Proposed Rezoning
of
part of Lot 1 DP 798111, Bungendore

Planning Proposal

(revised October 2019 following receipt of addition to Water Access Licence)

Queanbeyan-Palerang Regional Council

Reference:
PROJ0053/1
PP_2016_QPREG_002

Version	Description	Date
1	Initial planning proposal	December 2014
2	Amended as per Council resolution for Gateway determination	March 2015
3	Amended to include government agency responses	February 2019
4	Refined to reflect receipt of additional water access licence	October 2019

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Background

Council has received a draft planning proposal for the rezoning of Lot 1 DP 798111 North Bungendore from RU1 Primary Production to R2 Low Density Residential, R5 Large Lot Residential and RE1 Public Recreation. The rezoning of the land would enable a development application to be submitted for the creation of approximately 309 residential lots (exclusive of a 500 metre radius from the boundary of Lot 1 DP 798111 and Lot 44 DP 754876).

Council considered the draft planning proposal at its meeting on 4 December 2014 and the following resolution was made (269/2014):

1 Council forward the planning proposal, council report and recommendations to the Minister for Planning and Environment for a gateway determination.

2 The area within Lot 1 DP 798111 500 metres from the boundary of Lots 8 and 44 DP 754876 and Lot 1 DP 1087861 remain zoned RU1 Primary Production in the consideration of the planning proposal in accordance with the Land Zoning Map attached to this report.

3 Any environmental assessments required to be carried out by the gateway determination consider all of Lot 1 DP 798111

To ensure that Council's recommendations are clearly reflected in the planning proposal to be submitted for Gateway determination, a revised planning proposal was prepared by the *relevant planning authority*, being the then Palerang Council now Queanbeyan-Palerang Regional Council.

The planning proposal was considered by NSW Planning and Environment and a Gateway determination was made on 27 April 2015.

Gateway Conditions required Council to further demonstrate the proposal's consistency with Section 117 Directions *2.1 Environment Protection Zones* and *2.3 Heritage Conservation.*

Council was also required to undertake studies identified in the submitted planning proposal prior to undertaking community consultation and to include a copy of the studies in the exhibition materials. The list of studies is reproduced below.

The Gateway determination required Council to appropriately address any potential land use conflict with the Bungendore waste transfer station as a consequence of the Planning Proposal.

This report is an updated planning proposal which complies with the Gateway conditions and incorporates the eight studies commissioned by Council contained in the Appendix section of this report. These include:

- Appendix 4 Study 1: Soil Capability
- Appendix 5 Study: 2: Aboriginal Cultural Heritage
- Appendix 6 Study 3: Contamination
- Appendix 7 Study 4: Bushfire
- Appendix 8 Study 5: Water Supply
- Appendix 9 Study 6: Sewerage
- Appendix 10 Study 7: Traffic and Transport
- Appendix 11 Study 8: Stormwater
- Appendix 15 Addendum to Study 3: Contamination

Note

The above studies encompass the whole of Lot 1 DP 798111 rather than just the area of the planning proposal.

