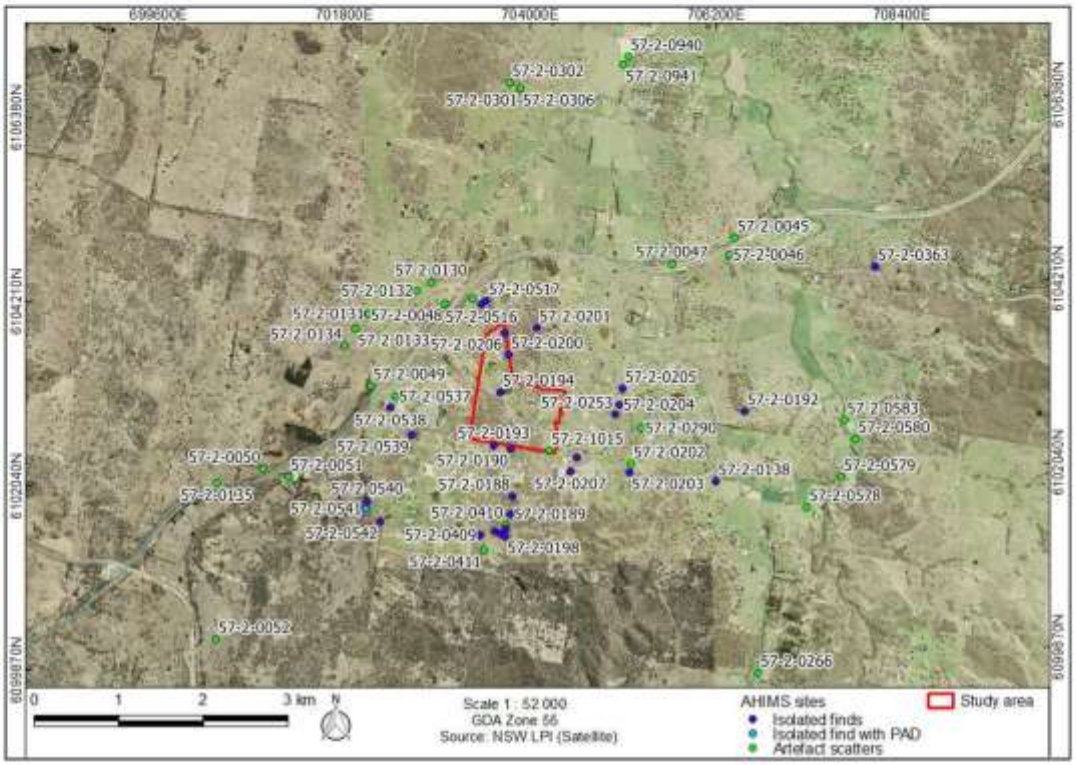
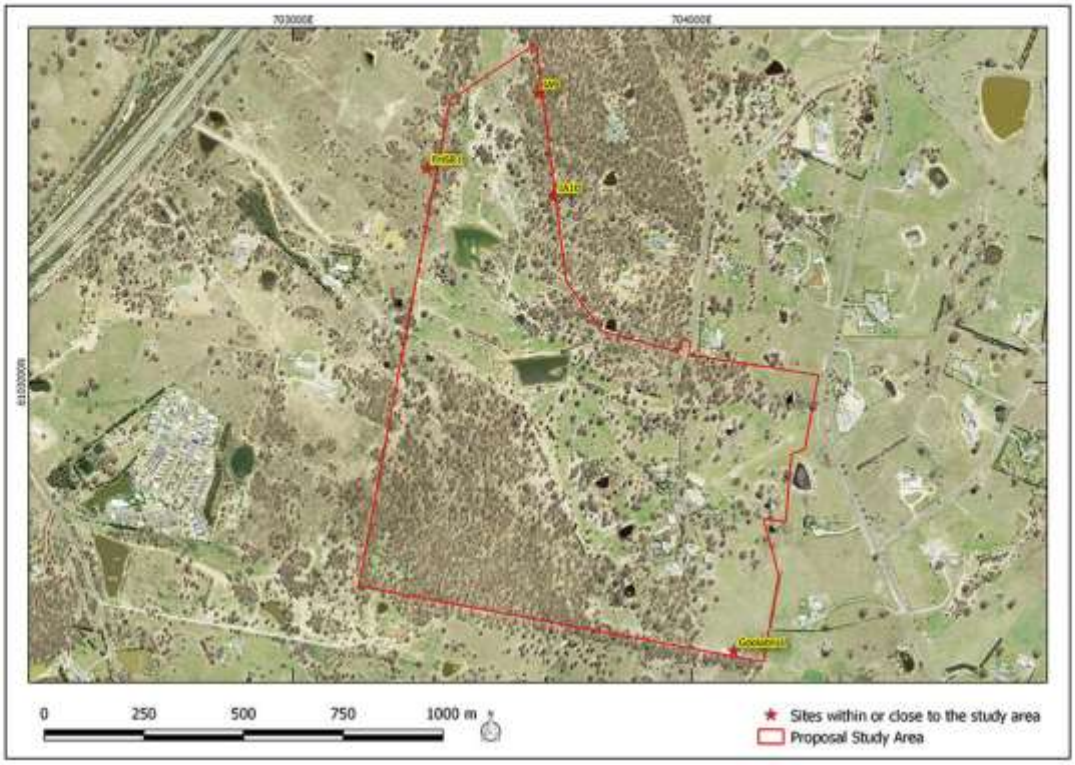


Figure 4-2: Aerial showing the conflicting AHIMS locations for site IA3.

Figure 4-3: Aerial showing sites within or in close proximity to the study area.



4.4 PREDICTIVE MODEL FOR SITE LOCATION

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including: plant and animal foods; stone and ochre resources and rock shelters; as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions, very little of the organic material culture remains of ancestral Aboriginal communities survives to the present. Generally it is the more durable materials such as stone artefacts, stone hearths, shell, and some bones that remain preserved in the current landscape. Even these however may not be found in their original depositional context since these may be subject to either (a) the effects of wind and water erosion/transport - both over short and long time scales or (b) the historical impacts associated with the introduction of European farming practices including: grazing and cropping; land degradation associated with exotic pests

such as goats and rabbits and the installation of farm related infrastructure including water-storage, utilities, roads, fences, stockyards and residential quarters. Scarred trees may survive for up to several hundred years but rarely beyond.

Based on a review of the results of archaeological investigations in and around the Sutton area, it is reasonable to predict that sites in the study area would be likely to share similar characteristics with those previously identified within the region. Based on the reviewed sites, the key attributes taken into account to develop the predictive model were; close proximity to water sources; landforms of slight elevation (i.e. low ridges) in relation to those water sources; and the presence of significantly deep and/or undisturbed soil profiles. Based on knowledge of the environmental contexts of the study area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of those site types being recorded within the study area:

- Isolated finds may be indicative of: random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or sub-surface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur.
    - As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the study area. It is noted that two isolated finds have been recorded in the study area previously (**Section 4.3.2**)
- Open artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 metres away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short or long term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools, but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.

  Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.

  Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.

- As a majority of the study area is within flat or gently sloping landforms distant to permanent water, this site type is not predicted to be common. Whilst this site type may be possible on elevated landforms or in association with erosive features, the moderate-high degree of previous disturbance would likely suggest that any scatters have become displaced. Any sites that are associated with such landforms are likely to have a low artefact density and a low complexity of tool types, representing either one-off events or only infrequently used. It is noted that a single low density artefact scatter has been recorded in the study area previously (**Section 4.3.2**).

- Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed as a consequence of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting or bark removal. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any particular example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently, the distinction between European and Aboriginal scarred trees may not be clear.

    - Due to the previous clearance regimes conducted in the immediate landscape of the study area, and to the absence of previously recorded scarred trees registered with AHIMS, this site type is predicted to be very rare. The majority of native trees present within the study area are not sufficiently mature to have been subject to cultural modification.

- Quarry sites and stone procurement sites typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.

    - This site type could be recorded within the study area should suitable rock outcroppings be available.

- Burials are generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.

    - Although it is possible that this site type could be found within the study area, it is considered a rare site type especially given the disturbance that has occurred within the study area.

5 RESULTS OF ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

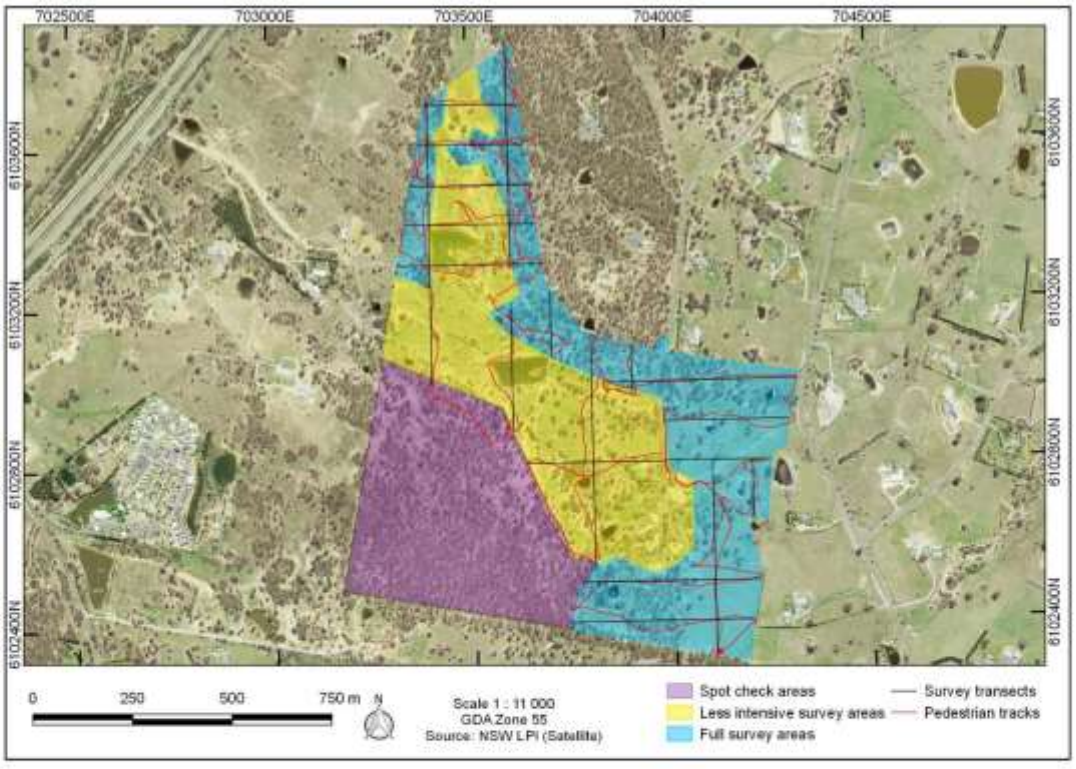
5.1 SAMPLING STRATEGY AND FIELD METHODS

The visual inspection of the study area was undertaken by OzArk Principal Archaeologist, Ben Churcher, on 15 March 2018. The methodology for the survey followed the survey methodology that had been sent to all RAPs for their consideration prior to the survey commencing.

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The study area was divided into three separate survey areas according to the level of inspection warranted based on expected impacts and previous disturbance (**Figure 5-1**). Survey of the treed south-western portion of the study area was not undertaken as there are no planned impacts occurring in this area.

Survey of those areas where survey was required was conducted systematically according to pre-determined transects to ensure maximum representativeness of area sampled. Any mature trees deemed of sufficient age to contain Aboriginal scarring or carving were also inspected.

Figure 5-1: Survey coverage within the study area.



Observations obtained during the visual inspection according to the survey transect are presented in **Table 5-1**. The location of the survey transects is shown on **Figure 5-2**.

This data shows that there was a generally high degree of disturbance across the study area, primarily originating from the construction of the golf course, dams, drainage features and buildings. As a result, ground surface visibility was generally high, apart from cleared and grassed areas (often former golf course freeways or well-used horse paddocks) where visibility was obscured by grass cover.

Figure 5-2: Location of the inspected survey transects.

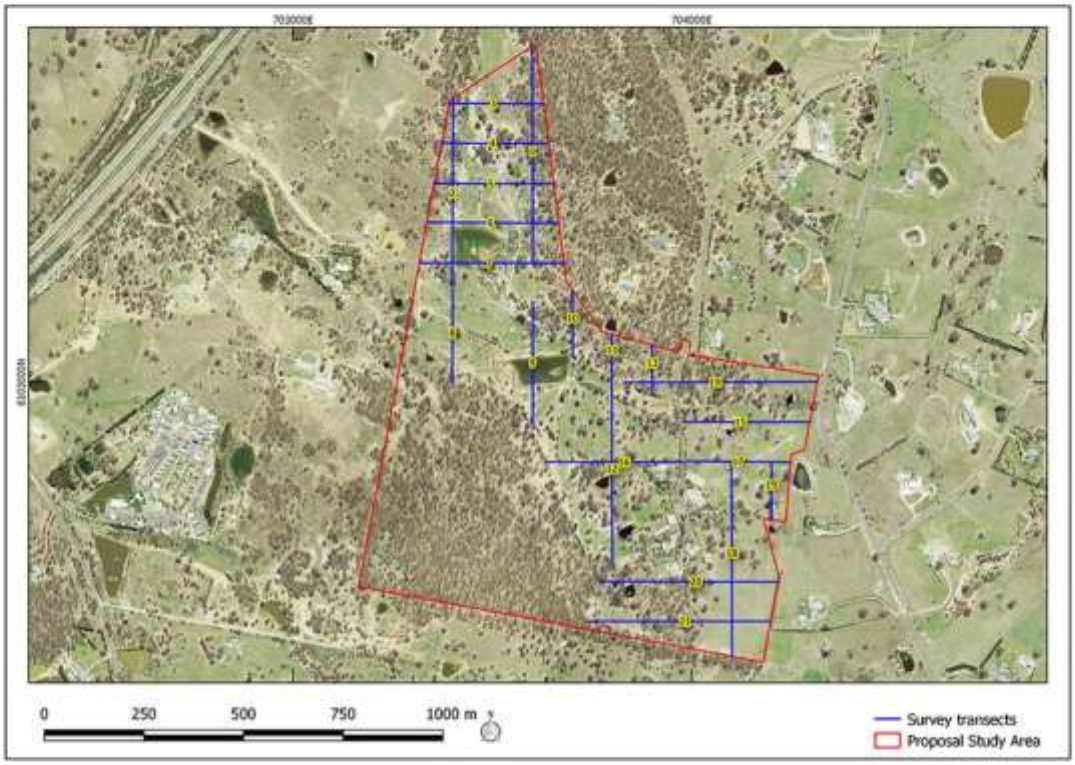


Table 5-1: Observations from the visual inspection.

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
1	Lower slope landform. Open regenerating woodland. Substantial gravel lag surfaces and evidence of water movement (runnels of vegetation).	50	25	
2	Lower slope landform. Open regenerating woodland. Very disturbed ephemeral drainage line in north. Extensive areas of earthworks/exposure. A lot of quartz fragments (non-artefactual). Generally high disturbance in southern portions	50	50	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
3	Lower slope landform. Open regenerating woodland. Open paddocks and earthworks in west. Very disturbed ephemeral drainage line in west.	40	50	
4	Small undisturbed area to west then high disturbance in the central portion. Regenerating woodland in lower slope landform to east with evidence of mechanical timber clearing (bulldozer use).	60	80	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
5	Lower slope landform. Open regenerating woodland in east. Dams and earthworks in central portion. Extensive exposures. Lower slopes in west with open regenerating woodland.	60	80	
6	Lower slope landform. Open regenerating woodland in west. Extensive area of earthworks/disturbance in centre and west. Generally high degree of disturbance.	55	40	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
7	Lower slope landform. Open regenerating woodland in east with low ground visibility (leaf litter). High disturbance in centre from dam/earthworks. Generally high disturbance across transect.	45	30	
8	Lower slope landform. Generally open paddock (disused golf course). Southern portion located on a wooded spur within the treed portion in the south-western portion of the study area.	70	50	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
9	High disturbance from former use as a golf course. Low visibility due to grass cover.	20	15	
10	Southern portion has high disturbance from dam/tracks. Could not access northern portion of transect as it was behind a high fence. Low visibility due to grass cover.	20	15	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
11	Rocky slopes without soil in the south, regenerating woodland in the north.	50	80	
12	Generally within the disused golf course with high degree of disturbances from dams/earthworks. Low visibility from grass cover	15	20	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
13	Rocky wooded slopes in the north, disused golf course to the south.	30	30	
14	Rocky slope on the edge of the disused golf course in the west. Open paddock with pockets of regenerating trees to the east. Low visibility from grass cover and leaf litter.	20	20	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
15	Generally consists of open paddocks. Low visibility from grass cover.	15	20	
16	Open paddock in the east. Close to built facilities/dam and other disturbances. Disused golf course in the west.	25	50	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
17	Western portions highly disturbed by horse yards. Eastern portions open paddocks used for horses. Variable ground surface visibility but generally low.	15	15	
18	Open, intensively used horse paddocks. Located on the crest of a hill. Some exposures but very intermittent.	20	25	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
19	Open, intensively used horse paddocks. Located on the crest of a hill and its adjacent slopes. Variable ground surface visibility.	20	25	
20	Open paddock with some regrowth to the west. Five degree slope to the crest past recent buildings and associated disturbances. Open paddock to the east.	25	25	

Transect #	Observations	Ground surface exposure (%)	Ground surface visibility (%)	Indicative photograph
21	Open horse paddock in the west. Occupies a crest of a hill (to west) then moderately sloping landforms to east. Lightly wooded. Rock outcropping. Sizeable exposures from sheet wash erosion in west.	60	80	

5.2 ABORIGINAL SITES RECORDED

No previously unrecorded Aboriginal sites were recorded as a result of the visual assessment.

5.3 PREVIOUSLY RECORDED ABORIGINAL SITES INSPECTED

5.3.1 Goolabri 1 (57-2-1015)

Goolabri 1 (57-2-1015), an artefact scatter first recorded by Saunders (2014), was re-recorded during the visual assessment and two quartz artefacts were identified at the site coordinates within an exposure near the boundary of the study area (**Figure 5-3**).

Figure 5-3: Goolabri 1 (57-2-1015) as observed during the visual assessment.

1. View of AHIMS 57-2-1015 in its current condition. Pin flag shows the location of a recorded artefact.

2. Example of a quartz artefact from AHIMS 57-2-1015.

5.3.2 IA9 (57-2-0206) and IA10 (57-2-0200)

The AHIMS locations of the sites first recorded by Hughes (1998) were inspected (see **Section 4.3.1**). No evidence of IA9 (57-2-0206) or IA10 (57-2-0200) could be discerned at either location (**Figure 5-4**). Both locations were within a regenerating woodland with variable ground surface visibility due to leaf litter. It is therefore possible that the artefacts recorded by Hughes 20 years ago remain at the location and are obscured. However, as both sites are located on gentle slopes, it is also possible that the artefacts have been moved from their recorded location by water movement.

5.3.3 FHSR1 (57-2-0365)

This site was recorded 25 metres to the west of the study area. The area within the study area closest to the recorded location of FHSR1 was inspected and despite reasonable ground surface visibility no further artefacts within the study area were noted. The recorded location of FHSR1 is on a shallow crest (a suitable camping/resting location) whereas the landform within the study area closest to FHSR1 is sloping and not as suitable for camping (**Figure 5-5**).

Figure 5-4: Locations of IA9 (57-2-0206) and IA10 (57-2-0200).

1. View of IA9 (57-2-0206) in its current condition.

2. View of IA10 (57-2-0200) in its current condition.

Figure 5-5: Closest location to FHSR1 (57-2-0365) within the study area.

1. View of the closest location to FHSR1 (57-2-0365) within the study area. FHSR1 (57-2-0365) is located on the flatter landform beyond the boundary fence to the right in this photograph.

5.4 Discussion

The predictive model set out in **Section 4.4** indicated that artefact sites would be the most likely site type recorded within the study area, however, due to past disturbances, it would be likely that the sites, should they be present, would lack integrity. The lack of recordings by the current assessment therefore supports this predictive model. As ground disturbances were greater than was possible to discern from aerial photography, the visual inspection confirmed that there we no landforms present within the study area that are likely to contain intact, subsurface archaeological deposits.

The lack of permanent water within the study area indicates that these landforms have a low archaeological potential and this was confirmed by the visual inspection.

5.5 LIKELY IMPACTS TO ABORIGINAL HERITAGE FROM THE PROPOSAL

All Aboriginal sites located within the study area (Goolabri 1 [57-2-1015]; IA9 [57-2-0206]; and IA10 [57-2-0200]) are located immediately adjacent boundary fences for Lot 3 DP1074706. As such, OzArk have been advised that all sites will be avoided by any impacts associated with the proposed subdivision such as the location of potential house blocks and access roads. Therefore, the sites can be avoided and there are no impacts expected to arise from the proposal.

6 MANAGEMENT AND RECOMMENDATIONS

Appropriate management of cultural heritage items is primarily determined on the basis of their assessed significance as well as the likely impacts of the proposed development.

To this end it is noted that all recorded Aboriginal sites will be avoided by the proposed work within the study area. Further, no landform within the study area was assessed to have potential to contain further, undetected, Aboriginal sites or objects.

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

1) The proposed work may proceed at Lot 3 DP1074706 without further archaeological investigation under the following conditions:
    a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent, archaeologically sensitive landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.
    b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.
2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. However, during the course of works, if Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the *Unanticipated Finds Protocol* (**Appendix 3**) should be followed;
3) Contractors involved with any ground clearing/excavation work associated with the proposal should be provided with the location of Goolabri 1 (57-2-1015), IA9 (57-2-0206) and IA10 (57-2-0200) and all efforts made to avoid these sites.
4) Work crews should undergo cultural heritage induction to ensure they recognise Aboriginal artefacts (see **Appendix 4**) and are aware of the legislative protection of Aboriginal objects under the NPW Act and the contents of the *Unanticipated Finds Protocol*.
5) This report should be sent to the Registered Aboriginal Parties (RAPs) as a courtesy and to ensure that they are informed that the current assessment will not be progressing further as an AHIP is not required.

REFERENCES

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APPENDIX 1: ABORIGINAL COMMUNITY CONSULTATION

Stage 1: Advertisement placed in the Canberra Times inviting registrations of interest

Expression of Interest
Cultural Heritage Management

OzArk Environmental & Heritage Management P/L on behalf of the proponent (Queanbeyan Palerang Regional Council) seeks registration of Aboriginal groups or individuals who are interested in being consulted over an Aboriginal Cultural Heritage Assessment and potential Aboriginal Heritage Impact Permit application (AHIP) for the proposed amendment to the *Palerang Local Environmental Plan 2014*. This amendment will allow the subdivision of Lot 3 DP1074706, Sutton, NSW, to create residential lots.

This consultation will assist the Applicant in the potential preparation of an AHIP application, and also the Director General of the Office of Environment and Heritage in their consideration and their determination.

If you hold cultural knowledge relevant to determining the cultural significance of the site/area, please register your interest by post: OzArk EHM, PO Box 2069 Dubbo NSW 2830, email: sheridan@ozarkehm.com.au, or by phoning OzArk between 9.00am and 5.00pm week days on 02 6882 0118.

All submissions should be received no later than 5pm **15th November 2017.**

Stage 1: Sample letter inviting registrations of interest

27th November 2017

XX

Dear XX,

Aboriginal Cultural Heritage Assessment and Potential Aboriginal Heritage Impact Permit Application Lot 3 DP1074706, Sutton, NSW.

OzArk Environmental & Heritage Management P/L is undertaking Aboriginal community consultation as per the Office of Environment and Heritage (OEH) *Aboriginal cultural heritage consultation requirements for proponents 2010,* on behalf of the proponent; Queanbeyan Palerang Regional Council (QPRC)

The Lot 3 DP 1074706 is 94.51 hectares and is located in the locality of Sutton. It is accessed from Goolabri Drive and Cartwright Avenue which connect via a service road to the Federal Highway and Sutton Road, and is approximately fifteen minutes from Canberra and Queanbeyan. The lot is zoned E4 Environmental Living under the Palerang Local Environmental Plan 2014.

The lot currently contains a convention centre complex, disused golf course, one dwelling, several small dams and a large area of native vegetation. The land surrounding the lot is rural residential having been created as part of a subdivision in 2002.

QPRC are seeking to amend Schedule 1 of the Palerang Local Environmental Plan 2014 to allow a development application for the subdivision of Lot 3 DP 1074706 into six residential lots varying in size from 4-8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and approximately 27 hectares of native vegetation.

If you hold cultural knowledge relevant to determining the impacts to the cultural significance of this project area, please register your interest by contacting our office. The closing date for expressions of interest is **5pm Wednesday 13th December 2017.**

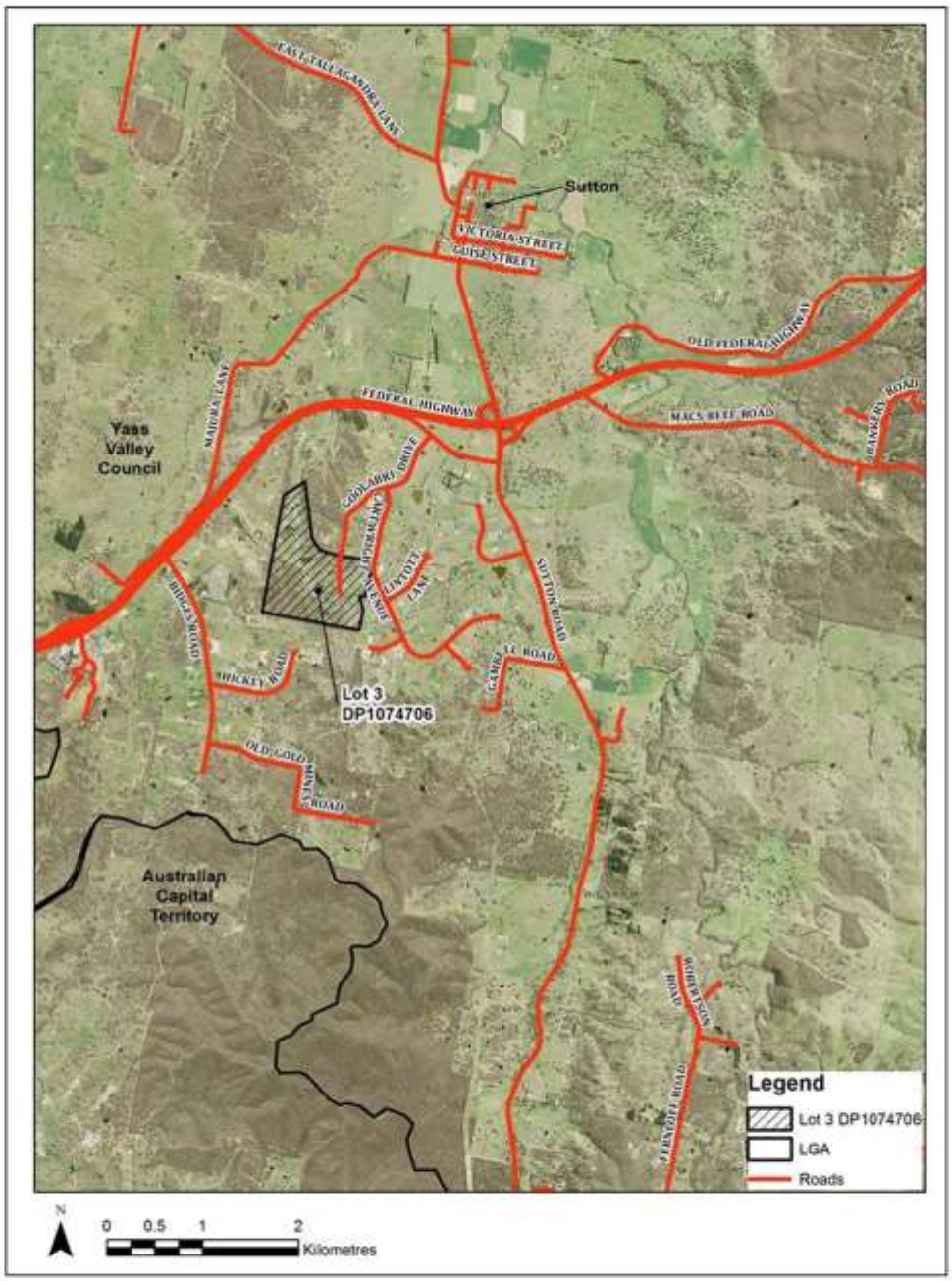
If you wish to register interest it is noteworthy that as per the OEH guidelines we are required to provide your details to the OEH unless advised you do not wish your details to be released.

Once relevant groups and individuals have been identified, they will form part of the formal consultation process for the project.

Kind regards,

Sheridan Baker
Community Liaison

Location Map.



Stage 2/3 sample letter inviting comments on the draft methodology

19 January 2018

XX

Dear Members,

Re: *Aboriginal Cultural Heritage Assessment and Potential Aboriginal Heritage Impact Permit Application*
Lot 3 DP1074706, Sutton, NSW.

Thank-you for your registration of interest to become a Registered Aboriginal Party (RAP) to be consulted for the Aboriginal cultural heritage assessment and potential Aboriginal Heritage Impact Permit (AHIP) application that is required for Lot 3 DP1074706, Sutton NSW.

The purpose of this letter is to invite you to comment on the enclosed draft methodology for the Aboriginal cultural heritage assessment.

In addition to comments on the draft document, if you can share any Aboriginal cultural heritage knowledge relevant to the proposed impact area we welcome this input so as to ensure Aboriginal cultural values are considered. OzArk is required to give you twenty eight (28) days to supply feedback on the attached documents. This period closes on **Monday 19th February 2018.** Should you need any help supplying feedback please do not hesitate to contact our office.

Should you have any queries in relation to the enclosed information please do not hesitate to contact our office.

Kind regards,

Sheridan Baker

Consultation Officer

APPENDIX 2: AHIMS SEARCH

Office of Environment & Heritage NSW

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Palerang
Client Service ID : 321342

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
57-2-0299	Site DP 1	AGD	55	703390	6102388	Open site	Valid	Artefact : 3		98575
	Contact	Recorders	Phil Hughes					Permits		
57-2-0304	Sutton Rd 98/R2	AGD	55	704410	6099410	Open site	Valid	Artefact : 3		98323
	Contact	Recorders	Ms Trish Saunders					Permits	1835,2016,2017	
57-2-0308	Sutton Rd 98/P1	AGD	55	704370	6099318	Open site	Valid	Artefact : 3		98323
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0265	Sutton Road 98/A3	AGD	55	704410	6099125	Open site	Valid	Artefact : 11		98323
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0267	Sutton Rd 98/A1	AGD	55	704480	6099424	Open site	Valid	Artefact : 14		98323
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0306	Mace Rest Road 1	AGD	55	707900	6101220	Open site	Valid	Artefact : 1		102899
	Contact	Recorders	Archaeological Heritage Surveys					Permits		
57-2-0265	PH/A1	AGD	55	703230	6101946	Open site	Valid	Artefact : 2		
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0537	98/A1	GDA	55	702302	6101804	Open site	Valid	Artefact : 4		100633
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0538	98/P1	GDA	55	702259	6102074	Open site	Valid	Artefact : 3		100630
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0539	98/P2	GDA	55	702381	6102143	Open site	Valid	Artefact : 3		100629
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0540	98/A2	GDA	55	701940	6101771	Open site	Valid	Artefact : 2		100624
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0543	98/P3 and P4D	GDA	55	701920	6101607	Open site	Valid	Artefact : 3, Potential Archaeological Deposit (PAD)		100624
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0542	98/P4	GDA	55	702307	6101329	Open site	Valid	Artefact : 1		100628
	Contact Searle	Recorders	Ms Trish Saunders					Permits		
57-2-0044	C-AE20 Deadly's Creek	AGD	55	707700	6104770	Open site	Valid	Artefact :	Open Camp Site	447,102056
	Contact	Recorders	Margrit Koettig					Permits		
57-2-0047	C-AE29 Sutton Rd/Federal Hwy	AGD	55	705300	6103000	Open site	Valid	Artefact :	Open Camp Site	447,611
	Contact	Recorders	Margrit Koettig					Permits		
57-2-0048	C-AE30 Federal Hwy	AGD	55	702800	6102900	Open site	Valid	Artefact :	Open Camp Site	447,1394
	Contact	Recorders	Margrit Koettig					Permits	1535	
57-2-0049	C-AE31 Federal Hwy	AGD	55	701860	6102950	Open site	Valid	Artefact :	Open Camp Site	447,1394

Report generated by AHIMS Web Service on 10/01/2018 for Stephanie Hawkes for the following area at Datum :GDA, Zone : 55, Eastings : 700000 - 708000, Northings : 6099000 - 6107000 with a Buffer of 0 meters. Additional Info : survey. Number of Aboriginal sites and Aboriginal objects found is 67

This information is not guaranteed to be free from error or omission. Office of Environment and Heritage (OEH) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 4

Office of Environment & Heritage NSW

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : Palerang
Client Service ID : 321342

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Margrit Koettig					Permits	1536,1553	
57-2-0130	P/H1	AGD	55	702440	6104150	Open site	Valid	Artefact :	Open Camp Site	3670
	Contact	Recorders	Kerry Navin					Permits		
57-2-0132	H/T1	AGD	55	702470	6100960	Open site	Valid	Artefact :	Open Camp Site	3670
	Contact	Recorders	Ms Robin Officer					Permits		
57-2-0133	P/H1	AGD	55	701790	6100630	Open site	Valid	Artefact :	Open Camp Site	3670
	Contact	Recorders	Ms Robin Officer					Permits		
57-2-0134	P/H1	AGD	55	701690	6103430	Open site	Valid	Artefact :	Open Camp Site	3670
	Contact	Recorders	Kerry Navin					Permits		
57-2-0135	H/D1	AGD	55	700850	6101050	Open site	Valid	Artefact :	Open Camp Site	
	Contact	Recorders	Ms Robin Officer					Permits		
57-2-0138	Sutton Rd 1	AGD	55	703360	6102730	Open site	Valid	Artefact :	Isolated Find	
	Contact	Recorders	Philip Hunt					Permits		
57-2-0050	C-AE02 AC3/98/W Surface	AGD	55	708690	6102890	Open site	Valid	Artefact :	Open Camp Site	447
	Contact	Recorders	Margrit Koettig					Permits		
57-2-0051	C-AE03 AC3/98/W Surface	AGD	55	708980	6103360	Open site	Valid	Artefact :	Open Camp Site	447
	Contact	Recorders	Margrit Koettig					Permits	1535	
57-2-0052	Gundaroo Creek 1/Gundaroo	AGD	55	708800	6100860	Open site	Valid	Artefact :	Open Camp Site	447
	Contact	Recorders	Paul Packard					Permits		
57-2-0304	W/S6	AGD	55	703750	6104320	Open site	Valid	Artefact : 3		98603
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0301	W/S1	AGD	55	703750	6101820	Open site	Valid	Artefact : 24		98603
	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0302	W/S2	AGD	55	703625	6103490	Open site	Valid	Artefact : 2		98603
	Contact	Recorders	Ms Trish Saunders					Permits		
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	Contact	Recorders	Ms Trish Saunders					Permits		
57-2-0310	IC/M3 - A/1	AGD	55	703460	6101284	Open site	Valid	Artefact : 10		
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57-2-0311	IC/M3 - A/2	AGD	55	703190	6100960	Open site	Valid	Artefact : 2		
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57-2-0312	C-AE27 Mace Rest Rd	AGD	55	706200	6101800	Open site	Valid	Artefact :	Open Camp Site	447

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AHIMS Web Services (AWS)
Extensive search - Site list report

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Client Service ID : [illegible]

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AHIMS Web Services (AWS)
Extensive search - Site list report

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	Contact	Recorders	Ms.Trish Saunders					Permits		

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[illegible]

Page [illegible]

APPENDIX 3: ABORIGINAL HERITAGE: UNANTICIPATED FINDS PROTOCOL

An Aboriginal artefact is anything which is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal) remains may also be uncovered while onsite.

Cultural heritage significance is assessed by the Aboriginal community and is typically based on traditional and contemporary lore, spiritual values, and oral history, and may also take into account scientific and educational value.

Protocol to be followed in the event that previously unrecorded or unanticipated Aboriginal object(s) are encountered:

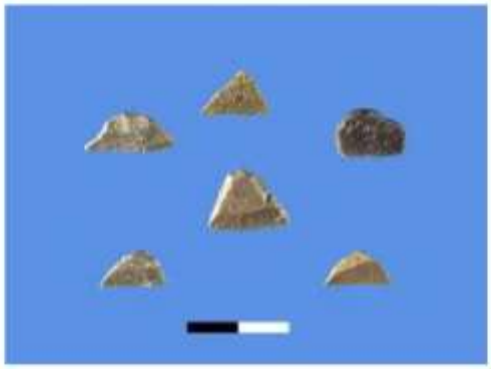
1) If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:
    a. Not further harm the object;
    b. Immediately cease all work at the particular location;
    c. Secure the area so as to avoid further harm to the Aboriginal object;
    d. Notify OEH as soon as practical on 131 555, providing any details of the Aboriginal object and its location; and
    e. Not recommence any work at the particular location unless authorised in writing by OEH.
2) In the event that Aboriginal burials are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.
3) Cooperate with the appropriate authorities and relevant Aboriginal community representatives to facilitate:
    a. The recording and assessment of the find(s);
    b. The fulfilment of any legal constraints arising from the find(s), including complying with OEH directions; and
    c. The development and implementation of appropriate management strategies, including consultation with stakeholders and the assessment of the significance of the find(s).

Where the find(s) are determined to be Aboriginal object(s), recommencement of work in the area of the find(s) can only occur in accordance with any consequential legal requirements and after gaining written approval from OEH (normally an Aboriginal Heritage Impact Permit).

APPENDIX 4: ABORIGINAL HERITAGE: ARTEFACT IDENTIFICATION

Retouched blades (scale = 1cm)

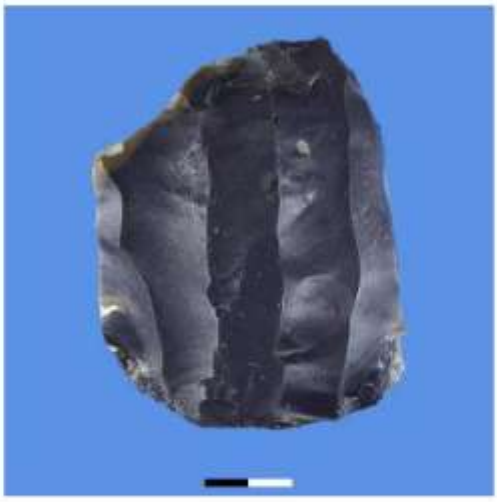
Flakes



Microliths (scale = 1cm)

Scraper (scale = 1cm)

Flake characteristics (scale = 1cm)



Core from which flakes have been removed (scale = 1cm)

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 7 FLORA AND FAUNA REPORT

Attachment 7 - Flora ad Fauna report

eco logical AUSTRALIA

Lot 3 DP 1074706 Sutton Residential Subdivision

Flora and Fauna Study

Prepared for
Queanbeyan-Palerang Regional Council

15 January 2018

C1922154

DOCUMENT TRACKING

Item	Detail
Project Name	Sutton Residential Subdivision – Flora and Fauna Study
Project Number	7026
Project Manager	Sarah Dickson-Hoyle Level 2, 11 London Circuit Canberra, ACT 2601
Prepared by	Sarah Dickson-Hoyle, Alex Gorey, Peter Hancock
Reviewed by	Jason Berrigan
Approved by	Jason Berrigan
Status	FINAL
Version Number	V2
Last saved on	15 January 2018
Cover photo	Remnant and regenerating *Eucalyptus melliodora* within the subject land

This report should be cited as 'Eco Logical Australia 2018. *Lot 3 DP 1074706 Sutton Residential Subdivision – Flora and Fauna Assessment*. Prepared for Queanbeyan-Palerang Regional Council.'