Description of the Planning Proposal

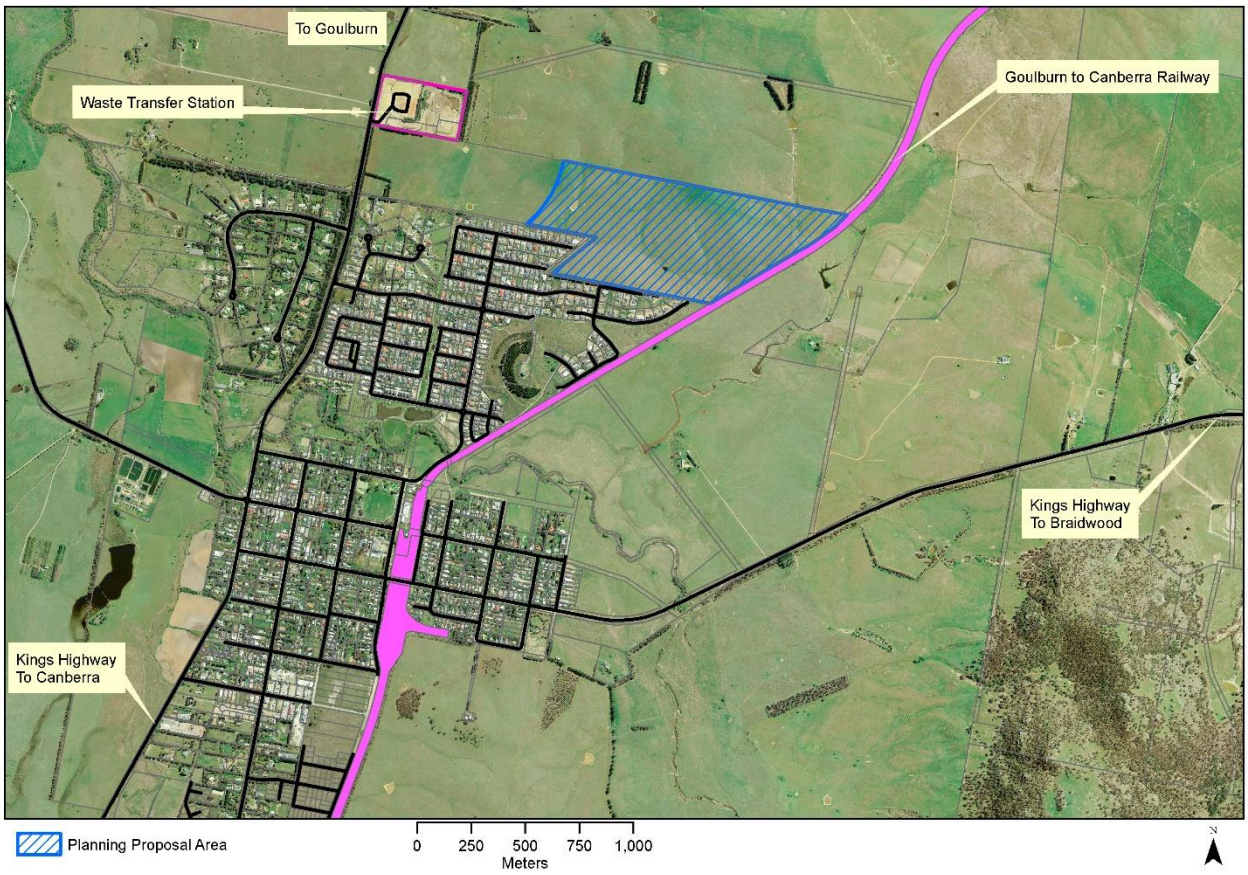
The planning proposal relates to Lot 1 DP 798111 North Bungendore which comprises 82.03 hectares in total (see Map 1 below) (refer to Appendix 14 for the Deposited Plan). The land is currently zoned RU1 Primary Production under the *Palerang Local Environmental Plan 2014.* It is proposed that the eastern part of Lot 1 DP 798111 be rezoned R2 Low Density Residential and as shown in the Amended, *Palerang Local Environmental Plan 2014* Land Zoning Map 4A below. The location of land to be zoned RE1 Public Recreation (if any) will be determined at subdivision stage when a detailed layout is developed around attributes such as drainage lines. A local environmental plan amendment would be undertaken later to reflect the development layout. It is also proposed that rather than zoning land R5 Large Lot Residential that the land is zoned R2 Low Density Residential but with a large minimum lot size on the higher areas (see the Amended, *Palerang Local Environmental Plan 2014* Lot Size Map 4A below).

The western part of Lot 1 DP 798111 has not been included in the planning proposal as it is within a 500 metre radius of a landfill site to the north which was the subject of a landfill closure investigation and development of a closure plan (see Section D, 10.5). The Environmental Protection Agency licence conditions for the landfill site requires a 250 metre buffer and on-going monitoring. While the buffer has been reduced to 250 metres, the planning proposal has not been amended and still utilises the 500 metres buffer.

The zoning of the land R2 Low Density Residential would allow the creation of residential lots of approximately 850-1000 square metres with some at a higher elevation having a minimum lot size of 1000 square metres or an alternative lot size depending on the outcome of detailed site analysis. Based on the area to be rezoned R2 Low Density Residential, approximately 309 lots could be created based on 850-1000 square metres noting that some of the lots being larger. The lots would be connected to the existing Bungendore reticulated water and sewer schemes. The primary road access would be via Tarago Road with secondary access via existing roads in the north Elmslea residential area. Active transport connections will be provided along existing road and drainage reserves.

Council has the consent of the Director of Elmslea Land Developments, the owner of Lot 1 DP 798111 to rezone the part of Lot 1 DP 798111 that is the subject of this planning proposal.

There are no interests to be extinguished. However, Council has concluded that the road adjacent to Larmer and Eyre streets and Lot 1 DP 798111 is not a public road owned by Council rather it is a road from the old system subdivision known as “Ashby Estate”. This subdivision was created on 10 November 1882. There does not appear to be any evidence that the roads shown on the Deposited Plan (976557), other than Tarago Road were ever constructed. Ashby Estate has now been subsumed into later subdivisions and most of the roads were included after ‘Primary Applications’ by the owners of the surrounding land. This appears to have been the instance when Elmslea was developed. The location of the road is shown Appendix 14. Until this matter is addressed, it is recommended that the road is not rezoned from RU1 Primary Production to R2 Low Density Residential.



Map 1 Location of Lot 1 DP 798111

Source Queanbeyan-Palerang Regional Council and Land and Property Information

Site description

The topography varies from flat in the western parts of the site to undulating and moderately sloping in the central and eastern areas. There are no major watercourses on the site although there are several gullies and depressions, all of which flow towards the existing developed area to the south or under the railway to the east. There are several dams on the site.

The western boundary of the lot is formed by Tarago Road and the eastern boundary by the Sydney to Canberra railway line. The land immediately to the north is rural land currently used for grazing, while the area to the south is a relatively recent low-density residential development known locally as Elmslea.

The land has a history of agricultural use. Some small areas of native grass remain. The land does not contain dwellings and is currently occupied by one shed (outside of the planning proposal area). The aerial photograph below illustrates the current landuses:

Map 2 Aerial photograph of Lot 1 DP 798111 illustrating its current landuses

Source Queanbeyan-Palerang Regional Council and Land and Property Information

Part 1 Intended outcome

The intended outcome of the planning proposal is that the eastern part (55 hectares) of Lot 1 DP 7988111 be zoned R2 Low Density Residential. Dwellings will be permissible on the R2 Low Density Residential land with a minimum lot size generally of 850 or 1000 square metres depending on the topography, the availability of water and sewer and with a maximum building height of 8.5 metres.

Part 2 Explanation of provisions

The eastern part (55 hectares) of Lot 1 DP 798111 is to:

- Be zoned part R2 Low Density Residential.
    - This is consistent with the zoning of the majority of the residential areas of Bungendore particularly the area directly south of the proposal.
    - The proposed development is consistent with the objectives and landuses in the R2 Low Density Residential land use zone in the *Palerang Local Environmental Plan 2014.*
- Have a minimum lot size of 850 square metres or approximately 1000 square metres in the steeper areas.
- Remove the Lot Averaging provision
- Have a maximum building height of 8.5 metres.

These provisions are considered to be consistent with other areas of Bungendore and the Bungendore character statement included in the *Palerang Development Control Plan 2015* (p147). The following are extracts from the character statement:

"Bungendore is a rural town with commercial, civic and residential neighbourhoods. The characteristic subdivision pattern of the original village and low scale development creates an open, informal and spacious character that contributes to the rural village character."