C1922154

Contents

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Abbreviations

Abbreviation	Description
BOS	Biodiversity Offset Scheme
CEEC	Critically Endangered Ecological Community
C/EEC	Critically Endangered/Endangered Ecological Community
DPI	Department of Primary Industries
EEC	Endangered Ecological Community
ELA	Eco Logical Australia
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FM Act	*Fisheries Management Act 1995*
HBT	Hollow-bearing Tree
KFH	Key Fish Habitat
kph	Kilometres per hour
MNES	Matter of National Environmental Significance
PCT	Plant Community Type
TEC	Threatened Ecological Community
TSC Act	*Threatened Species Conservation Act 1995*

1 Introduction

Eco Logical Australia Pty Ltd (ELA) was engaged by Queanbeyan-Palerang Regional Council (QPRC) (hereafter "Council") to undertake a flora and fauna survey to support a planning proposal to allow for the subdivision of Lot 3 DP 1074706 (hereafter referred to as the "subject land") into six residential lots and one residual lot.

This planning proposal intends to amend Schedule 1 of the Palerang Local Environmental Plan 2014 to allow the subdivision of Lot 3 DP 1074706 into six residential lots (Lots 1-6) and one residual lot.

Lot 3 DP 1074706 was originally created a part of the staged subdivision of "Sutton Acres" (Development Application S4/98), comprising Lot 2 and Lot 3 DP827113 and Lot 6 DP 234480. The development application to the former Yarrowlumla Council was approved in 1998 and resulted in the creation of 56 rural residential lots and one lot for an electricity substation. Previous documentation exists for the subject land including a *Flora and Fauna Survey and Assessment Report for a Planned Three Lot Subdivision of Lot 3 Goolabri Lane, Sutton* (Good Environmental Systems, 2014) and a *Draft Vegetation Management Plan* (Butler and Associates, undated).

This flora and fauna study has been undertaken to identify ecological values present within the subject land to provide recommendations to minimise or mitigate impacts associated with the proposed subdivision, and is pursuant to the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act); the *Fisheries Management Act 1995* (FM Act); the NSW *Biodiversity Conservation Act 2016* (BC Act) and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.1 Subject land details

The subject land is located within the Queanbeyan-Palerang Local Government Area, Murrumbidgee catchment and South Eastern Highlands IBRA bioregion, approximately 22 km north of Canberra.

It is currently zoned E4 – Environmental Living and has a minimum lot size of 6 ha under the Palerang Local Environmental Plan (LEP) 2014 and covers 94.47 ha. The subject land is covered by the terrestrial biodiversity overlay and the riparian lands and watercourses overlay associated with the Palerang LEP.

The subject land currently comprises a disused golf course, function centre, large patches of remnant native vegetation, farm dams, and an existing residential dwelling in proposed Lot 3.

1.2 Definition of key terms

For the purposes of this report, key terms are defined as follows:

1. Subject land: The existing Lot 3 DP1074706.
2. Study area: all lands contained with proposed Lots 1-6 (**Figure 1**), plus 20 m buffer area ,which may be affected by indirect impacts. Note: the study area defined for this report does not include areas outside the subject land, which may also be subject to indirect impacts.
3. Locality: For database searches, defined as 10 km radius.

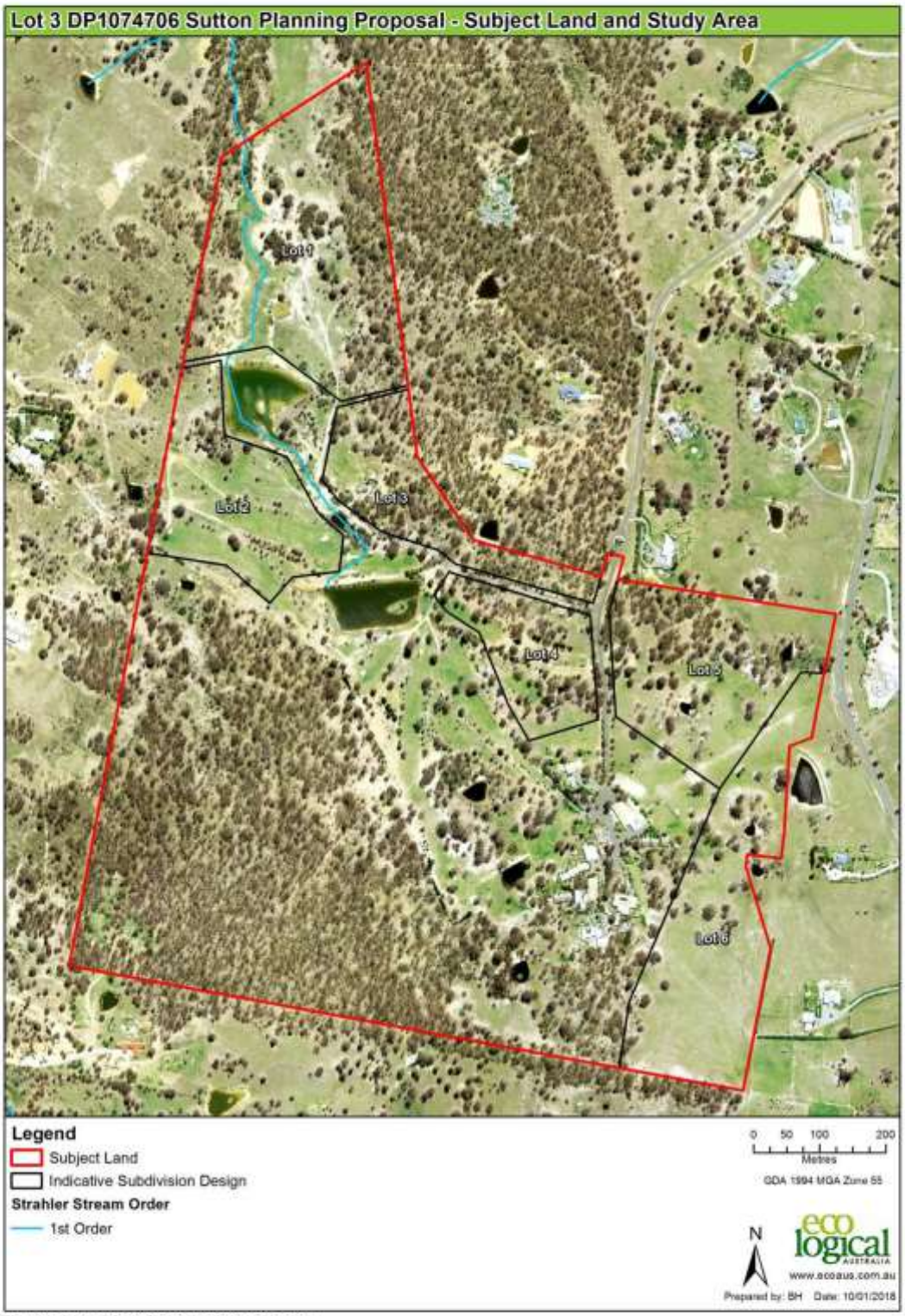

Figure 1: Subject land and study area

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2 Methods

2.1 Data review

The following databases and data sources were reviewed prior to conducting the field surveys:

- BioNet / Atlas of NSW Wildlife Search (OEH, 2017) covering an area from latitude -35.09 to -35.29 and longitude 149.13 to 149.33 (Datum GDA94)
- EPBC Act Protected Matters Search Tool (DotEE, 2017a) using a radius of 10 km around the coordinates -35.19682, 149.23755 (Datum GDA94)
- *Flora and Fauna Survey and Assessment Report for a Planned Three Lot Subdivision of Lot 3 Goolabri Lane, Sutton* (Good Environmental Systems, 2014)
- *Draft Vegetation Management Plan* (Butler and Associates, undated)
- *Flora Assessment for Lots 2, 3 & 6 Parish of Goorooyarroo in Yarrowlumla Shire, January 1998* (Geoff Butler, 1998)
- Palerang Local Environmental Plan 2014
- Queanbeyan-Palerang Regional Council Planning Proposal Amendment to Schedule 1 (no date)
- Palerang Native Vegetation mapping (provided by QPRC)
- aerial photography.

The list of threatened species and ecological communities returned by the database searches was supplemented or amended based on local ecological knowledge of the locality, including known species occurrences. Each species likely occurrence was determined by reviewing records in the area, considering the habitat available, and using expert knowledge of the species' ecology derived from literature review and experience. Five terms for the likelihood of occurrence of species are used in this report and are defined in **Appendix A**.

2.2 Field survey

A field survey was undertaken by ELA ecologists Sarah Dickson-Hoyle and Alex Gorey on 31 October and 1 November 2017. This involved traversing the full extent of the study area in order to assess and record:

- vegetation (including validation of Palerang Native Vegetation mapping, assessment of floristic structure and composition, and of vegetation communities against key listing criteria for relevant threatened ecological communities
- aquatic ecology (including Key Fish Habitat)
- the presence of potential habitat for threatened flora and fauna
- opportunistic fauna sightings.

All vegetation within the subject land was mapped based on rapid survey assessments conducted within each vegetation zone, in accordance with the OEH standards for vegetation field validation and type mapping (DECCW 2010; OEH 2015). Rapid assessments involved describing the vegetation structure (dominant species and cover within each vegetation stratum), as well as topographic position, soils and any other relevant abiotic factors. More detailed floristic surveys were undertaken at various random locations within each vegetation community, which involved recording all species present within each stratum.

Threatened species habitat searches were limited to the study area as impacts are limited to this area. Areas identified as Key Fish Habitat were traversed and the following data recorded: general site description; aquatic and riparian environment (substrate type; dimensions and sequence of pools and riffles; presence/absence of aquatic or riparian vegetation; slope of adjacent land); surrounding land uses; and surrounding vegetation types and conditions.

Based on the ELA ecologist's knowledge and understanding of potential threatened species and their associated habitat, as well as the results of database searches undertaken, targeted surveys for threatened flora species were undertaken in areas of suitable habitat in the study area. The key threatened species that were targeted were *Leucochrysum albicans* var. *tricolor* (Hoary Sunray), *Rutidosis leptorrhynchoides* (Button Wrinklewort) and *Swainsona sericea* (Silky Swainson-Pea).

Representative photographs were taken within all vegetation communities and Key Fish Habitat (KFH) present within the subject land, as well as other aquatic values such as streams and dams. The location of any habitat features such as hollow bearing trees, termite mounds or bird nests were marked spatially using a handheld GPS unit.

3 Results and discussion

3.1 Data review

The data review (following supplementing and amending based on local ecological knowledge) identified three threatened ecological communities, 65 threatened fauna species (including marine and migratory species) and 19 threatened flora species predicted as known or having potential to occur on the subject land and locality.

These threatened ecological communities, flora and fauna species are listed in **Appendix A,** together with an assessment of the 'likelihood of occurrence' in the study area. There are no endangered populations or declared critical habitat within the study area.

According to the Palerang Native Vegetation mapping provided by QPRC, the subject land contains three vegetation types:

- Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest on skeletal hills of the tablelands, South Eastern Highlands bioregion
- Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands bioregion
- Modified vegetation: may contain native vegetation.

The subject land is also mapped in the *South East and Tablelands Regional Plan 2036* (NSW Government 2017) as containing approximately 15.40 ha of High Environmental Value lands, and 86.19 ha of Conservation Corridor land.

3.2 Flora and vegetation communities

3.2.1 Overview

A total of 100 flora species were recorded within the subject land during the field survey of which 32 are exotic. A full list of all flora species identified during field surveys can be found in **Appendix B**.

Six vegetation zones were identified and mapped by ELA within the subject land, comprising three vegetation communities, two of which were present in multiple conditions and therefore mapped as separate zones (**Figure 2** and **Table 1**). Two of the three vegetation communities were native vegetation communities that were then typed with reference to the classification of Plant Community Types (PCTs) for the South Eastern Highlands IBRA Biogeographic Region. The remaining vegetation community was exotic pasture with scattered native and exotic plantings. This community did not correspond to a PCT.

The distribution of these vegetation zones within the subject land is shown in **Figure 2**. Their distribution and condition within the subject land is discussed below. One of the vegetation communities located within the subject land and study area qualified as a Threatened Ecological Community (TEC) under the EPBC Act and/or BC Act (**Table 1**).

Table 1: Summary of vegetation zones and corresponding PCTs and TEC listings

Vegetation zone (ELA)	PCT	BC Act listing	EPBC Act listing
1: PCT 1330 (moderate – good condition)	PCT1330 – Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion	White Box Yellow Box Blakely's Red Gum Woodland EEC	White Box – Yellow Box Blakely's Red Gum Grassy Woodland and DNG CEEC **or** None (variable condition, see discussion below)
2: PCT 1330 (DNG)			White Box – Yellow Box Blakely's Red Gum Grassy Woodland and DNG CEEC **or** None (variable condition, see discussion below)
3: PCT 1093 (good condition)	1093 - Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion	None	None
4: PCT 1093 (lower condition)			
5: PCT 1093 (DNG)			
6: Exotic pasture and native/exotic plantings	N/A	None	None

3.2.1 Description of vegetation zones

Vegetation zone 1: PCT1330 – Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion

Vegetation Zone 1 was present along the lower slopes/flats within the subject land. It was present as a modified (partially cleared and advanced regeneration) woodland community, with a canopy dominated by *Eucalyptus melliodora* (Yellow Box) and/or *E. blakelyi* (Blakely's Red Gum) (**Photo 1**). Both *Eucalyptus pauciflora* (Snow Gum) and *E. rubida* (Candlebark) were present as scattered individuals, predominantly within proposed Lot 2 and Lot 3. The mid-storey was sparse to absent: where present, it consisted of scattered *Acacia dealbata* (Silver Wattle) and *Cassinia arcuata* (Sifton Bush).

The groundcover condition and composition was variable throughout the extent of this vegetation zone. Towards the north of the subject land in proposed Lot 1, Lot 2 and Lot 3, as well as the majority within the proposed residual lot, Vegetation Zone 1 was in moderate to good condition, with a predominantly native groundcover dominated by native perennial grass species including *Rytidosperma racemosum*, *Rytidosperma* sp., *Panicum effusum* (Hairy Panic) and *Austrostipa scabra* (Spear Grass), as well as a diversity of forbs and sub-shrubs including *Cheilanthes sieberi* (Rock Fern), *Vittadinia* spp., *Brachyloma daphnoides* (Daphne Heath), *Hibbertia obtusifolia* (Hoary Guinea-flower) and *Melichrus urceolatus* (Urn Heath) (**Photo 2**).

Photo 1: PCT1330 dominated by advanced regeneration of *E. melliodora* in proposed Lot 2

Photo 2: PCT1330 downslope of PCT1093 dry sclerophyll forest, with moderately diverse native groundcover

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Figure 2: Vegetation zones within the subject land

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These areas of higher diversity and condition (total 3.21 ha) were assessed as meeting the condition criteria for listing as the EPBC Act Critically Endangered Ecological Community *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grasslands*, and therefore also the equivalent BC Act listed Endangered Ecological Community (EEC) due to:

- the current dominance of *E. melliodora* and/or *E. blakelyi* as a canopy species
- abundant regeneration (both seedlings and saplings >15 cm diameter breast height) of *E. melliodora* and *E. blakelyi*;
- the grassy woodland structure (albeit modified through historic clearing)
- the predominantly native groundcover, dominated by native perennial grass species
- the patch sizes of >0.1 ha
- the presence of more than 12 native non-grass species in the groundcover, including at least one "important" species
- its location on lower slopes on moderately fertile soils in the NSW Southern Tablelands.

However, Vegetation Zone 1 within proposed Lot 5, as well as a small patch surrounding the large dam at the boundary of proposed Lot 2 and the proposed residual lot, was present in a more degraded condition (**Photo 3**) (total 1.96 ha). While the groundcover was still predominantly native, there was a relatively low diversity of native groundcover species, and a higher abundance and cover of exotic grasses and forbs including *Hypochaeris radicata* (Catsear), *Bromus* spp. and *Vulpia* sp. These patches contained scattered remnant mature *E. blakelyi* as well as dense regeneration (seedlings) of *E. blakelyi*. These areas were considered to be of sufficient condition to meet the requirements for listing as the BC Act EEC *White Box Yellow Box Blakely's Red Gum Woodland*.

Photo 3: PCT1330 in lower condition in proposed Lot 5

The distribution of these Threatened Ecological Communities (TECs) is shown in **Figure 4**.

A total of 11.17 of Vegetation Zone 1 was present within the subject land, 4.93 ha of which was located within the study area.

Vegetation zone 2: PCT1330 – Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion (DNG)

Vegetation Zone 2 was a derived native grassland (DNG) form of Vegetation Zone 1. It was present as two discrete patches located within proposed Lot 1, and one patch within proposed Lot 5. These areas have been subject to more intensive clearing, with the former woodland canopy no longer present (**Photo 4**). The grassy groundcover was heavily grazed by macropods.

Within proposed Lot 1, the composition was similar to groundcover composition in the moderate to good condition Vegetation Zone 1. The native forbs and rushes *Triptilodiscus pygmaeus* (Common Sunray), *Lomandra multiflora* (Many-flowered Mat Rush) and *Vittadinia muelleri* were common, and the exotic forbs *Hypochaeris radicata, Trifolium arvense* (Haresfoot Clover) and *Tolpis barbata* (Yellow Hawkweed) were scattered throughout.

These two patches of Vegetation Zone 2 (total area 2.07 ha) were assessed as meeting the required condition for the EPBC Act Critically Endangered Ecological Community *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grasslands*, and therefore also the equivalent BC Act listed Endangered Ecological Community (EEC), due to:

- the former dominance of *E. melliodora* and/or *E. blakelyi* as a canopy species, determined through assessment of current recruitment of both of these species, and its location directly adjacent to grassy woodlands dominated by these species
- the predominantly native groundcover, dominated by native perennial grass species
- the patch sizes of >0.1 ha
- the presence of more than 12 native non-grass species in the groundcover, including at least one "important" species
- its location on lower slopes on moderately fertile soils in the NSW Southern Tablelands.

The patch of Vegetation Zone 2 within proposed Lot 2 (total area 0.31 ha) had a relatively low native groundcover diversity and a higher (although not dominant) exotic groundcover. Therefore, this patch was considered too degraded to meet the condition requirements for the above-mentioned EPBC Act listed CEEC, but meets the condition of the BC Act listed *White Box Yellow Box Blakely's Red Gum Woodland* EEC.

A total of 2.38 ha of Vegetation Zone 2 was present within the subject land, all of which was located within the study area.

Photo 4: PCT1330 (DNG) within proposed Lot 1

Vegetation zone 3: PCT1093 - Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion (good condition)

Vegetation Zone 3 dominated across the subject land, located on hill slopes and crests in the low hill landscape on relatively shallow rocky soils. This zone consisted of a dry open forest in relatively intact and good condition, with a canopy dominated by *Eucalyptus macrorchyncha* (Red Stringybark), *E. mannifera* (Brittle Gum), *E. rossii* (Inland Scribbly Gum), with *E. goniocalyx* (Long-leaved Box) present as an associate species, and in higher abundances within the large remnant patch contained within the residual lot (**Photo 5**). The mid storey was relatively sparse (maximum 5% projected foliage cover), and was dominated by the native shrub *Daviesia leptophylla* (Narrow-leaved Bitter Pea) in association with *Styphelia triflora* (Pink Five-corners) and *Acacia mearnsii* (Black Wattle).

Photo 5: PCT1093 (good condition) within proposed Lot 1

Photo 6: PCT1093 (good condition) within proposed Lot 3, with tall tussock grassy groundcover and a diversity of native forbs

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The groundcover was dominated by the native perennial tussock grass species *Rytidosperma pallidum* (Red-anther Wallaby Grass), as well as a diversity of native shrubs, sub-shrubs, forbs and rushes including *Brachyloma daphnoides, Melichrus urceolatus, Lissanthe strigosa* (Peach Heath), *Lomandra longifolia* (Spiny-headed Mat-rush), *Leptospermum* sp. and *Gompholobium huegelii* (Pale Wedge Pea). The groundcover in proposed Lot 3 surrounding the existing residence was in particularly good condition, due to this area being fenced off and therefore not subject to intense macropod grazing (**Photo 6**).

A total of 38.02 ha of Vegetation Zone 3 was present within the subject land, 9.99 ha of which was located within the study area.