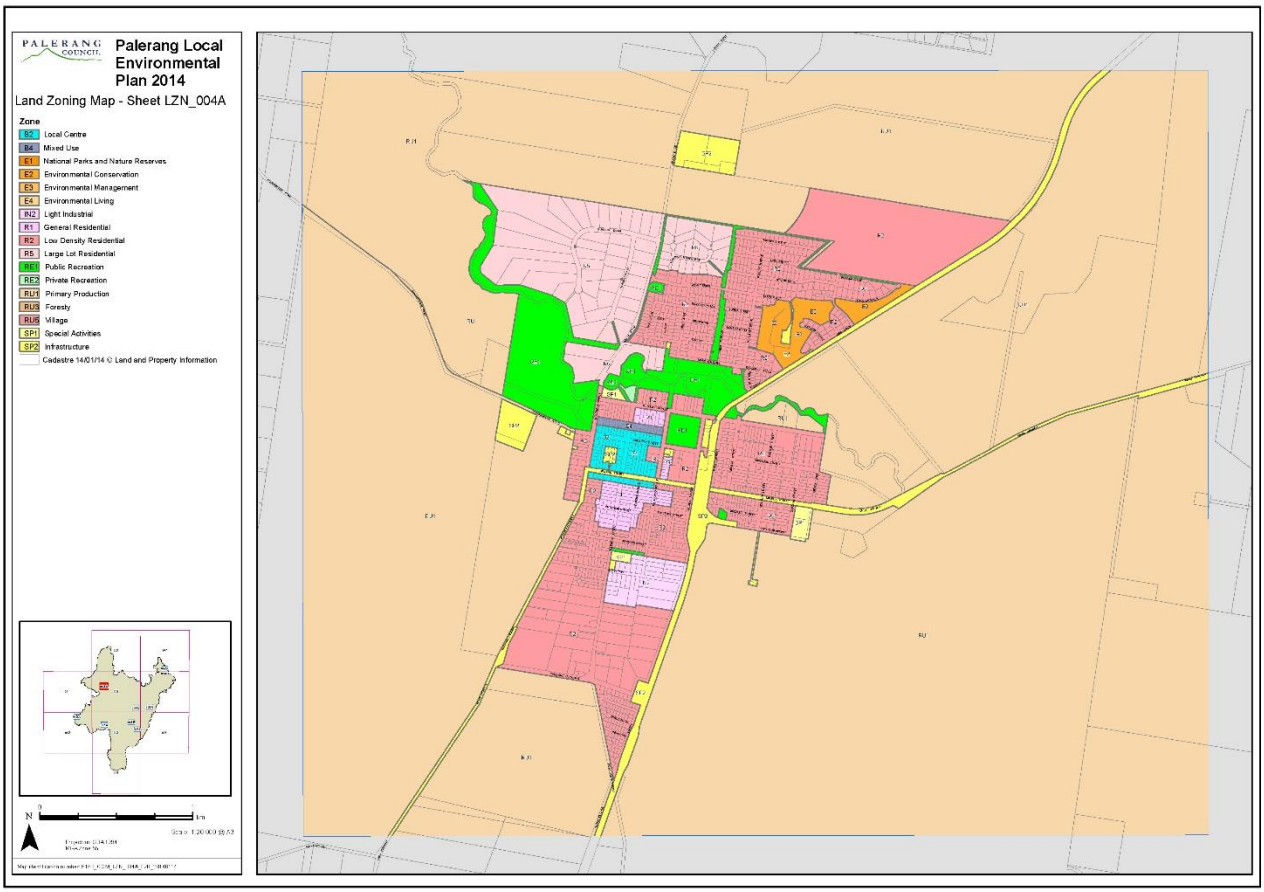
"Residential lots are characterised by single dwellings with the front of the dwelling facing the front of the lot (the street frontage) and the rear of the dwelling and the rear yard facing and adjacent to the rear of the lot. Houses are generally set back from the street (average 7 metres) and are generally located within the front half of the lot leaving significant rear yards. Many lots and the streets are planted with mature trees that have created a significant canopy. The planting of mature trees along lot boundaries provides substantial buffers between lots.

"There is characteristically a larger proportion of unbuilt on area to built on area, and a larger proportion of soft landscape to hard landscape (such as concrete and paving), that creates a feeling of openness and rural village character. The significant gaps between buildings allow for views through to the surrounding rural landscape."

The following are the desired future characteristics of Bungendore from the *Palerang Development Control Plan 2015* (p149). It is considered that the proposal will be in accordance with these.

- Structures are of a low scale with a distinct divide between the town and the surrounding rural landscape.
- Development is generally of low density with buildings well separated (except in the commercial area (precinct 2)).
- A landscaped setting including mature trees and shrubs, grassed verges and gardens, all of which combine exotic and native species.
- The historic grid pattern is intact.
- Heritage items are dominant features.
- New buildings are of sympathetic form and external materials relate to the existing town character.
- Open space areas are not cluttered with new structures.

The following are the amended *Palerang Local Environmental Plan 2014 maps:*

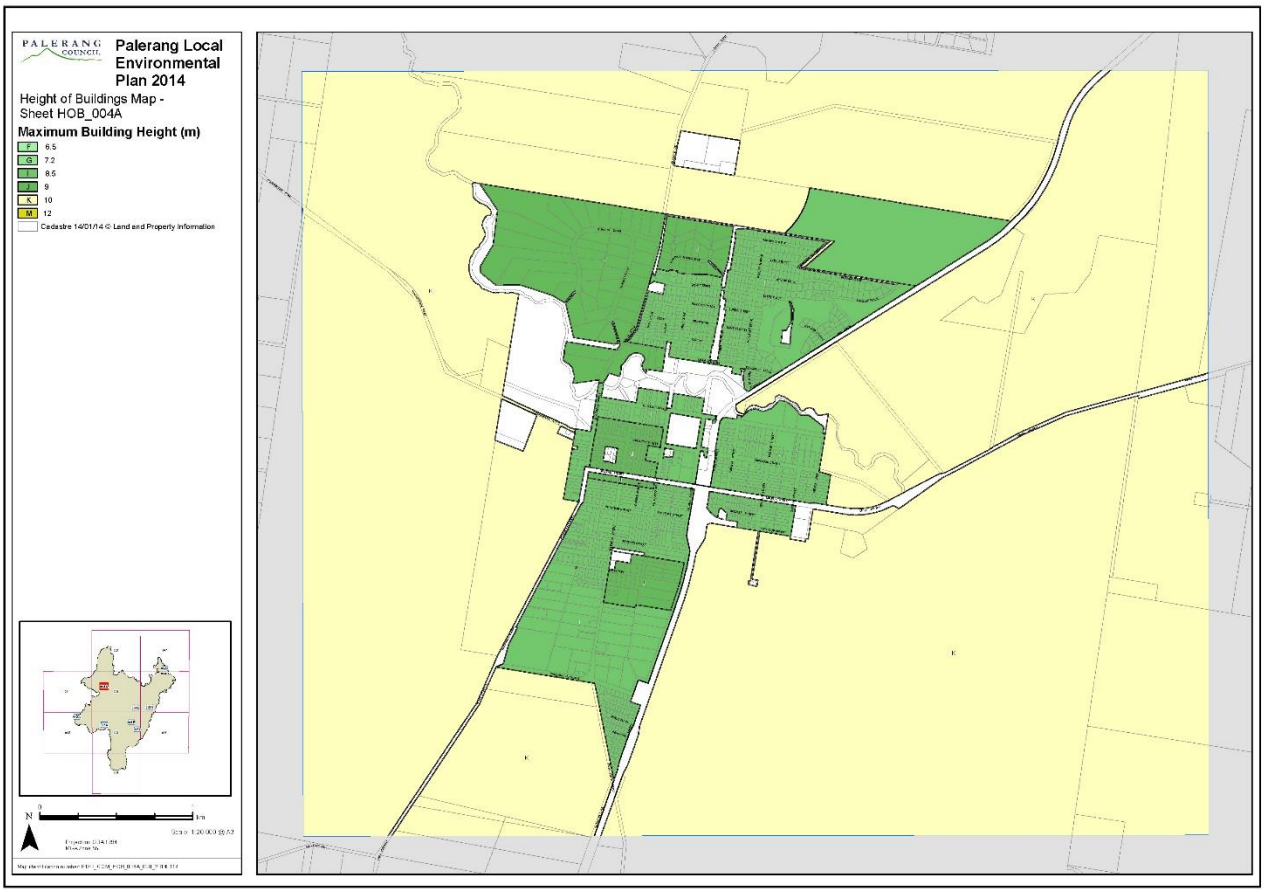


Map 3 Amended - Palerang Local Environmental Plan 2014 Land Zoning Map 4A

Source Queanbeyan-Palerang Regional Council and Land and Property Information

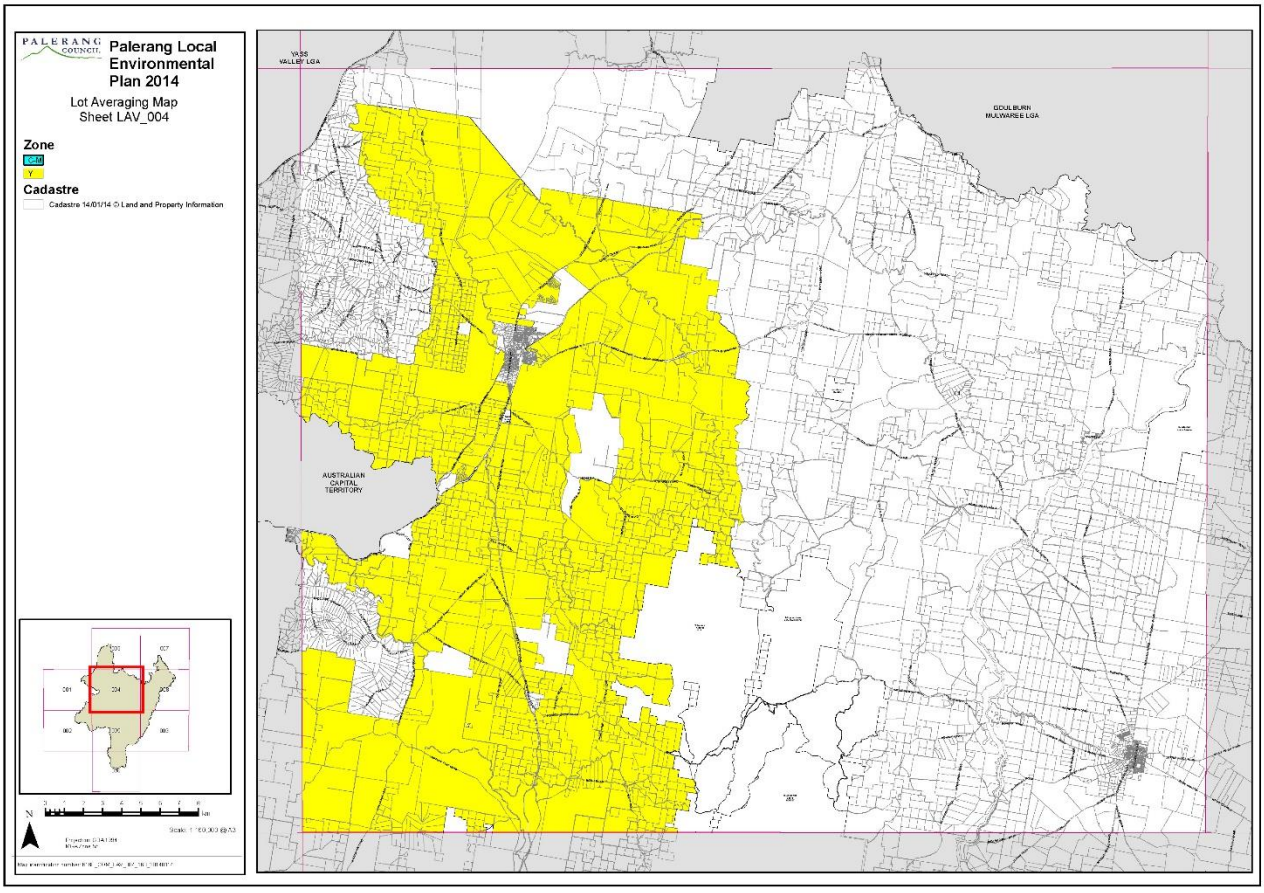
Map 4 Amended - Palerang Local Environmental Plan 2014 Lot Size Map 4A

Source Queanbeyan- Palerang Regional Council and Land and Property Information



Map 5 Amended - Palerang Local Environmental Plan 2014 Height of Buildings Map 4A

Source Queanbeyan-Palerang Regional Council and Land and Property Information



Map 6 Amended - Palerang Local Environmental Plan 2014 Lot Averaging Map 4

Source Queanbeyan-Palerang Regional Council and Land and Property Information

The *Palerang Local Environmental Plan 2014* Terrestrial Biodiversity Map 4 will not be amended rather it will be revised as part of the draft Queanbeyan-Palerang Local Environmental Plan.