Vegetation zone 4: PCT1093 - Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion (lower condition)

Vegetation Zone 4 was primarily contained within proposed Lot 4 and Lot 6. This vegetation zone was the same vegetation community as Vegetation Zone 3, however it was present in a modified (partially cleared) condition, with scattered remnant *Eucalyptus macrochyncha, E. goniocalyx* and *E. mannifera*. The groundcover was also moderately degraded, containing a higher abundance of exotic pasture species and exotic forbs including *Bromus* spp., *Vulpia* sp., *Hypochaeris radicata*, various *Trifolium* spp. (Clovers) and *Acetosella vulgaris* (Sheep Sorrell).

A total of 5.30 of Vegetation Zone 4 was present within the subject land, 4.90 ha of which was located within the study area.

Vegetation zone 5: PCT1093 - Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion (DNG)

Vegetation Zone 5 was a DNG form of Vegetation Zone 3. It was primarily located within (and dominated) proposed Lot 2, and was also found as two discrete patches located within proposed Lot 1. These areas have been subject to more intensive clearing, with the former woodland canopy no longer present (**Photo 7**). Horses were grazing within proposed Lot 6.

The groundcover was heavily grazed, and dominated by the native grass species *Rytidosperma racemosum, Chloris truncata* (Windmill Grass) and *Austrostipa scabra*. While the groundcover was predominantly native in terms of cover, there was a relatively high abundance of exotic grasses and forbs, including *Arctotheca calendula* (Cape Weed), *Aira* sp., *Acetosella vulgaris* and *Agrostis capillaris* (Bent Grass).

A total of 6.73 ha of Vegetation Zone 5 was present within the subject land, 6.71 ha of which was located within the study area.

Photo 7: PCT1093 (DNG) within proposed Lot 6

Vegetation zone 6: Exotic pasture and native/exotic plantings

Vegetation Zone 6 was predominantly located within the residual lot. It consists primarily of the disused golf green, with a heavily grazed and/or mown groundcover dominated by exotic grasses including *Agrostis* sp. (Bent Grass), *Bromus* spp. (Brome), *Holcus lanatus* (Yorkshire Fog) and *Vulpia* sp., as well as a high abundance of exotic forbs such as *Hypochaeris radicata, Acetosella vulgaris, Echium plantagineum* (Patterson's Curse), *Arctotheca calendula, Hypericum perforatum* (St John's Wort) and *Paronychia brasiliana* (Chilean Whitlow Wort). While there were small scattered patches containing native grasses and forbs, including *Rytidosperma racemosum, Aristida ramosa* (Purple Wiregrass) and *Dichondra repens* (Kidney Weed), these were not considered to be of sufficient size (< 0.1 ha) or viability to warrant mapping as DNG.

Linear and block plantings of both native and exotic trees and shrubs were present throughout Vegetation Zone 6. These included linear plantings of local provenance native species such as *Eucalyptus viminalis* (Ribbon Gum), *E. stellulata* (Black Sallee), *E. bicostata* (Eurabbie) and *E. rubida* (Candlebark), as well as linear and ornamental plantings of a diversity of exotic species including *Pinus radiata* (Radiata Pine), *Cotoneaster* sp. and *Cuppressus* sp. (Cypress) (**Photo 8** and **Photo 9**). Large individual remnant *Eucalyptus melliodora* and *E. blakelyi* were scattered throughout. While these native plantings and scattered remnant "paddock" trees have biodiversity and habitat value, these were not considered to be equivalent to a native vegetation community or PCT. As such there are no equivalent PCTs or TEC listings for this vegetation community.

Photo 8: Native *Eucalyptus* sp. and shrub plantings over former golf green

Photo 9: Native/exotic shrub and *Eucalyptus* plantings towards western boundary of subject land

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A total of 26.36 ha of Vegetation Zone 6 was present within the subject land, 14.71 ha of which was within the study area.

3.3 Terrestrial fauna and fauna habitat

3.3.1 Habitats and key components

The fauna habitats present in the study area are those generally associated with dry sclerophyll forest, grassy woodland, derived native grasslands and riparian habitats in the locality. These habitats, particularly the remnant forest and woodland patches, are likely to support a relatively diverse range of common native fauna species due to the abundance of habitat features such as hollow-bearing trees (HBTs) and structural vegetation diversity (trees, shrubs and tussock grasses).

Key fauna habitat components within the study area included hollow-bearing trees (HBTs), termite mounds, large woody debris, *Amyema* sp. (mistletoe), bird nests, and farm dams and ephemeral creeklines. No termite mounds shown evidence of use (nesting) by the threatened reptile species *Varanus rosenbergi* (Rosenberg's Goanna).

A total of 26 HBTs (e.g. **Photo 8**), eight termite mounds and 13 bird nests were identified within the subject land (**Figure 3**). Of the 26 HBTs, 19 were located within the study area.

Photo 8: *E. macrorhyncha* containing medium branch hollows and one stick nest

Due to the contiguity of the patches of remnant vegetation within the study area with larger patches in the locality, the HBTs are likely to provide roosting, breeding and nesting habitat for a diversity forest and woodland birds and arboreal mammals. Mistletoe may provide foraging and nesting habitat for the

threatened fauna species *Grantiella picta* (Painted Honeyeater). Three nests were observed in mistletoe, but these did not show any signs of activity.

The majority of the dams showed signs of disturbance along the banks from cattle movement and grazing by cattle and *Macropus giganteus* (Eastern Grey Kangaroo). These dams are likely to provide habitat for aquatic species that are able to tolerate a moderate level of disturbance and activities associated with agricultural land uses.

3.3.2 Observed fauna

A total of 33 fauna species were recorded opportunistically during the survey, consisting of 27 native bird species, two native mammal species, one native amphibian species, one exotic bird species and one exotic mammal species. A full list of all fauna species identified during field surveys can be found in **Appendix D**.

No threatened fauna species listed under either the BC Act or EPBC Act were observed.

The native birds most commonly recorded during the site inspection were predominantly larger common bird species such as *Cracticus tibicen* (Australian Magpie), *Cacatua galerita (*Sulphur-crested Cockatoo) and *Eolophus roseicapilla* (Galah), as well as a number of smaller woodland and open grassland bird species such as *Acanthiza pusilla* (Brown Thornbill) and *Pardalotus striatus* (Striated Pardalote). One Brown Thornbill nest was observed within the study area. The individual was seen to be utilising the nest during the time of survey.

A number of native bird species associated with aquatic habitats, including *Chenonetta jubata* (Australian Wood Duck) and *Fulicra atra* (Eurasian Coot) were observed utilising farm dams and fringing vegetation within the study area.

3.4 Potentially occurring species

From the evaluation in **Appendix A**, the following threatened species are considered to have potential to utilise the study area and subject land for foraging, roosting or breeding purposes. **Table 2** outlines the activity and resources likely to be utilised by each potentially affected species.

Table 2: Potentially occurring species in the study area and subject land

Species	Common name	Activity	Habitat features
Apus pacificus	Fork-tailed Swift	Foraging	Native vegetation communities within the study area, particularly above low, dry canopies for insects
Artamus cyanopterus cyanopterus	Dusky Woodswallow	Foraging, breeding	Dry open forest and woodlands
Callocephalon fimbriatum	Gang-gang Cockatoo	Foraging	Dry open forest and woodland canopies for foraging
Chthonicola sagittata	Speckled Warbler	Foraging, breeding	Dry open forest and woodland tussock groundcover

Species	Common name	Activity	Habitat features
Climacteris piculmus victoriae	Brown Treecreeper (Eastern subspecies)	Foraging, breeding	Dry open forest. Hollow trees and logs for nesting
Grantiella picta	Painted Honeyeater	Foraging, breeding	*Amyema* spp. for foraging purposes, nesting habitat in drooping branches of eucalypt species as well as mistletoe
Hirundapus caudacutus	White-throated Needletail	Foraging	Occasionally utilise native vegetation communities for foraging, feeding on insects flying above and amongst the canopy of dry forests. Mostly an aerial forager
Lathamus discolor	Swift Parrot	Foraging	*Eucalyptus melliodora* is a preferred feeding tree and is present.
Melanodryas cucullata	Hooded Robin	Foraging, breeding	Dry open forest and woodlands, including ecotone with cleared vegetation.
Myotis macropus	Southern Myotis	Foraging, breeding	May breed in hollow-bearing trees within 200 m of waterbodies. Forages over waterbodies.
Petroica boodang	Scarlet Robin	Foraging, breeding	Dry open forest and woodland, potentially breeding in the dry open forest. Marginal winter foraging habitat in the DNG
Petroica phoenicea	Flame Robin	Foraging	May forage in groundcover in all vegetation types within the study area, including exotic pasture
Phascolarctos cinereus	Koala	Movement corridor	Patches of native vegetation containing preferred food trees which form part of a large contiguous patch
Polytelis swainsonii	Superb Parrot	Foraging, breeding	Forages within Box Gum Woodland, breeding with hollow bearing trees, including paddock trees (prefers *E. blakelyi* and *E. melliodora*)
Rostratula australis	Painted Snipe	Foraging	Dams and associated fringing vegetation
Stagonopleura guttata	Diamond Firetail	Foraging, breeding	Grassy woodland and DNG. Nests in shrub layer, and ground forager
Varanus rosenberi	Rosenberg's Goanna	Foraging, breeding	Termite mounds (critical nesting habitat resource) located in native vegetation communities

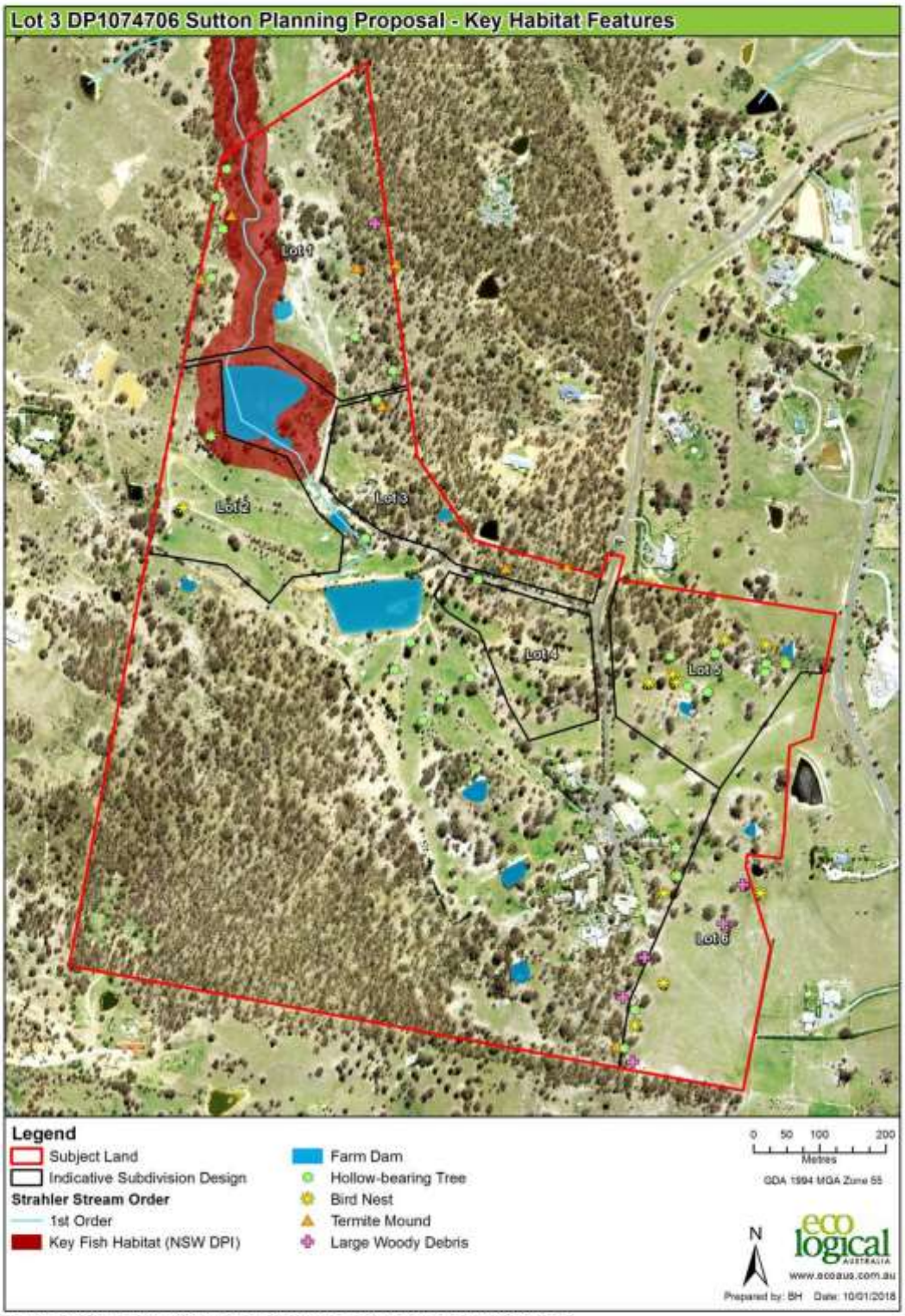

Figure 3: Key habitat features within the study area and subject land

3.5 Riparian corridor requirements and aquatic ecology

3.5.1 Riparian corridor

The drainage line within the site / study area (shown in **Figure 3**) was assessed in relation to the *Water Management Act 2000* (WM Act) to identify the riparian corridor requirements.

Under the Strahler stream order classification system, the drainage line is a first order stream which requires a 10 m wide (each side from top of bank) vegetated riparian zone (**Table 3**) under the WM Act.

The first order stream showed signs of alteration and disturbance, which has resulted in the absence of a defined bed, bank or channelin some areas. The downstream portion of the stream had been dammed and the upstream extent built up to service as an access track.

The central portion of the stream contained a defined bed, bank and channel and would meet the definition of a "river" but would be unlikely to accommodate flowing water. After heavy, consistent rainfall events it is expected that the watercourse may temporarily contain pools of water.

The upstream end of the watercourse showed signs of erosion and artificial rock placement and an abandoned access track extending into the neighbouring property. It is evident that the watercourse has undergone a long history of alteration and disturbance which has ultimately impacted the function of the watercourse. It is unlikely to support aquatic fauna and did not support any aquatic flora.

Table 3: NSW DPI Water recommended riparian corridor widths

Watercourse Type (Strahler)	Vegetated Riparian Zone Width (each side of watercourse from top of bank)	Total width
1st Order	10 m	20 m
2nd Order	20 m	40 m
3rd Order	30 m	60 m
4th Order or greater	40 m	80 m

3.5.2 Aquatic habitat values

NSW DPI Fisheries have mapped a reach of approximately 600 m of Key Fish Habitat (KFH) within the boundary of the subject land.

As noted above, this is an ephemeral 1st order stream, so satisfies the requirements of a **Type 3** minimally sensitive KFH (Fairfull 2013). The stream channel below the dam wall is poorly defined, though it becomes more incised and easier to discern approximately 150 m downstream. Channel definition strengthens as it moves northward towards the property boundary, where it is approximately 1.5 m deep and 5-10 m wide. The channel is ephemeral, flowing only after rainfall, and it has no aquatic vegetation. In terms of waterway classification, this stream possesses the characteristics of a **Class 3** minimal KFH (Turnbull 2013).No other KFH is mapped for the subject land, and none of the other waterways meet the criteria for key fish habitat as defined in Fairfull (2013). NSW Fish Community Status mapping does not include this stream, but the Yass River, into which this stream eventually flows, is classified as having a poor fish community.

At the time of survey, the watercourse did not contain any water, signs of stagnant or pooling water and was densely covered in exotic perennial groundcover species and / or thick leaf litter.

The subject land contains twelve farm dams in varying condition. The majority of the dams contained *Gambusia holbrooki* and disturbance along the banks from cattle grazing and movement. The presence of *Gambusia holbrooki* is an indicator that native frog species are constrained as this species is known to feed on the clutches of eggs laid by frogs and prey on tadpoles. Some of the dams contained good quality fringing vegetation which may be utilised by aquatic birds and amphibians for roosting, nesting, refuge or foraging habitat (**Photo 9**).

Searches for threatened fish species using the Protected Matters Search Tool and DPI Fisheries Spatial Data Portal (accessed 19 December 2017 and summarised in Riches et al. 2016) indicate that the following species have the potential to occur locally:

- Murray Cod (*Maccullochella peelii*)- Vulnerable under EPBC Act
- Macquarie Perch (*Macquaria australasica*)- Endangered under EPBC Act and FM Act

Both of these species require deep pools and permanent waterholes, so there is no suitable habitat for them within the subject land and therefore would not occur.

Photo 9: Farm dam with fringing aquatic vegetation

3.5.3 Riparian lands and Watercourses overlay – Palerang LEP 2014

The subject land is covered by the Riparian lands and watercourses overlay and is subject to the conditions outlined in the Palerang LEP 2014. Consideration of the matters listed in Clause 6.5 of the Palerang LEP must be considered prior to development consent being granted.

Table 4 below discusses the consistency of the proposed development with the matters listed in Clause 6.5 of the Palerang LEP. The proposal is considered to be significant with the matters listed in Clause 6.5.

Table 4: Matters for consideration under Clause 6.5 of the Palerang LEP

Matter for consideration	Reasoning
whether or not the development is likely to have any adverse impact on the water quality and flows within the watercourse	No. The first order stream did not contain any signs of recent flow or water pooling during heavy rain events. The stream had been dammed downstream and flow had been impeded by rocks upstream. No further changes to the watercourse are proposed.
whether or not the development is likely to have any adverse impact on aquatic and riparian species, habitats and ecosystems of the watercourse	No. The first order stream did not contain any aquatic vegetation. The stream contained exotic perennial species and leaf litter. Current hydrological regime is not expected to change.
whether or not the development is likely to have any adverse impact on the stability of the bed and banks of the watercourse,	No. Not impacted by the layout.
whether or not the development is likely to have any adverse impact on the free passage of fish and other aquatic organisms within or along the watercourse	No. No fish are likely to utilise the watercourse as a corridor due to absence of any consistent or intermittent water flow and lack of connectivity with other streams upstream or downstream.
whether or not the development is likely to have any adverse impact on any future rehabilitation of the watercourse and riparian areas	As per the DPI Water guidelines, a 10 m vegetation riparian zone (VRZ) is required from top of bank either side. Given this requirement, it is unlikely the development would adversely impact the riparian corridor or its potential rehabilitation.
whether or not the development is likely to have any adverse impact on whether or not the development is likely to increase water extraction from the watercourse,	No. No dam proposed.
whether or not the development is likely to have any adverse impact on any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development	Not applicable.
the development is designed, sited and will be managed to avoid any significant adverse environmental impact	As per the DPI Water guidelines, a 10 m VRZ on either side of the 1st order stream is required.
if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact	As per the DPI Water guidelines, a 10 m VRZ on either side of the 1st order stream is required.

Matter for consideration	Reasoning
if that impact cannot be minimised—the development will be managed to mitigate that impact	As per the DPI Water guidelines, a 10 m VRZ on either side of the 1st order stream is required.

4 Summary of ecological values and planning constraints

Key ecological values present within the study area and subject land are shown in **Figure 4**.

4.1 Vegetation

The area of each vegetation community within the study area and the residual lot is shown in **Table 5** (note: these areas exclude existing infrastructure/buildings and dams). The study area contained six vegetation zones comprising two native vegetation communities: PCT 1330 Yellow Box – Blakely's Red Gum Grassy Woodland and PCT 1093 Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest.

PCT1093 Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest was present in three conditions: good, low or DNG. This community is not listed as a TEC under the BC Act or EPBC Act. This vegetation community in good condition comprised a majority of the subject land and study area and is considered to represent a moderate ecological constraint due to it containing a diversity of habitat features. The patches of the community in good condition form part of a larger, contiguous patch of native vegetation that extends into the locality. PCT1330 Yellow Box – Blakely's Red Gum grassy woodland was present in two condition states: moderate to good, or DNG. All areas mapped as PCT1330 were considered of sufficient quality to meet the requirements for assessment as the BC Act listed EEC *White Box Yellow Box Blakely's Red Gum Woodland*. In addition, the majority of this vegetation community met the condition requirements of the EPBC Act listed community *White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and DNG*.

The patches of the community in EPBC Act defined condition are considered to represent a very high ecological constraint due to being a CEEC (total 5.32 ha within the study area). Any direct impacts to this CEEC would require referral to the Commonwealth Department of the Environment and Energy (DotEE). The areas mapped as meeting only the BC Act listed EEC (total 7.32 ha within the study area) pose a high constraint, and offer opportunities for improvement through appropriate management. These areas of EEC shown in **Figure 4** are considered to be validated boundaries and extent of High Environmental Value lands. Managing and enhancing these areas of EEC (both good condition and DNG), as well as the large remnant patch of PCT1093 within the remnant lot, for biodiversity outcomes, will contribute to the aim and actions outlined in the *South East and Tableland Regional Plan 2017*, Direction 15: Enhance biodiversity connections.

Table 5: Vegetation communities in the subject land

Vegetation Zone	Study area (ha)	Residual lot (ha)	Total in subject land (ha)
PCT1330 Yellow Box - Blakely's Red Gum Grassy Woodland	4.93	6.41	**11.17**
PCT1330 Yellow Box - Blakely's Red Gum grassy woodland (DNG)	2.38	0.00	**2.38**
PCT1093 Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest (good condition)	9.99	28.88	**38.02**

Vegetation Zone	Study area (ha)	Residual lot (ha)	Total in subject land (ha)
PCT1093 Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest (lower condition)	4.90	1.16	**5.30**
PCT1093 Red Stringybark - Brittle Gum - Inland Scribbly Gum dry open forest (DNG)	6.72	0.11	**6.73**
Exotic Pasture and Native/Exotic Plantings	14.71	14.82	**26.36**
Total (ha)	**44.69**	**55.74**	**89.98**

4.1.1 Terrestrial fauna

The study area supports a range of habitat features likely to be utilised by native birds, common arboreal mammals, and microchiropteran bats, including, potentially, threatened bird or microbat species. These habitat features should be retained in the future via strategic layout of future development to avoid and / or minimise impacts.

The farm dams are likely to provide foraging habitat for a number of wetland birds and amphibians capable of withstanding a moderate level of disturbance. These are not considered a key constraint.

The native vegetation in the study area forms part of a larger, contiguous patch that extends beyond the subject land. This connectivity would connect the subject land to potential habitat within the locality. Vegetation retention should aim to maintain this connectivity at a site to landscape scale.

The HBTs provide potential nesting habitat for a range of hollow-dependent birds, mammals and microchiropteran bat species known from the locality, including the threatened *Polytelis swainsonii* (Superb Parrot). The hollow-bearing *E. blakelyi* and *E. melliodora* containing medium to large hollows pose a high constraint due to their potential to provide breeding habitat for this species. All hollow-bearing trees pose, at minimum, a medium constraint.

4.1.2 Aquatic habitats

The degraded and highly ephemeral nature of the KFH present within the subject land means that this poses only a moderate constraint to development.

Any works that temporarily obstruct KFH or block fish passage would require a permit from DPI Fisheries. No threatened fish listed under the FM Act or EPBC Act are likely to occur near the crossings or along each waterway, therefore the proposal would not directly impact threatened fish or their habitats.

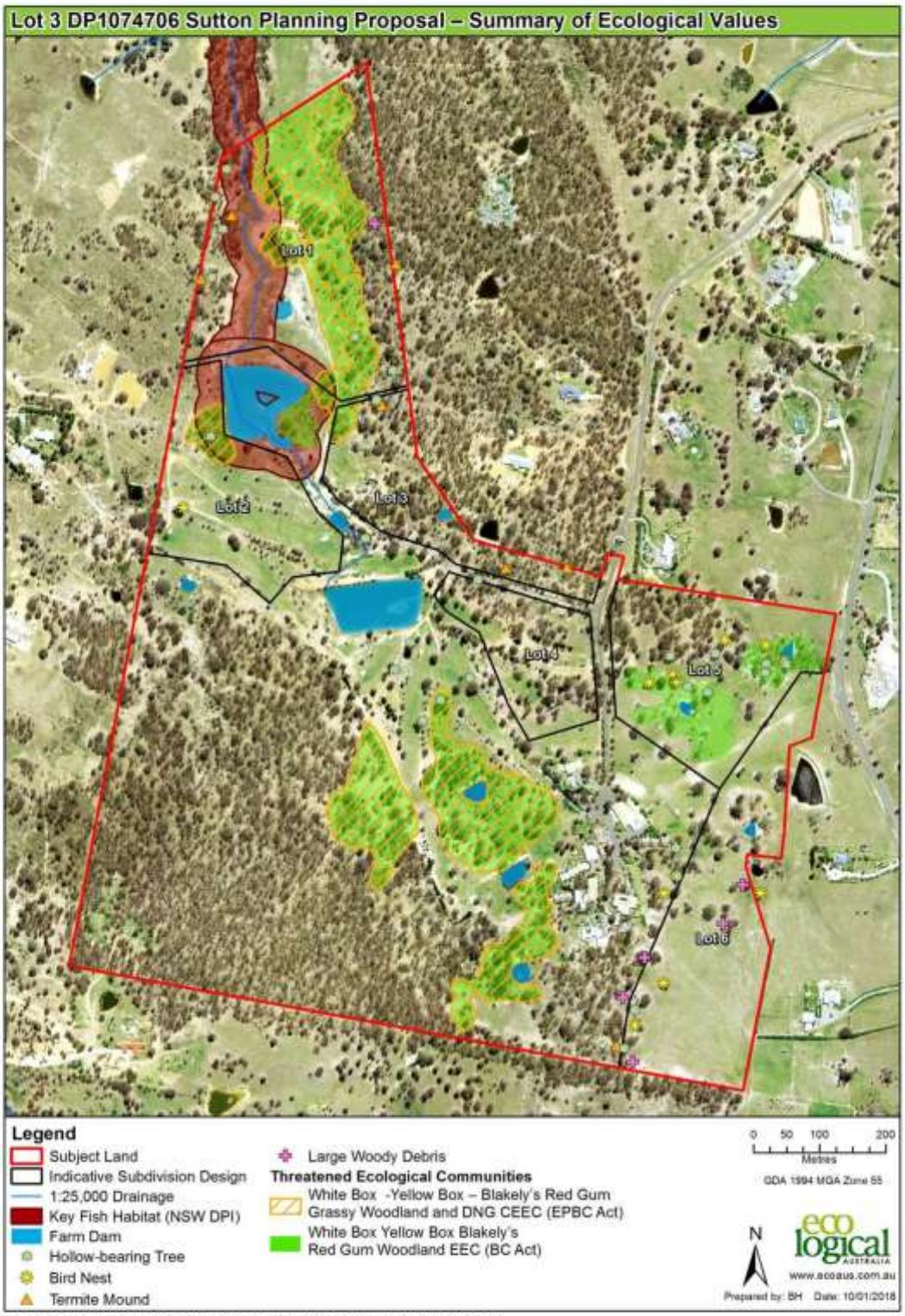

Figure 4: Summary of key ecological values and constraints

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4.2 Future development under the BC Act 2016

Future development will be required to be assessed under the BC Act which repealed the *Threatened Species Conservation Act 1995*, and is due to come into full effect from 25th February 2018.

Under section 7.2 of the BC Act, development will enter the Biodiversity Offset Scheme (BOS) if:

- It is likely to significantly affect threatened species or their habitats in accordance with the five part test in section 7.3.
- The development exceeds the biodiversity offset scheme thresholds established by the regulations which include:
    - clearing of native vegetation above a defined area threshold; or
    - development in areas containing mapped "sensitive biodiversity values";
- It is carried out in a declared area of outstanding biodiversity value.

In addition, Clause 7.1 of the *Biodiversity Conservation Regulation 2017* identifies the following triggers into the BOS:

(1) Proposed development exceeds the biodiversity offsets scheme threshold for the purposes of Part 7 of the Act if it is or involves:

(a) the clearing of native vegetation of an area declared by clause 7.2 as exceeding the threshold, or;

(b) the clearing of native vegetation, or other action prescribed by clause 6.1, on land included on the *Biodiversity Values Map* published under clause 7.3.

(2) Proposed development that is or involves the clearing of native vegetation on Lord Howe Island does not exceed the biodiversity scheme threshold, despite anything to the contrary in subclause (1).

(3) If proposed development is or involves the subdivision of land, the subdivision is taken to involve the clearing of native vegetation that, in the opinion of the relevant consent authority or other planning approval body, is required or likely to be required for the purposes for which the land is to be subdivided. Once that clearing has been taken into account, the clearing for the purposes of the subsequent development of the land for which it was subdivided is not to be taken into account when determining whether the subsequent development exceeds the threshold.

If the future development meets any of the above thresholds, the BOS will apply and a Biodiversity Development Assessment Report (BDAR) will be required to be prepared by an accredited ecologist.

The BOC clearing area threshold for clearing of native vegetation is associated with the minimum lot size for the zoning specified in the LEP. The thresholds for clearing, and associated minimum lot sizes, are presented in **Table 6**. The area threshold applies to all proposed native vegetation clearing, including clearing of secondary grasslands, associated with a proposal, regardless of whether this clearing is across multiple lots. In the case of a subdivision, the proposed clearing must include all future clearing likely to be required for the intended use of the land after it is subdivided.

Based on the current minimum lot size of 6 ha, any clearing over 0.5 ha would trigger the requirement to undertake a BAM and complete a BDAR.

Table 6: Biodiversity Offsets Scheme thresholds for clearing

Minimum Lot Size	Threshold for clearing
Less than 1 ha	0.25 ha or more
1 ha to less than 40 ha	0.5 ha or more
40 ha to less than 1000 ha	1 ha or more
1000 ha or more	2 ha or more

5 Recommendations

The following measures are recommended to mitigate or minimise the potential impacts of the proposal on native flora and fauna present within the subject land:

- Design the proposal to avoid any impacts to hollow-bearing trees and the EPBC Act listed CEEC.
- Confine all impact areas (building envelopes, infrastructure footprints) to lands mapped as Vegetation Zone 6 Exotic Pasture and Native/Exotic Plantings, to the greatest extent possible to minimise impacts, but also to minimise likely offset obligations.
- Any waterway crossings should be designed and constructed in accordance with the national guidelines entitled '*Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings*' (Fairfull and Witheridge 2003). Crossings are to be designed to allow adequate fish passage during operation. The crossings are on Class 3 – Minimal key fish habitat and culvert or fords are the preferred crossing type (in that order) for Class 3 waterways.
- Consider updating and finalising the Vegetation Management Plan for the subject land, with a particular emphasis on managing and restoring the areas of TEC, establishing the vegetated riparian zone and retaining remnant mature trees.
- Develop a Construction Environmental Management Plan (CEMP) to address potential pollution and contamination issues, such as silt control and oil/fuel/chemical storage/spill management, which could arise during construction, and to incorporate Unexpected Find and Pre-clearing and Clearing Supervision procedures (particularly focussed on avoiding impacts to hollow-dependent fauna).

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Appendix A - Likelihood of occurrence table flora, fauna and TECs

An assessment of likelihood of occurrence was made for threatened and migratory species identified from the database search. Five terms for the likelihood of occurrence of species are used in this report. This assessment was based on database or other records, presence or absence of suitable habitat, features of the proposal site, results of the field survey and professional judgement. The terms for likelihood of occurrence are defined below:

- "yes" = the species, population or ecological community was or has been observed on the site.
- "likely" = a medium to high probability that a species, population or ecological community occurs on the site
- "potential" = suitable habitat for a species, population or ecological community occurs on the site, but there is insufficient information to categorise the species as likely, or unlikely to occur.
- "unlikely" = a very low to low probability that a species, population or ecological community occurs on the site
- "no" – the species, population or ecological community is not present on the site

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
ECOLOGICAL COMMUNITIES						
Natural Temperate Grassland of the South Eastern Highlands		-	CE	Generally corresponds with the Monaro, Murrumbateman, Bungonia and Crookwell subregions of the South Eastern Highlands bioregion. Remnants are known to be located in various sub-regions of the Hawkesbury/Nepean, Lachlan, Murrumbidgee and Southern Rivers Catchment Management Regions of NSW.	Ridges, crests, hillsides, undulating plains, valleys and lower slopes, creeks, drainage lines and river flats. Usually associated with heavy textured soils with low nutrient levels.	No – not identified in the study area or subject lands during survey
Tablelands Snow Gum, Black Sallee, Candlebark and Ribbon Gum Grassy Woodland in the South Eastern Highlands, Sydney Basin, South East Corner and NSW South Western Slopes Bioregions		E	-	Southern Tablelands and Central Tablelands, with outlying occurrences in the Sydney Basin, South East Corner and NSW South Western Slopes Bioregions.	Valley floors, margins of frost hollows and on footslopes and undulating hills. It occurs between approximately 600 and 1400 m in altitude on a variety of substrates, including basalt, sediments, granite, colluvium and alluvium.	No – not identified in the study area or subject lands during survey
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland		E	CE	Occurs in an arc along the western slopes and tablelands of the Great Dividing Range from Southern Queensland through NSW to central Victoria. In NSW, it occurs in the Brigalow Belt South, Nandewar, New England Tableland, Sydney Basin, NSW North Coast, South Eastern Highlands, South East Corner, NSW South Western Slopes and Riverina Bioregions.	Areas where rainfall is between 400 and 1200 mm per annum, on moderate to highly fertile soils at altitudes of 170 m to 1200 m.	Yes – identified in the study area and subject lands during survey
FAUNA						

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Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Actitis hypoleucos	Common Sandpiper	-	M	Summer migrant. In NSW, widespread along coastline and also occurs in many areas inland.	Coastal wetlands and some inland wetlands, especially muddy margins or rocky shores. Also estuaries and deltas, lakes, pools, billabongs, reservoirs, dams and claypans, mangroves.	No – no habitat present within the study area or subject lands
Anthochaera phrygia	Regent Honeyeater	E4A	CE	Inland slopes of south-east Australia, and less frequently in coastal areas. In NSW, most records are from the North-West Plains, North-West and South-West Slopes, Northern Tablelands, Central Tablelands and Southern Tablelands regions; also recorded in the Central Coast and Hunter Valley regions.	Eucalypt woodland and open forest, wooded farmland and urban areas with mature eucalypts, and riparian forests of *Casuarina cunninghamiana* (River Oak).	Unlikely – no feed tree species present within study area or subject lands
Aprasia parapulchella	Pink-tailed Legless Lizard	V	V	In NSW, only known from the Central and Southern Tablelands, and the South Western Slopes.	Sloping, open woodland areas with predominantly native grassy groundlayers, rocky outcrops or scattered, partially-buried rocks.	Unlikely – lack of suitable rocky habitat within the sudy area or subject lands
Apus pacificus	Fork-tailed Swift	-	M	Recorded in all regions of NSW.	Riparian woodlands, swamps, low scrub, heathland, saltmarsh, grassland, Spinifex sandplains, open farmland and inland and coastal sand-dunes.	Potential – foraging habitat present within the subject lands

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V	-	Occurs in eastern Australia from north Queensland to Tasmania, and in southwestern Western Australia.	Occurs in eucalypt woodlands and forests, with south-eastern populations migrating north during winter.	Potential – foraging and breeding habitat present
Calidris acuminata	Sharp-tailed Sandpiper	-	M	Summer migrant. Widespread in most regions of NSW, especially in coastal areas, but sparse in the south-central Western Plain and east Lower Western Regions.	Shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	No – lack of suitable habitat within the subject land and study area
Calidris ferruginea	Curlew Sandpiper	E1	CE, M	Occurs along the entire coast of NSW, and sometimes in freshwater wetlands in the Murray-Darling Basin.	Littoral and estuarine habitats, including intertidal mudflats, non-tidal swamps, lakes and lagoons on the coast and sometimes inland.	No – lack of suitable habitat within the subject land and study area
Calidris melanotos	Pectoral Sandpiper	d	M	Summer migrant to Australia. Widespread but scattered in NSW. East of the Great Divide, recorded from Casino and Ballina, south to Ulladulla. West of the Great Divide, widespread in the Riverina and Lower Western regions.	Shallow fresh to saline wetlands, including coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	No – lack of suitable habitat within the subject land and study area
Callocephalon fimbriatum	Gang-gang Cockatoo	V	-	In NSW, distributed from the south-east coast to the Hunter region, and inland to the Central Tablelands and south-west slopes. Isolated records known from as far north as Coffs Harbour and as far west as Mudgee.	Tall mountain forests and woodlands in summer; in winter, may occur at lower altitudes in open eucalypt forests and woodlands, and urban areas. The species may forage within the study area from time to time and	Potential – foraging habitat is present within the subject land and study area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
					could potentially breed within the few hollow-bearing trees within the study area, however this habitat is not the preferred tall mountain forests and woodlands that this species preferentially breeds in.	
Chthonicola sagittata	Speckled Warbler	V	-	The Speckled Warbler is patchily distributed on and inland of the Great Dividing Range, from level with Mackay in Qld, to the Grampians National Park in Victoria.	The Speckled Warbler lives in dry sclerophyll forests and woodlands	Potential – potential foraging and breeding habitat present within study area
Climacteris piculmus victoriae	Brown Treecreeper (Eastern subspecies)	V	-	Endemic to eastern Australia, occurring on the inland plains and slopes of the Great Dividing Range.	Occurs in eucalypt woodlands, including Box Gum Woodlands, and dry open forests. Prefers woodlands dominated by stringybarks or other rough barked species, usually with a grassy understorey.	Potential – potential foraging and breeding habitat present within study area
Dasyurus maculatus	Spotted-tailed Quoll	V	E	Found on the east coast of NSW, Tasmania, eastern Victoria and north-eastern Qld.	Rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline.	No - lack of suitable habitat within the subject land and study area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Delma impar	Striped Legless Lizard	V	V	In NSW, occurs in the Southern Tablelands, the South West Slopes and possibly on the Riverina.	Natural Temperate Grassland, secondary and modified grassland, open Box-Gum Woodland.	Unlikely – lack of habitat present, grasslands present were secondary and highly modified
Gallinago hardwickii	Latham's Snipe	-	M	Migrant to east coast of Australia, extending inland west of the Great Dividing Range in NSW.	Freshwater, saline or brackish wetlands up to 2000 m above sea-level; usually freshwater swamps, flooded grasslands or heathlands.	Unlikely – dams present in poor condition. No records within 10 km of subject land
Grantiella picta	Painted Honeyeater	V	V	Widely distributed in NSW, predominantly on the inland side of the Great Dividing Range but avoiding arid areas.	Boree, Brigalow and Box-Gum Woodlands and Box-Ironbark Forests.	Potential – habitat present within subject lands and one record within 10 km of subject land
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	-	Distributed along the coastline of mainland Australia and Tasmania, extending inland along some of the larger waterways, especially in eastern Australia.	Freshwater swamps, rivers, lakes, reservoirs, billabongs, saltmarsh and sewage ponds and coastal waters. Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, forest and urban areas.	Unlikely – lack of potential habitat in the subject land

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Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Hirundapus caudacutus	White-throated Needletail	-	M	All coastal regions of NSW, inland to the western slopes and inland plains of the Great Divide.	Occur most often over open forest and rainforest, as well as heathland, and remnant vegetation in farmland.	Potential – potential habitat present within study area
Lathamus discolor	Swift Parrot	E1	CE	Migrates from Tasmania to mainland in Autumn-Winter. In NSW, the species mostly occurs on the coast and south west slopes.	Box-ironbark forests and woodlands.	Potential - foraging habitat present and records within 10 km of subject land
Litoria aurea	Green and Golden Bell Frog	E1	V	Since 1990, recorded from ~50 scattered sites within its former range in NSW, from the north coast near Brunswick Heads, south along the coast to Victoria. Records exist west to Bathurst, Tumut and the ACT region.	Marshes, dams and stream-sides, particularly those containing *Typha* spp. (bullrushes) or *Eleocharis* spp. (spikerushes). Some populations occur in highly disturbed areas.	Unlikely – only one known population in the Southern Tablelands near Hoskinstown
Litoria castanea	Yellow-spotted Tree frog	E4A	E	A single known population occurs on the Southern Tablelands of NSW.	Large permanent ponds or slow-flowing streams with plenty of emergent vegetation such as bulrushes.	Unlikely – lack of suitable habitat within subject land
Litoria raniformis	Southern Bell Frog	E1	V	In NSW, only known to exist in isolated populations in the Coleambally Irrigation Area, the Lowbidgee floodplain and around Lake Victoria. A few recent unconfirmed records have also been made in the Murray Irrigation Area.	Permanent or ephemeral Black Box/Lignum/Nitre Goosefoot swamps, Lignum/Typha swamps and River Red Gum swamps or billabongs along floodplains and	Unlikely – lack of suitable habitat within subject land

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
					river valleys. Also found in irrigated rice crops.	
Melanodryas cucullata	Hooded Robin	V	-	The Hooded Robin is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania. However, it is common in few places, and rarely found on the coast. It is considered a sedentary species, but local seasonal movements are possible.	Generally prefers lightly wooded country, usually open eucalypt woodland, and often occurs in or near clearings or open areas. It requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.	Potential – potential foraging and breeding habitat present within study area
Monarcha melanopsis	Black-faced Monarch	-	M	In NSW, occurs around the eastern slopes and tablelands of the Great Divide, inland to Coutts Crossing, Armidale, Widden Valley, Wollemi National Park and Wombeyan Caves. It is rarely recorded farther inland.	Rainforest, open eucalypt forests, dry sclerophyll forests and woodlands, gullies in mountain areas or coastal foothills, Brigalow scrub, coastal scrub, mangroves, parks and gardens.	Unlikely – distribution does not overlap and lack of habitat present in subject land
Motacilla flava	Yellow Wagtail	-	M	Regular summer migrant to mostly coastal Australia. In NSW recorded Sydney to Newcastle, the Hawkesbury and inland in the Bogan LGA.	Swamp margins, sewage ponds, saltmarshes, playing fields, airfields, ploughed land, lawns.	Unlikely – no records within 10 km of subject land
Myiagra cyanoleuca	Satin Flycatcher	-	M	In NSW, widespread on and east of the Great Divide and sparsely scattered on the western slopes, with very occasional records on the western plains.	Eucalypt-dominated forests, especially near wetlands, watercourses, and heavily-vegetated gullies.	Unlikely – lack of suitable habitat in subject land

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Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Myotis macropus	Southern Myotis	V	-	In NSW, found in the coastal band. It is rarely found more than 100 km inland, except along major rivers. This species was recorded by NHG (2016) immediately north of the study area.	Foraging habitat is waterbodies (including streams, or lakes or reservoirs) and fringing areas of vegetation. Generally roost in groups of 10 - 15 close (within approximately 200m) to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. In NSW females have one young each year usually in November or December.	Potential – marginal habitat present within study area due to presence of hollow-bearing trees in proximity to farm dams
Numenius madagascariensis	Eastern Curlew	-	CE, M	Summer migrant to Australia. Primarily coastal distribution in NSW, with some scattered inland records.	Estuaries, bays, harbours, inlets and coastal lagoons, intertidal mudflats or sandflats, ocean beaches, coral reefs, rock platforms, saltmarsh, mangroves, freshwater/brackish lakes, saltworks and sewage farms.	Unlikely – distribution does not overlap with subject land
Petroica boodang	Scarlet Robin	V	-	In NSW, it occurs from the coast to the inland slopes.	Dry eucalypt forests and woodlands, and occasionally in mallee, wet forest, wetlands and tea-tree swamps. One individual was observed within Frost Hollow Grassy Woodland at the very north of the study area.	Potential – potential foraging and breeding habitat present within study area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Petroica phoenicea	Flame Robin	V	-	In NSW, breeds in upland areas, and in winter many birds move to the inland slopes and plains, or occasionally to coastal areas. Likely that there are two separate populations in NSW, one in the Northern Tablelands, and another ranging from the Central to Southern Tablelands.	Breeds in upland tall moist eucalypt forests and woodlands. In winter uses dry forests, open woodlands, heathlands, pastures and native grasslands. Occasionally occurs in temperate rainforest, herbfields, heathlands, shrublands and sedgelands at high altitudes.	Potential – potential foraging habitat present within study area
Phascolarctos cinereus	Koala	V	V	In NSW it mainly occurs on the central and north coasts with some populations in the west of the Great Dividing Range. There are sparse and possibly disjunct populations in the Bega District, and at several sites on the southern tablelands.	Eucalypt woodlands and forests.	Potential – records within 10 km of subject land, however no preferred feed trees present
Polytelis swainsonii	Superb Parrot	V	V	In NSW, occurs on inland slopes of the Great Divide and on adjacent plains, especially along the major river-systems.	Box-gum woodland, Box-Cypress-pine and Boree Woodlands and River Red Gum Forest.	Potential – records within 10 km of subject land and potential habitat present
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	Along the eastern coast of Australia, from Bundaberg in Qld to Melbourne in Victoria.	Subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops.	Unlikely – records within 10 km of subject land however this species was not recorded

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
						and habitats within subject land are not preferred habitats
Rhipidura rufifrons	Rufous Fantail	-	M	Coastal and near coastal districts of northern and eastern Australia, including on and east of the Great Divide in NSW.	Wet sclerophyll forests, subtropical and temperate rainforests. Sometimes drier sclerophyll forests and woodlands.	Unlikely – no records within 10 km of study area and lack of suitable habitat present
Rostratula australis	Australian Painted Snipe	E1	E	In NSW most records are from the Murray-Darling Basin. Other recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys.	Swamps, dams and nearby marshy areas.	Potential – dams present within study area
Synemon plana	Golden Sun Moth	E1	CE	NSW populations are found in the area between Queanbeyan, Gunning, Young and Tumut.	Natural Temperate Grasslands and grassy Box-Gum Woodlands in which groundlayer is dominated by *Rytidosperma* spp. (wallaby grasses).	Unlikely – lack of suitable habitat due to heavy grazing
Stagonopleura guttata	Diamond Firetail	V	-	Widely distributed in NSW, mainly recorded in the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina, and less commonly found in coastal areas and further inland.	Grassy eucalypt woodlands, open forest, mallee, Natural Temperate Grassland, secondary derived grassland, riparian areas and lightly wooded farmland.	Potential – potential foraging and breeding habitat present within the study area

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Tympanocryptis pinguicolla	Grassland Earless Dragon	E1	E	The only populations now known are in the ACT and adjacent NSW at Queanbeyan, and on the Monaro Basalt Plains between Cooma and south-west of Nimmitabel.	Restricted to a small number of Natural Temperate Grassland sites dominated by *Rytidosperma* sp. (wallaby grasses), *Austrostipa* spp. (spear grasses), Poa Tussock (*Poa sieberiana*), *Bothriochloa macra* (Red Grass), and occasionally *Themeda triandra* (Kangaroo Grass).	Unlikely – no natural grasslands within the subject land
Varanus rosenbergi	Rosenberg's Goanna	V	-	Heath, open forest and woodland	Feeds on carrion, birds, eggs, reptiles and small mammals. Shelters in hollow logs, rock crevices and in burrows, which they may dig for themselves, or they may use other species' burrows, such as rabbit warrens. Lays up to 14 eggs in a termite mound.	Potential – known to occur in region, potential habitat present
FLORA						
Eucalyptus aggregata	Black Gum	V	V	In NSW, found in the Central and Southern Tablelands, in the South Eastern Highlands Bioregion and on the western fringe of the Sydney Basin Bioregion.	Alluvial soils, on cold, poorly-drained flats and hollows adjacent to creeks and small rivers. Usually occurs in open woodland with a grassy groundlayer.	No – not identified during survey
Lepidium hyssopifolium	Aromatic Peppercress	E1	E	In NSW, occurs near Bathurst, Bungendore, and Crookwell. May also be extant near Armidale.	Woodland with a grassy understorey and grassland.	No – lack of suitable habtiat

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Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Lepidium pseudopapillosum	Formbe Peppercress	E1	V	Original collection location of NSW specimen unknown. Recorded from Canberra but these are now considered to be a distinct taxon.	In Victoria, recorded in Buloke/Black Box woodland and open forest of Grey Box.	Unlikely – not identified during survey
Leucochrysum albicans var. tricolor	Hoary Sunray	P	E	In NSW it occurs on the Southern Tablelands and adjacent areas in an area roughly bounded by Albury, Bega and Goulburn.	Grassland, woodland and forest, generally on relatively heavy soils.	Unlikely – not identified during survey
Pelargonium sp. Striatellum (G.W.Carr 10345)	Omeo Storksbill	E1	E	Known from only 3 locations in NSW, with two on lake-beds on the basalt plains of the Monaro and one at Lake Bathurst.	Irregularly inundated or ephemeral lakes, in the transition zone between surrounding grasslands or pasture and wetland or aquatic communities.	No – lack of habitat present in subject land
Pomaderris pallida	Pale Pomaderris	V	V	In NSW, recorded from near Kydra Trig (north-west of Nimmitabel), Tinderry Nature Reserve, the Queanbeyan River (near Queanbeyan), the Shoalhaven River (between Bungonia and Warri), the Murrumbidgee River west of the ACT and the Byadbo area in Kosciuszko National Park.	Shrub communities surrounded by *Eucalyptus mannifera* (Brittle Gum) and *E. macrorhyncha* (Red Stringybark) or Callitris woodland.	Unlikely – not identified during survey
Prasophyllum petilum	Tarengo Leek Orchid	E1	E	Four sites in NSW: at Boorowa, Captains Flat, Ilford and Delegate. Also experimentally introduced at Bowning Cemetery NSW.	Natural Temperate Grassland, grassy woodland, and Box-Gum woodland.	Unlikely – not identified during survey

Scientific Name	Common Name	BC Act Status	EPBC Act Status	Distribution	Habitat	Likelihood of Occurrence
Rutidosis leptorrhynchoides	Button Wrinklewort	E1	E	In NSW, populations occur at Goulburn, the Canberra - Queanbeyan area and at Michelago.	Box-Gum Woodland, secondary derived grassland or in Natural Temperate Grassland, usually on shallow, stony red-brown clay loams.	Unlikely – not identified during survey
Swainsona recta	Small Purple-pea	E1	E	Queanbeyan and Wellington-Mudgee areas. Historically also recorded at Carcoar, Culcairn and Wagga Wagga.	Grassland, open woodland and open forests dominated by *Eucalyptus blakelyi* (Blakely's Red Gum), *E. melliodora* (Yellow Box), *E. rubida* (Candlebark Gum) and *E. goniocalyx* (Long-leaf Box).	Unlikely – not identified during survey
Thesium australe	Austral Toadflax	V	V	In eastern NSW it is found in very small populations scattered along the coast, and from the Northern to Southern Tablelands.	Grassland on coastal headlands or grassland and grassy woodland away from the coast.	Unlikely – no areas of extensive *T. triandra* and not identified during the survey

[1]Distribution and habitat information taken from OEH and/or SPRAT species profiles (OEH 2017b; DoEE 2017b) [2]No impact assessment required for species for which the proposal is likely to only impact upon marginal habitat, or upon potential habitat of which there is extensive area within the locality and for highly mobile species. For further clarification refer back to **Section 3.1**

Appendix B Flora and fauna species inventory

Flora species

Scientific Name	Common Name	Native / Exotic
Acacia dealbata	Silver Wattle	N
Acacia decora	Western Silver Wattle	N
Acacia gunnii	Ploughshare Wattle	N
Acacia leucoclada	Northern Silver Wattle	N
Acacia melanoxylon	Black Sally	N
Acaena ovina	-	N
Acetosella vulgaris	Sorrel	E
Actinotus helianthi	Flannel Flower	N
Agapanthus praecox	African Lily	E
Aira sp.	-	E
Amyema pendula	-	N
Arctotheca calendula	Capeweed	E
Aristida ramosa	Purple Wiregrass	N
Astroloma humifusum	Native Cranberry	N
Austrostipa densiflora	-	N
Austrostipa scabra	Speargrass	N
Brachyloma daphnoides	Daphne Heath	N
Brasica sp.	-	E
Briza maxima	Quaking Grass	E
Briza minor	Shivery Grass	E
Bromus sp.	-	E
Carex appressa	Tall Sedge	N
Carex sp.	-	N
Cassinia arcuata	Sifton Bush	N
Cassinia longifolia	-	N
Cheilanthes sieberi	-	N
Chloris truncata	Windmill Grass	N
Cirsium vulgare	Spear Thistle	E
Conyza bonariensis	Flax-leaf Fleabane	E

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Scientific Name	Common Name	Native / Exotic
Conyza sp.	-	E
Cotula australis	Common Cotula	E
Craspedia variabilis	Common Billy Buttons	N
Crassula siberiana	Australian Stonecrop	N
Cupressus sp.	-	E
Cymb laws	-	N
Dactylis glomerata	Cocksfoot	E
Daviesia leptophylla	-	N
Deyeuxia imbricata	Bent Grass	N
Dichondra repens	Kidney Weed	N
Dillwynia sp.	-	N
Entolasia sp.	-	N
Erodium botrys	Long Storksbill	N
Eucalyptus bicostata	Eurabbie	N
Eucalyptus blakelyi	Blakely's Red Gum	N
Eucalyptus dives	Broad-leaved Peppermint	N
Eucalyptus goniocalyx	Long-leaved Box	N
Eucalyptus macroryncha	Red Stringybark	N
Eucalyptus mannifera	Brittle Gum	N
Eucalyptus melliodora	Yellow Box	N
Eucalyptus ovata	-	N
Eucalyptus rossii	Inland Scribbly Gum	N
Exocarpos cuppresiformis	Native Cherry	N
Gompholobium huegelii	Pale Wedge Pea	N
Gonocarpus tetragynus	-	N
Goodenia hederacea	Forest Goodenia	N
hardenbergia violacea	Purple Coral Pea	N
Hibbertia obtusifolia	Hoary Guinea Flower	N
Holcus lanatus	Yorkshire Fog	E
Hydrocotyle laxiflora	Stinking Pennywort	E
Hypericum gramineum	Small St John's Wort	N
Hypericum perforatum	St John's Wort	E
Hypochaeris radicata	Catsear	E

Scientific Name	Common Name	Native / Exotic
Jacaranda mimosifolia	Jacaranda	E
Lactuca sp.	-	E
Leptospermum sp.	-	N
Leptospermum squarrosum	Peach Blossom Tea-tree	N
Lissanthe strigosa	Peach Heath	N
Lolium Perenne	Perennial Ryegrass	E
Lomandra filiformis	Wattle Mat-rush	N
Lomandra glauca	Pale Mat Rush	N
Lomandra longifolia	Spiky-headed Mat-rush	N
Lomandra multiflora	Many-flowered Mat-rush	N
Lozula sp.	-	N
Lysimachia arvensis	Scarlet Pimpernell	E
Melichrus urceolatus	Urn-heath	N
Modiola caroliniana	Red-flowered Mallow	E
Panicum effusum	Hairy Panic	N
Paronychia brasiliana	Chilean Whitlow Wort	E
Pinus radiata	Radiata Pine	E
Plantago lanceolata	Plantago	E
Poa sieberiana	-	N
Pultenaea sp.	-	N
Rhytidosperma sp.	-	N
Rytidosperma pallidum	Silvertop Wallaby Grass	N
Solenogyne dominii	-	N
Sonchus oleraceus	Common Sowthistle	E
Styphelia triflora	Pink Five-corners	N
Themeda triandra	Kangaroo Grass	N
Tolpis barbata	Yellow Hakweed	E
Trifolium arvense	Hairfoot Clover	E
Trifolium campestre	Hop Clover	E
Trifolium subterraneum	Subterranean Clover	E
Triptilodiscus pygmaeus	Common Sunray	N
Typha sp.	-	N
Vittadinia muelleri	-	N

Scientific Name	Common Name	Native / Exotic
Vittadinia sp.	-	N
Vulpia sp.	-	E
Wahlengerbia sp.	-	N
Xerochrysum viscosum	Sticky Everlasting	N

Fauna species

Scientific name	Common Name	Native / Exotic
	Queens Froglet	N
Acanthiza chrysorrhoa	Yellow-rumped Thornbill	N
Acanthiza pusilla	Brown Thornbill	N
Acanthiza reguloides	Buff Rumped Thornbill	N
Alisterus scapularis	Australian King Parrot	N
Anthochaera carunculata	Red Wattle Bird	N
Cacatua galerita	Sulphur Crested Cockatoo	N
Calyptorhynchus funereus	Yellow-tailed Black Cockatoo	N
Chenonetta jubata	Australian Wood Duck	N
Corcorax melanorhamphos	White Winged Chough	N
Cormobates leucophaea	White-throated Treecreeper	N
Corvus corax	Common Raven	N
Cracticus tibicen	Australian Magpie	N
Eolophus roseicapilla	Galah	N
Fulica atra	Eurasian Coot	N
Grallina cyanoleuca	Magpie Lark	N
Hirundo neoxena	Welcome Swallow	N
Macropus giganteus	Eastern Grey Kangaroo	N
Macropus rufogriseus	Red-necked Wallaby	N
Manorina melanocephala	Noisy Miner	E
Ocyphaps lophotes	Crested Pigeon	N
Oryctolagus cuniculus	European Rabbit	E
Pachycephala rufiventris	Rufous Whistler	N
Pardalotus striatus	Striated Pardalote	N
Philemon corniculatus	Noisy Friar Bird	N

Scientific name	Common Name	Native / Exotic
Platycercus elegans	Crimson Rosella	N
Platycercus eximius	Eastern Rosella	N
Podargus strigoides	Tawny Frogmouth	N
Psephotus haematonotus	Red-rumped Parrot	N
Rhipidura albiscapa	Grey Fantail	N
Strepera graculina	Pied Currawong	N
Sturnus vulgaris	Starling	N
Vanellus miles	Masked Lapwing	N

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QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 8 BUSH FIRE REPORT

Attachment - Bush fire report

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Bushfire Protection Assessment

Planning proposal for six residential lot and one residual lot subdivision

Lot 3 DP 1074706, Sutton

June 2018

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

DOCUMENT TRACKING

Item	Detail
Project Name	Bushfire Protection Assessment Lot 3 DP 1074706 Sutton
Project Number	7025
Client Name	Queanbeyan Palerang Regional Council
Project Manager	Mick George Level 2, 11 London Circuit Canberra, ACT 2601
Prepared by	Mick George
Reviewed by	Bruce Horkings
Approved by	Bruce Horkings FPAA BPAD L3 Certified Practitioner No. BPAD29963-L3
Status	Final
Version Number	2
Last saved on	8 June 2018

This report should be cited as 'Eco Logical Australia June 2018. Bushfire Protection Assessment, Planning proposal for six lot residential and one residual lot subdivision. Lot 3 DP 1047406, Sutton. Prepared for Queanbeyan Palerang Regional Council.'

Contents

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1 Property and proposal

Table 1: Subject site summary

Street address or property name:	Goolabri Drive		
Suburb, town or locality:	Sutton	**Postcode:**	2620
Lot/DP no:	Lot 3 DP 1074706		
Local Government Area:	Queanbeyan Palerang Regional Council		
Zoning:	E4 Environmental Living		
Type of development:	Planning proposal to amend Local Environment Plan		

1.1 Description of proposal

The proposal is to amend schedule 1 of the Local Environment Plan (LEP) to allow subdivision of Lot 3 DP 1074706 (the site) into 6 residential lots and one residual lot (See **Figure** 1).

There are numerous previous approvals in place for the existing developments that will be retained on the residual lot. These approvals include:

- 46/87 – 6 motel units and BBQ pavilion (with amendment)
- DA 205/94 – Conference centre
- 2000/CA253 – 8 accommodation units
- 2008/350 – Conference centre

The intent of the planning proposal is to allow for the subdivision of the site into six residential lots varying in size from 4-8 hectares and one residual lot which will include an existing tourist/disused golf course/convention centre complex and a large area of native vegetation.

1.2 Assessment process

The proposal was assessed in accordance with Section 100B of the *Rural Fires Act 1997* and 'Planning for Bush Fire Protection 2006' (RFS 2006), herein referred to as PBP (See **Appendix A** for a summary of the assessment process).

Assessment included a review of background documentation, design team consultation, GIS analysis and a site inspection on 31 October and 1 November 2017.

Table 2 identifies the bushfire protection measures assessed and whether these involved acceptable or performance solutions.

Table 2: Summary of bushfire protection measures assessed

Bushfire Protection Measure	Acceptable Solution	Performance Solution	Report Section
Asset Protection Zones	☑	☐	3.1
Construction standard	☑	☐	3.3
Access	☑	☐	3.4
Water supply	☑	☐	3.5

Gas and electrical supplies	☑	☐	3.5

1.3 Bush fire prone land status

The site includes land classified as bush fire prone on the Queanbeyan Palerang Regional Council's bush fire prone land (BFPL) map (**Figure 2**).

Figure 1: Indicative subdivision layout

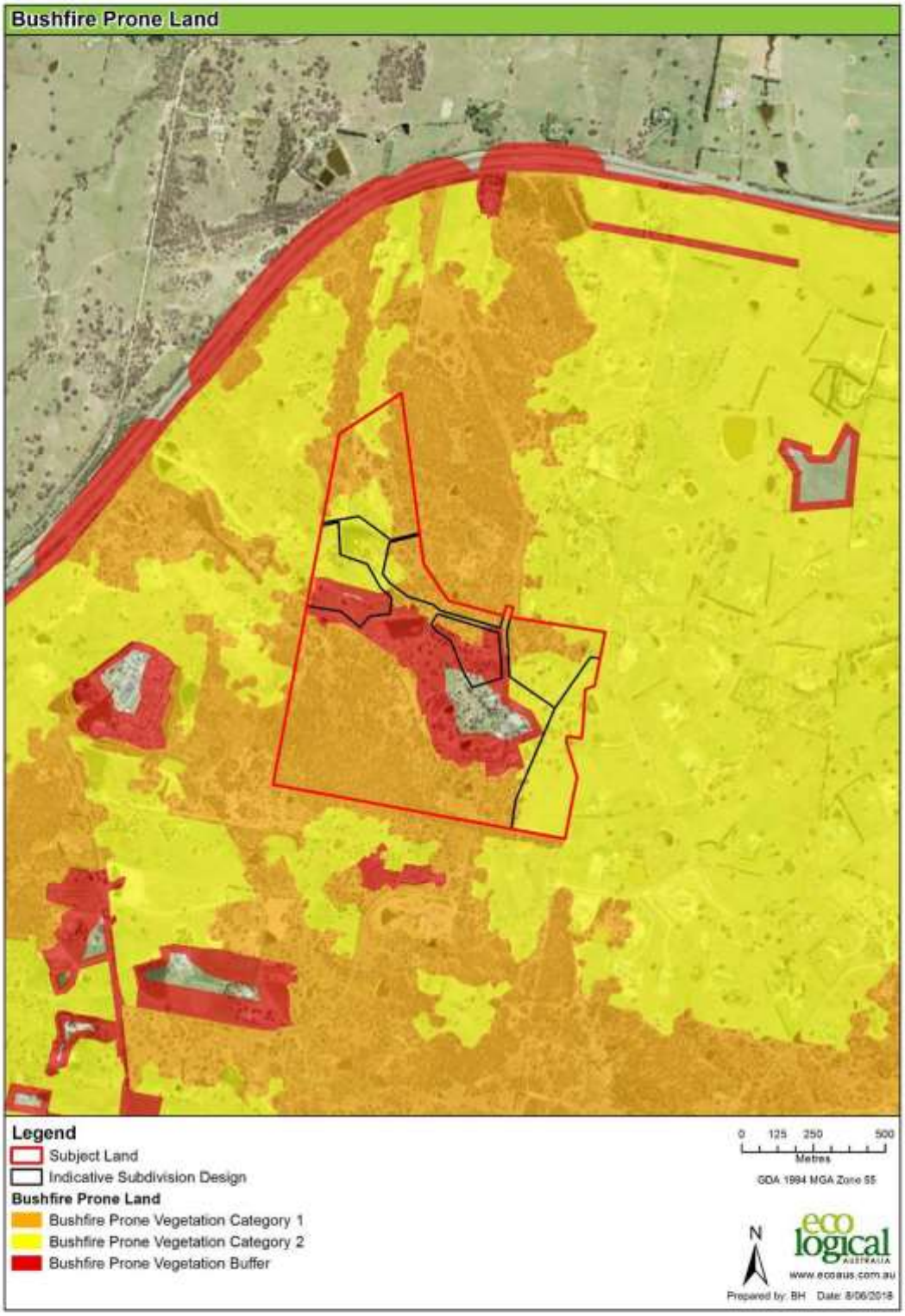

Figure 2: Bushfire prone land map

2 Bushfire threat assessment

Figure 3 shows the effective slope and predominant vegetation on transect lines representing the highest bushfire threat potentially posed to the site from various directions.

The effective slope has been determined from 10 m contour data and revised where required by site assessment.

The predominant vegetation has been determined from the Flora and Fauna Assessment Report (ELA, 2018).

Figure 3 and **Table 3** show the vegetation and slope information assessed. Where required additional information is provided within **Table 3** on why and how the chosen slope and vegetation has been assessed.

The site is located within the Local Government Area (LGA) of Queanbeyan Palerang Regional Council and has a Fire Danger Index (FDI) of 100.

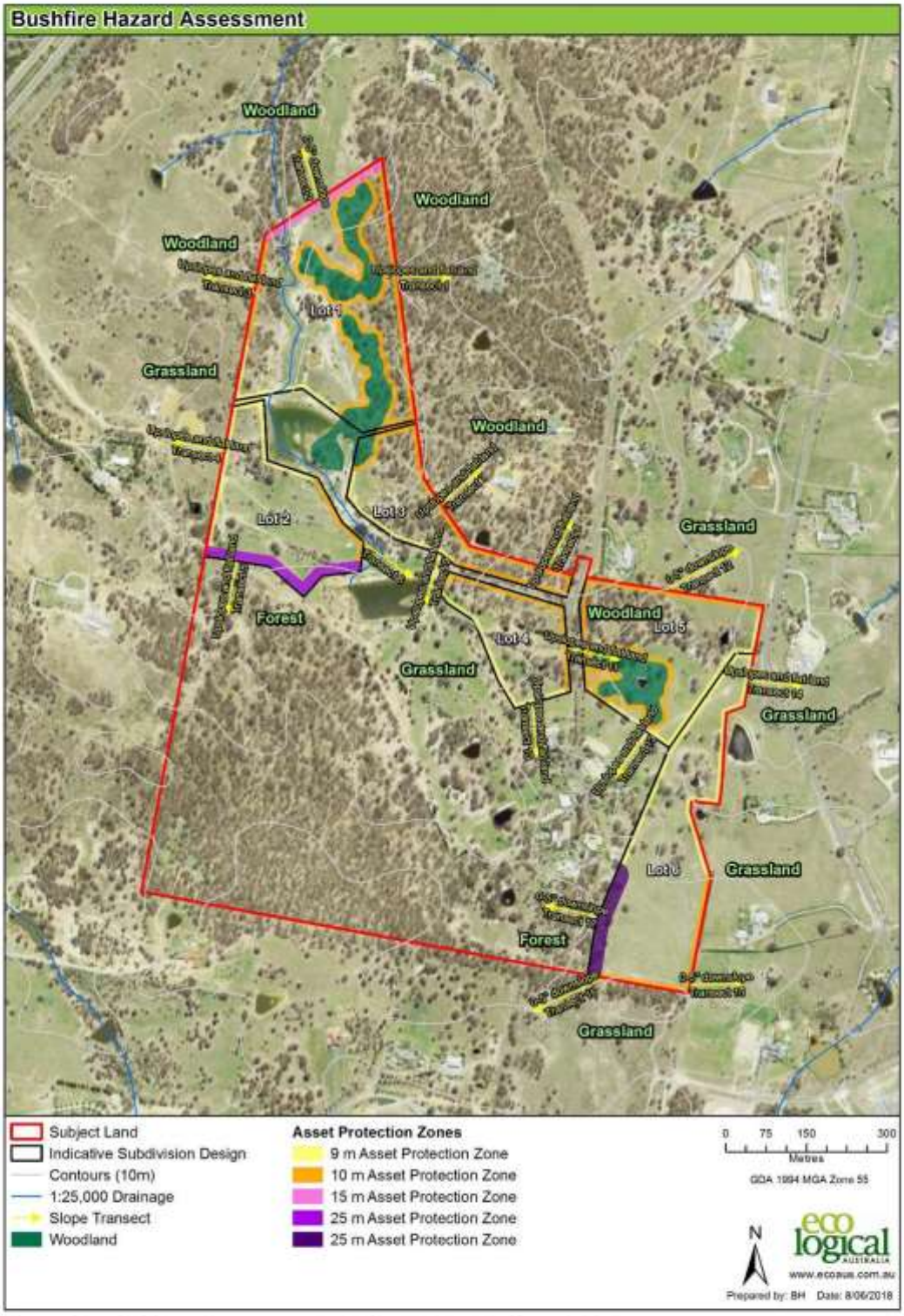

Figure 3: Bushfire hazard assessment and Asset Protection Zones (APZ)

3 Bushfire protection measures

3.1 Asset Protection Zones (APZ)

Table 3 shows the dimensions of the Asset Protection Zones (APZ) required in each of the transect line directions; and where relevant, information on how the APZ is to be provided is included. The footprint of the required APZ is also shown in **Figure 3**.

There are patches of Blakely's Red Gum Grassy Woodland that have been assumed will be retained on site as part of this assessment, though this will depend on the final design of the subdivision and consideration of the Fauna and Flora assessment (Eco Logical Australia 2018). A 10 m APZ has also been provided for these patches as indicated in **Figure 3**.

Queanbeyan Palerang Regional Council advised ELA that property owners for the existing infrastructure on the residual lot (Tourist facility and residences) all have a current bushfire plan detailing meeting points and water sources. The disused golf course is slashed to provide an APZ to the south-west of the residual lot developments.

3.2 APZ maintenance plan

Part of the required APZ may be provided by any access arrangements for the proposed lots (see **Table 3**). Where the APZ is to be established for building envelopes it is to be managed to Inner Protection Area standards as follows:

- No tree or tree canopy is to occur within 2 m of the future building rooflines;
- The presence of a few shrubs or trees in the APZ is acceptable provided they:
  - Are well spread out and do not form a continuous canopy;
  - Are not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
  - Are located far enough away from the building so that they will not ignite future buildings by direct flame contact or radiant heat emission.
- Any landscaping or plantings should preferably be local endemic mesic species or other low flammability species;
- A minimal ground fuel is to be maintained to include less than 4 tonnes per hectare of fine fuel (fine fuel means ANY dead or living vegetation of <6 mm in diameter e.g. twigs less than a pencil in thickness. 4 t/ha is equivalent to a 1 cm thick layer of leaf litter); and
- Any structures storing combustible materials such as firewood (e.g. sheds) must be sealed to prevent entry of burning debris.

Further details on APZ implementation and management can be found on the NSW RFS website including:

https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0010/13321/Standards-for-Asset-Protection-Zones.pdf.

Table 3: Bushfire hazard assessment and APZ requirements

Lot # OR direction from development boundary	Transect #	Slope	Vegetation	PBP required APZ (PBP 2006)	BAL-29 required APZ (AS 3959-2009)	Proposed APZ	Comments
1	1	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries. May be amended/removed if APZ for Blakely's Red Gum woodland required to be retained (see **Section 3.1**)
	2	Downslope >0 to 5 degrees	Woodland	15 m	21 m	21 m	Provided within lot boundaries.
	3	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries.
2	4	All upslopes and flat land	Grassland	10 m	9 m	9 m	Provided within lot boundaries.
	5	All upslopes and flat land	Forest	20 m	25 m	25 m	Provided within lot boundaries. May need to be amended depending on management of residual lot.
	6	All upslopes and flat land	Grassland	10 m	9 m	9 m	Assumes disused golf course will remain as grassland vegetation. May need to be amended depending on management of residual lot.

3	7	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries.
	8	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries. May be able to be amended depending on road design for the subdivision.
	9	All upslopes and flat land	Grassland	10 m	9 m	9 m	Assumes disused golf course will remain as grassland vegetation. May need to be amended depending on management of residual lot.
4	8	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries. May be able to be amended depending on road design for the subdivision.
	9	All upslopes and flat land	Grassland	10 m	9 m	9 m	Assumes disused golf course will remain as grassland vegetation. May need to be amended depending on management of residual lot.
	10	All upslopes and flat land	Grassland	10 m	9 m	9 m	Assumes disused golf course will remain as grassland vegetation. May need to be amended depending on management of residual lot.
	11	All upslopes and flat land	Woodland	10 m	16 m	16 m	Provided within lot boundaries. May be able to be amended depending on road design for the subdivision.
5	12	Downslope >0 to 5 degrees	Grassland	10 m	10 m	10 m	Provided within lot boundaries.
	13	All upslopes and flat land	Grassland	10 m	9 m	9 m	Assumes disused golf course will remain as grassland vegetation. May need to be amended depending on management of residual lot.
	14	All upslopes and flat land	Grassland	10 m	9 m	9 m	Provided within lot boundaries.

6	15	Downslope >0 to 5 degrees	Grassland	10 m	10 m	10 m	Provided within lot boundaries.
	16	Downslope >0 to 5 degrees	Grassland	10 m	10 m	10 m	Provided within lot boundaries.
	17	Downslope >0 to 5 degrees	Forest	25 m	32 m	32 m	May need to be amended depending on management of residual lot.

3.3 Construction standard

The Bushfire Attack Level (BAL) for future dwellings within the proposed subdivision will be determined at the individual dwelling Development Application (DA) stage, however, a maximum of BAL-29 can be achieved by the subdivision design using AS 3959-2009 fuel loads.

3.4 Access

Public road access to the site is via Goolabri Drive and Cartwright Avenue.

No access for the subdivision has yet been determined and will be assessed as part of a development application process. All bushfire prone areas should have an alternate access or egress option. This is usually achieved by providing more than one public road into and out of a precinct. The need for an alternative road and its location depends on the bushfire risk, the density of the development, and the chances of the road being cut by fire.

Goolabri Drive is currently a dead end road (see **Figure 2**). This road should be extended to connect to Cartwright Avenue to the east or Hickey Road to the south to provide a public through road. Property access roads will also need to provide safe access for emergency services and provide protection to properties and occupants during a bushfire.

The performance criteria and acceptable solutions for access types are shown in **Appendix B**. All access within the site for any future subdivision should be designed to meet the acceptable solutions within PBP to ensure compliance.

3.5 Services – Water, electricity and gas

3.5.1 Water

The proposal will be serviced by a non-reticulated water supply. **Table 4** identifies the acceptable solution requirements of Section 4.1.3 of PBP for which the proposal is compliant with, subject to the following specifications:

Table 4: Performance criteria for non-reticulated water supplies (PBP page 27)

Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
for rural-residential and rural developments (or settlements) in bush fire prone areas, a water supply reserve dedicated to firefighting purposes is installed and maintained. The supply of water can be an amalgam of minimum quantities for each lot in the subdivision (community titled subdivisions), or held individually on each lot	• the minimum dedicated water supply required for firefighting purposes for each occupied building excluding drenching systems, is provided in accordance with Table 4.2.	Can comply
	• a suitable connection for firefighting purposes is made available and located within the IPA and away from the structure. A 65mm Storz outlet with a Gate or Ball valve is provided.	Can comply
	• Gate or Ball valve and pipes are adequate for water flow and are metal rather than plastic.	Can comply
	• underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank. A hardened ground surface for truck access is supplied within 4 metres of the access hole.	Can comply
	• above ground tanks are manufactured of concrete or metal and raised tanks have their stands protected. Plastic tanks are not used. Tanks on the hazard side of a building are provided with adequate shielding for the protection of fire fighters.	Can comply
	• all above ground water pipes external to the building are metal including and up to any taps. Pumps are shielded.	Can comply

3.5.2 Electricity services

Electricity supply to / within the site is located aboveground. The proposed overhead electrical transmission lines are compliant with Section 4.1.3 of PBP, subject to the following specifications:

- Lines with short pole spacing (30 metres) are required, unless crossing gullies, gorges or riparian areas; and
- No part of a tree is closer to a power line than the distance set out in accordance with the specifications in *'Guide for the Management of Vegetation in the Vicinity of Electricity Supply Infrastructure'* issued by the Industry Safety Steering Committee 3 (ISSC3 2016).

3.5.3 Gas services

Gas services (reticulated or bottle gas) are compliant with Section 4.1.3 of PBP, subject to the following specifications:

- Any gas services are to be installed and maintained in accordance with Australian Standard AS/NZS 1596 *The storage and handling of LP Gas* (SA 2014). Metal piping is to be used;

- All fixed gas cylinders are kept clear of all flammable materials to a distance of 10 metres and shielded on the hazard side of the installation;
- If gas cylinders need to be kept close to the building, the release valves are directed away from the building and at least 2 metres away from any combustible material, so that they do not act as a catalyst to combustion. Connections to and from gas cylinders are metal; and
- Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not used.

4 Assessment of environmental issues

A Flora and Fauna Assessment has been prepared in support of the planning proposal (ELA 2018) containing recommendations to mitigate potential impacts from any proposed development. Site impacts have been minimised by carefully selected bushfire protection measures. If required, the impact footprint of these measures e.g. APZ is clearly identified within this report and therefore capable of being clearly assessed by suitably qualified persons.

Queanbeyan Palerang Regional Council is the determining authority for any development for the site; they will assess more thoroughly any potential environmental and heritage issues.

5 Conclusion

The proposed planning proposal can comply with the acceptable solutions within 'Planning for Bush Fire Protection 2006', (see **Table 2**). All performance solutions used are substantiated within the section of this assessment identified in **Table 5**.

Table 5: Summary of bushfire protection measures assessed

Bushfire Protection Measures	Complies	Requirements	Acceptable Solution	Performance Solution	Report Section
Asset Protection Zones	☑	APZ dimensions are detailed in **Table 3** and **Figure** 3.	☑	☐	3.1
APZ Maintenance plan	☑	Identified APZ to be maintained in perpetuity to the detailed specifications in **Section 3.2**.	☑	☐	3.2
Construction standard	☑	BAL for dwellings to be determined at individual DA stage however, a maximum of BAL-29 (using AS 3959-2009 fuel loads) is achievable.	☑	☐	3.3
Access	☑	Access to meet standards detailed in **Table 6 Table 7 Table 8**.	☑	☐	3.4
Water supply	☑	Non-reticulated water supply to meet PBP acceptable solutions specifications for a subdivision.	☑	☐	3.5.1
Electricity service	☑	Electricity supply located aboveground and to comply with the PBP specification.	☑	☐	3.5.2
Gas service	☑	Gas services are to be installed and maintained in accordance with AS/NZS 1596:2014.	☑	☐	3.5.3

7 Recommendations

This report presents a Bushfire Protection Assessment of a planning proposal for proposed residential subdivision of the site. Recommendations on how to achieve compliance with s100B *Rural Fires Act 1997*, Clause 44 of the *Rural Fires Regulation 2013* and 'Planning for Bush Fire Protection 2006' are located within Section 3 – Bushfire Protection Measures. They include the provision of Asset Protection Zones (APZs), adequate access, water supply for firefighting, the safe installation of utilities, and discussion of building construction standards for future dwellings.

All opportunities / constraints identified should be considered in conjunction with any environmental impact and rezoning studies. The most crucial bushfire protection measures that will require careful design of the proposed subdivision relate to the provision of APZs and the provision of safe firefighting access.

It is recommended that the minimum APZs applied to the development are those corresponding with BAL-29 construction under AS 3959-2009 both to pre-empt any likely changes to PBP (a revised version is expected to be released during 2018) and to avoid high construction costs and minimise material/design constraints for future dwellings within the proposed subdivision.

Access to the proposed development requires design in accord with the PBP specifications in **Table 6, Table 7 and Table 8.**

Provision of appropriate APZs and safe firefighting access for the proposed subdivision are critical factors to obtaining approval from the NSW Rural Fire Service for any future residential development of the subject land.

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FPAA BPAD L3 Certified Practitioner No. BPAD29962-L3

8 References

Eco Logical Australia. 2018. *Lot 3 DP 1074706 Sutton Residential Subdivision – Flora and Fauna Assessment*. Prepared for Queanbeyan-Palerang Regional Council.

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Standards Australia (SA). 2009. *Construction of buildings in bushfire-prone areas (including Amendments 1 – 3)*, AS 3959-2009. SAI Global, Sydney.

Standards Australia (SA). 2014. *The storage and handling of LP Gas*, AS/NZS 1596:2014. SAI Global, Sydney.

Appendix A – Assessment process

Vegetation types

In accord with PBP the predominant vegetation class has been assessed for a distance of at least 140 m from the subject land in all directions.

Effective slope

In accord with PBP, the slope that would most significantly influence fire behaviour was determined over a distance of 100 m from the boundary of the proposed development where the vegetation was found.

Asset Protection Zone determination

Table A2.4 (FDI 100) of PBP has been used to determine the width of required Asset Protection Zone (APZ) for the proposed development using the vegetation and slope data identified in **Section 2**.

Appendix B – Access specifications

Table 6: Performance criteria for proposed property access roads (PBP page 23)

Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
• access to properties is provided in recognition of the risk to fire fighters and/ or evacuating occupants.	• at least one alternative property access road is provided for individual dwellings (or groups of dwellings) that are located more than 200 metres from a public through road	Can comply
• the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles. • •all weather access is provided.	• bridges clearly indicate load rating and pavements and bridges are capable of carrying a load of 15 tonnes • roads do not traverse a wetland or other land potentially subject to periodic inundation (other than a flood or storm surge).	Can comply Can comply
• road widths and design enable safe access for vehicles	• a minimum carriageway width of four metres for rural-residential areas, rural landholdings or urban areas with a distance of greater than 70 metres from the nearest hydrant point to the most external part of a proposed building (or footprint). *Note: No specific access requirements apply in a urban area where a 70 metres unobstructed path can be demonstrated between the most distant external part of the proposed dwelling and the nearest part of the public access road (where the road speed limit is not greater than 70kph) that supports the operational use of emergency firefighting vehicles (i.e. a hydrant or water supply).*	Can comply
	• in forest, woodland and heath situations, rural property access roads have passing bays every 200 metres that are 20 metres long by two metres wide, making a minimum trafficable width of six metres at the passing bay. • a minimum vertical clearance of four metres to any overhanging obstructions, including tree branches. • internal roads for rural properties provide a loop road around any dwelling or incorporate a turning circle with a minimum 12 metre outer radius. • curves have a minimum inner radius of six metres and are minimal in number to allow for rapid access and egress. • the minimum distance between inner and outer curves is six metres. • the crossfall is not more than 10 degrees. • maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.	Can comply Can comply Can comply Can comply Can comply Can comply Can comply

Performance Criteria	Acceptable Solutions	Complies
	Note: Some short constrictions in the access may be accepted where they are not less than the minimum (3.5m), extend for no more than 30m and where the obstruction cannot be reasonably avoided or removed. The gradients applicable to public roads also apply to community style development property access roads in addition to the above.	
	• access to a development comprising more than three dwellings have formalised access by dedication of a road and not by right of way.	Can comply

Table 7: Performance criteria for proposed fire trail (PBP page 25)

Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
• the width and design of the fire trails enables safe and ready access for firefighting vehicles	• a minimum carriageway width of four metres with an additional one metre wide strip on each side of the trail (clear of bushes and long grass is provided.	Can comply
	• the trail is a maximum grade of 15 degrees if sealed and not more than 10 degrees if unsealed.	Can comply
	• a minimum vertical clearance of four metres to any overhanging obstructions, including tree branches is provided.	Can comply
	• the crossfall of the trail is not more than 10 degrees.	Can comply
	• the trail has the capacity for passing by:	
	◦ reversing bays using the access to properties to reverse fire tankers, which are six metres wide and eight metres deep to any gates, with an inner minimum turning radius of six metres and outer minimum radius of 12 metres; and/or	Can comply
	◦ a passing bay every 200 metres, 20 metres long by three metres wide, making a minimum trafficable width of seven metres at the passing bay.	Can comply
	• *Note: Some short constrictions in the access may be accepted where they are not less than the minimum (3.5m) and extend for no more than 30m and where obstruction cannot be reasonably avoided or removed.*	
• Fire trails are trafficable under all weather conditions. Where the fire trail joins a public road, access shall be controlled to prevent use by non-authorised persons	• the fire trail is accessible to firefighters and maintained in a serviceable condition by the owner of the land.	Can comply
	• appropriate drainage and erosion controls are provided.	Can comply
	• the fire trail system is connected to the property access road and/or to the through road system at frequent intervals of 200 metres or less.	
	• fire trails do not traverse a wetlands or other land potentially subject to periodic inundation (other than a flood or storm surge).	Can comply
	• gates for fire trails are provided and locked	Can comply

Performance Criteria	Acceptable Solutions	Complies
• Fire trails designed to prevent weed infestation, soil erosion and other land degradation	• fire trail design does not adversely impact on natural hydrological flows.	Can comply
	• fire trail design acts as an effective barrier to the spread of weeds and nutrients.	Can comply
	• fire trail construction does not expose acid-sulphate soils.	Can comply

Table 8: Performance criteria for proposed public roads (PBP page 21)

Performance Criteria	Acceptable Solutions	Complies
The intent may be achieved where:		
• firefighters are provided with safe all weather access to structures (thus allowing more efficient use of firefighting resources)	• public roads are two-wheel drive, all weather roads	Can comply
• public road widths and design that allows safe access for firefighters while residents are evacuating an area	• urban perimeter roads are two-way, that is, at least two traffic lane widths (carriageway 8 metres minimum kerb to kerb), allowing traffic to pass in opposite directions. Non perimeter roads comply with Table 4.1 – Road widths for Category 1 Tanker (Medium Rigid Vehicle)	NA
	• the perimeter road is linked to the internal road system at an interval of no greater than 500 metres in urban areas	NA
	• traffic management devices are constructed to facilitate access by emergency services vehicles	Can comply
	• public roads have a cross fall not exceeding 3 degrees	Can comply
	• public roads are through roads. Dead end roads are not recommended, but if unavoidable, dead ends are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end and direct traffic away from the hazard	Can comply (extension of Goolabri Road to existing roads to south and/or east)
	• curves of roads (other than perimeter roads) are a minimum inner radius of six metres	Can comply
	• maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient	Can comply
	• there is a minimum vertical clearance to a height of four metres above the road at all times	Can comply

Performance Criteria	Acceptable Solutions	Complies
• the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles	• the capacity of road surfaces and bridges is sufficient to carry fully loaded firefighting vehicles (approximately 15 tonnes for areas with reticulated water, 28 tonnes or 9 tonnes per axle for all other areas). Bridges clearly indicated load rating	Can comply
• roads that are clearly sign posted (with easy distinguishable names) and buildings / properties that are clearly numbered	• public roads greater than 6.5 metres wide to locate hydrants outside of parking reserves to ensure accessibility to reticulated water for fire suppression • public roads between 6.5 metres and 8 metres wide are No Parking on one side with the services (hydrants) located on this side to ensure accessibility to reticulated water for fire suppression	NA NA
• there is clear access to reticulated water supply	• public roads up to 6.5 metres wide provide parking within parking bays and located services outside of the parking bays to ensure accessibility to reticulated water for fire suppression • one way only public access roads are no less than 3.5 metres wide and provide parking within parking bays and located services outside of the parking bays to ensure accessibility to reticulated water for fire suppression	NA NA
• parking does not obstruct the minimum paved width	• parking bays are a minimum of 2.6 metres wide from kerb to kerb edge to road pavement . No services or hydrants are located within the parking bays • public roads directly interfacing the bush fire hazard vegetation provide roll top kerbing to the hazard side of the road	Can comply Can comply

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Suite 1, Level 1
101 Sussex Street
Sydney NSW 2000
T 02 8536 8650
F 02 9542 5622

NEWCASTLE
Suites 28 & 29, Level 7
19 Bolton Street
Newcastle NSW 2300
T 02 4910 0125
F 02 9542 5622

ARMIDALE
92 Taylor Street
Armidale NSW 2350
T 02 8081 2685
F 02 9542 5622

WOLLONGONG
Suite 204, Level 2
62 Moore Street
Austinmer NSW 2515
T 02 4201 2200
F 02 9542 5622

BRISBANE
Suite 1, Level 3
471 Adelaide Street
Brisbane QLD 4000
T 07 3503 7192
F 07 3854 0310

HUSKISSON
Unit 1, 51 Owen Street
Huskisson NSW 2540
T 02 4201 2264
F 02 9542 5622

NAROOMA
5/20 Canty Street
Narooma NSW 2546
T 02 4302 1266
F 02 9542 5622

MUDGEE
Unit 1, Level 1
79 Market Street
Mudgee NSW 2850
T 02 4302 1234
F 02 6372 9230

GOSFORD
Suite 5, Baker One
1-5 Baker Street
Gosford NSW 2250
T 02 4302 1221
F 02 9542 5622

ADELAIDE
2, 70 Pirie Street
Adelaide SA 5000
T 08 8470 6650
F 02 9542 5622

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 9 OFFICE OF ENVIRONMENT AND HERITAGE RESPONSE

Attachment 8 - Office of Environment and Heritage letter

NSW GOVERNMENT | Office of Environment & Heritage

PP_2016_QPREG_002_00
DOC16/534562

John Wright
Director
Planning and Environment
Queanbeyan-Palerang Regional Council
PO Box 348
Bungendore NSW 2621

Attention: Sue Robb & Will Mayes

Dear Mr Wright

RE: Palerang Local Environmental Plan 2014 – Lot 3 DP 1074706 Goolabri Park, SUTTON, NSW

On 24 October 2016 the Office of Environment and Heritage (OEH) received your request for comments on the above planning proposal. It seeks to amend Schedule 1 of the Palerang Local Environmental Plan 2014 to allow the subdivision of Lot 3 DP 1074706 into six residential lots varying in size from 4-8 hectares and one residual lot which will include the existing tourist/disused golf course/convention centre complex and a large area of native vegetation (approximately 27 hectares).

OEH representatives participated in the government agency site inspection on 15 September 2016.

OEH has no objection to planning proposal proceeding to exhibition based on the results of the site inspection and previous environmental assessment carried for proposed DA subdivision. However, further information and clarification is requested as outlined below for the exhibition phase of planning process.

Flora and Fauna

The flora and fauna assessment undertaken in April 2014 by Roger Good and Associates was in the form of test of significance prepared for what was then going to be a 4 lot subdivision application. The report identified in the text that there is a small remnant area of poor condition Yellow box-Blakely's Red Gum woodland that exists on the lower slopes to flat areas of the westerly aspects of the property but did not provide a map of where these areas are located. In regard to the impact of the subdivision on native vegetation the report concluded that the subdivision of the property into 3 Lots will not have any significant impact on the Box-Gum Woodland or other threatened species.

From the site inspection it is clear that the horse paddocks and the old golf course site have limited ecological values. The predominant vegetation type remaining in the areas to be subdivided is dry forest dominated by Red Stringybark and Brittle Gum. There appears scope for dwellings envelopes to be sited on the proposed lots without the need for clearing. The exception may be the central lot on the northern boundary which has the most forest cover.

An update to the flora and fauna report is required to address the additional lots proposed in the planning proposal. This should include a map of the vegetation community types onsite and if any

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hollow bearing trees exist onsite and where they are located. The extent of any clearing required onsite if any for each lot should be clarified and where the nominated building envelopes are to be located.

The large remnant forest patch of the residue lot (shown as **Attachment 1**) was discussed at the site meeting. It has an intact understorey, is in good condition and would have the highest conservation values onsite. Its status was unclear but was excluded from the small lots created in the original Sutton Acre's subdivision and is known as the conservation lot. If not formally protected now it should be secured in some form of in conservation perpetuity agreement.

Aboriginal Cultural Heritage

The due diligence assessment undertaken by Trish Saunders in 2014 Aboriginal Cultural Heritage Assessment Report does not provide enough information to assess the impact of the proposal on Aboriginal Cultural Heritage. In 2014, the proposal was for 3 additional rural residential allotments with a 63 hectare residue. However, the current proposal is for a six lot residential subdivision with a 27 hectare residue.

We require a new archaeological survey be undertaken because at the time of the 2014 survey only proposed lots 2 and 3 were surveyed. Information about the length and placement of survey transects was not provided we cannot assess how thoroughly those areas were surveyed. Also, because Aboriginal objects have already been located on the lot there is potential for further objects to be present.

We recommend that the survey be completed prior to finalising a development footprint so that all Aboriginal objects can be avoided. If objects cannot be avoided, the applicant will need to apply for an Aboriginal Heritage Impact Permit (AHIP).

To discuss the contents of this letter further please contact or Miles Boak for flora and fauna matters on (02) 6229-7095 or Sarah Robertson for Aboriginal Cultural Heritage matters on (02) 62297088.

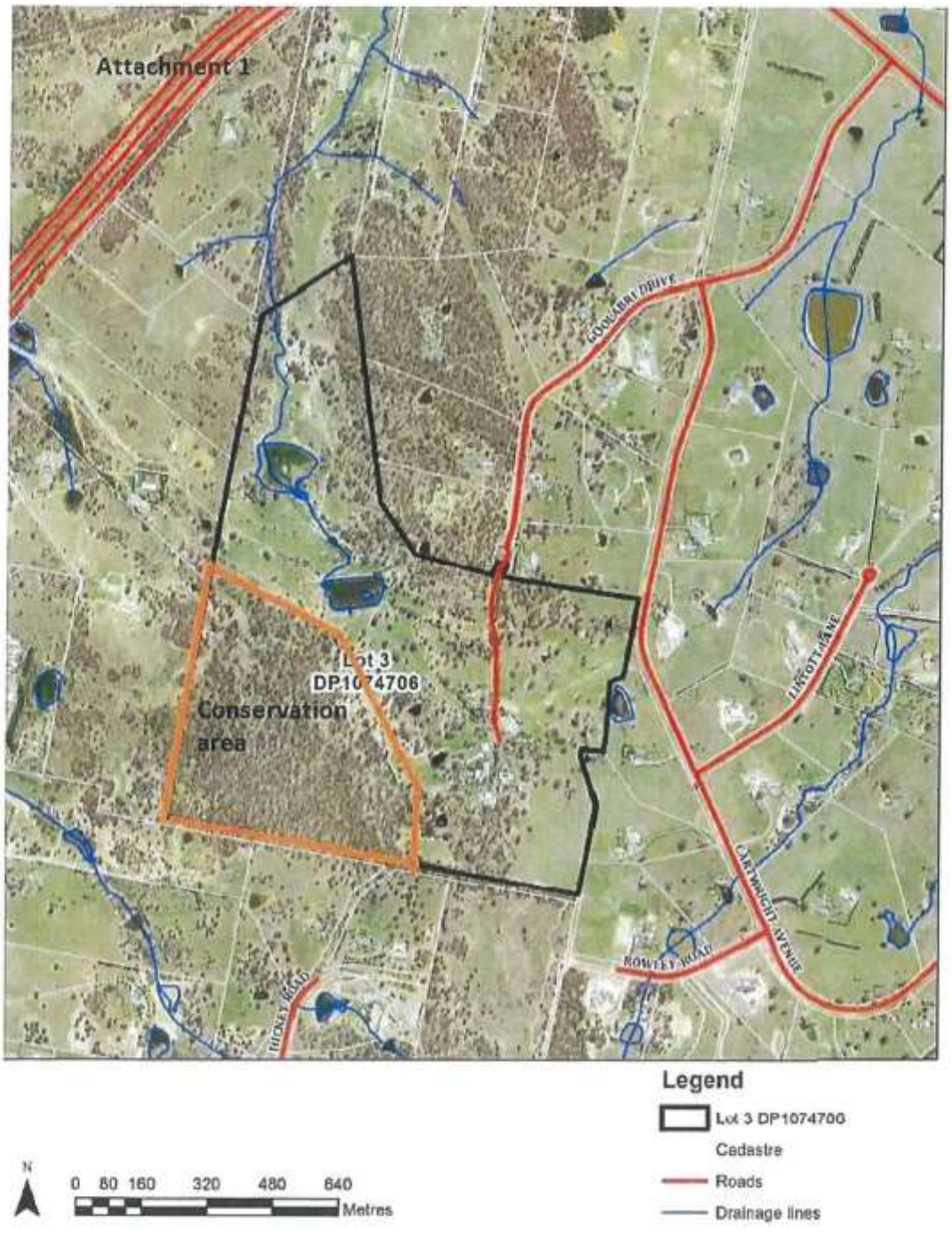
Yours sincerely

9/11/16

ALLISON TREWEEK
Senior Team Leader, Planning - South East
Regional Operations Group
OFFICE OF ENVIRONMENT AND HERITAGE

Enclosed Attachment 1

Attachment 1



QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

27 FEBRUARY 2019

ITEM 12.3 SUTTON PLANNING PROPOSAL (LOT 3, DP 1074706 - GOOLABRI DRIVE)

ATTACHMENT 10 NSW RURAL FIRE SERVICE RESPONSE

Attachment 9 - NSW Rural Fire Service letter

All communications to be addressed to:

Headquarters
15 Carter Street
Lidcombe NSW 2141

Telephone: 1300 NSW RFS
e-mail: csc@rfs.nsw.gov.au

Headquarters
Locked Bag 17
Granville NSW 2142

Facsimile: 8741 5433

The General Manager
Palerang Council
PO Box 348
BUNGENDORE NSW 2621

Your Ref: PROJ0035/11/6
Our Ref: R16/131
DA16102704452 MD

ATTENTION: Will Mayes

4 November 2016

Dear Will

Planning Instrument for Planning Proposal - Palerang Local Environment Plan 2014 (pp_2016_qpreg_002_00)

I refer to your letter dated 18 October 2016 seeking advice for the above Planning Instrument in accordance with the 'Environmental Planning and Assessment Act 1979'.

The service is not in a position to properly assess the application as submitted by Palerang Council on the basis of the information provided. The following will need to be provided for further assessment:

1. The submitted 'Fire Hazard Assessment' prepared by Good Environmental Systems is for a three lot subdivision, not a six lot subdivision as is proposed in the Planning Proposal. A revised Bush Fire Assessment Report of the extent to which the proposed development conforms with or deviates from the specifications set out in 'Planning for Bush Fire Protection 2006' is to be provided.
2. Notwithstanding the point above, a preliminary assessment of the proposal has identified the following non compliances with the acceptable solutions of Planning for Bushfire Protection (PBP) 2006:

   - Section 4.1.3 (1) Public Roads and 4.1.3 (2) Property Access of PBP 2006 do not appear to be satisfied for land locked lots. In this regard the RFS has concerns that the current configuration will not be able to provide safe access to certain lots including the lot located in the far north west of the subject site. Clear plans demonstrating access roads to each lot/dwelling envelope including details on the proposed widths and tenure etc shall be provided.

ID:104452/98019/3

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- The proposed Asset Protection Zones (APZs) for each lot shall be recalculated from Table A2.4 of PBP 2006 and not from a McArthur Meter fire behaviour predictor.

3. Where the acceptable solutions of PBP 2006 are not satisfied at Planning Proposal stage, the applicant is required to demonstrate how an alternate solution can meet the relevant intent of the bush fire protection measure in PBP 2006. The applicant shall identify what mechanism/s would ensure that any measures proposed as part of an alternate solution at Planning Proposal stage, would ensure these are provided for at future development application stage.

4. Can Council please confirm that the existing Tourist Facility proposed to be located within the residue lot is an approved use. Furthermore, any existing bush fire protection measures applying to the Tourist Facility should be discussed in the Bush Fire Assessment Report as the proposed subdivision could result in reduced APZs distances (i.e the boundaries are moving closer to the facility therefore surrounding managed land potentially will be in different ownership). An improvement in the level of bush fire protection afforded to the Tourist Facility should result from the Planning Proposal.

From receipt of the required information the Service will respond with its recommendations within 21 days.

If additional information is not received within 100 days the application will be refused on the basis of Requested Information not provided. A formal request for re-assessment would be required after this time.

For any queries regarding this correspondence please contact Martha Dotter on 1300 NSW RFS.

Yours sincerely

Amanda Moylan

Amanda Moylan
Team Leader Development Assessment and Planning

The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006' , visit the RFS web page at www.rfs.nsw.gov.au and search under 'Planning for Bush Fire Protection, 2006'.

QUEANBEYAN-PALERANG REGIONAL COUNCIL

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27 FEBRUARY 2019

ITEM 12.4 JUMPING CREEK - FUTURE MANAGEMENT AND DEDICATION OF OPEN SPACE

ATTACHMENT 1 JUMPING CREEK ZONING OVERLAY

Jumping Creek Zoning Overlay