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 has been prepared following the finalisation of the *Bungendore Land Use Strategy and Structure Plan* which includes the identification of areas of potential residential development. The general area of Lot 1 DP 798111 is identified as "potential extension to residential development, subject to possible environmental offset investigations" and water supply. The *Bungendore Land Use Strategy and Structure Plan* was adopted by Council in August 2010 and endorsed by the Director General of the Department of Planning in 2010.

The *Bungendore Land Use Strategy Structure Plan* is currently being reviewed with the aim of setting the direction for Bungendore for the next thirty years. It will ensure that the development of Bungendore occurs in a co-ordinated and efficient manner and in a direction that reflects the views of the community. The reviewed structure plan will be closely aligned with the Integrated Water Cycle Management Strategy currently being undertaken by Council for the former Palerang local government area. This strategy sets out the management of water, sewer and stormwater in the former Palerang local government area for the next thirty years. It is intended that the structure plan be reviewed and updated every four years over the life of the Plan, at the same time as the Integrated Water Cycle Management Strategy.

The reviewed Structure Plan will build on the *Bungendore Land Use Strategy and Structure Plan*. As the area in question was identified in the 2010 Plan, it is not anticipated that the updated plan will remove this area from future development areas.

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

The planning proposal is the best and only means of achieving the intended outcome.

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?

The planning proposal is consistent with the *South East and Tablelands Regional Plan 2036* launched on 7 July 2017 by focusing growth in an existing centre identified by a housing strategy. The Regional Plan outlines a 20-year vision to build sustainable communities by balancing opportunities for new homes and jobs with the protection of the region's natural environment.

The Plan states that the Queanbeyan-Palerang local government area is expected to require an additional 12,050 dwellings to accommodate 25,050 more people by 2036. Residential growth areas identified include Googong and Bungendore, and the proposed South Jerrabomberra. It also notes that the availability of water will continue to influence the amount and location of additional urban development, particularly in areas such as Bungendore. This issue has been addressed in Section 10.1 of this planning proposal.

Bungendore has in recent years experienced residential growth in both infill and new residential areas and with the development of Canberra and Queanbeyan, this is likely to continue as people seek a large residential lot in a rural environment that is within commuting distance of Canberra and Queanbeyan. At the time of the 2001 census, the population of Bungendore was 1,685 and in 2011

the population was 2,754 (ABS) with 967 dwellings (ABS). The 2016 census (ABS) found that there were 3,317 people and 1,186 dwellings in Bungendore. Over the next thirty years with a population growth rate of two percent there would be approximately 5,000 people with a need for about 1,033 additional dwellings.

In regard to the regional plan and the management of native vegetation refer to Question 7.

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

Yes, as stated in Question 1, Lot 1 DP 798111 is generally shown as a possible future area for residential development in the *Bungendore Land Use Strategy and Structure Plan*.
It is noted that the Bungendore Structure Plan is currently being reviewed with the aim of setting the direction for Bungendore for the next thirty years. It will ensure that the development of Bungendore occurs in a co-ordinated and efficient manner and in a direction that reflects the views of the community. The reviewed structure plan will be closely aligned with the Integrated Water Cycle Management Strategy.

This planning proposal generally meets the vision of the current structure plan. Any inconsistencies are addressed in the response to Section 117 directions above. Whilst rural land is proposed to be developed for residential purposes the proposal will achieve the following vision statements:

- Village/townscape setting retains a country/heritage feel appealing to residents and visitors.
- Rural entry roads retained (i.e. not dominated by housing).
- Friendly, safe community with good level of services and infrastructure.
- Preservation and improvement/extension of the Common and other green spaces to allow for walking, cycling, dog walking, horse riding, etc.
- Improved local employment and vitality and range of services in the village but no large shopping centre.
- Recognised for care of the natural environment and living sustainably (page i, *Bungendore Land Use Strategy and Structure Plan).*

The *Queanbeyan-Palerang Community Strategic Plan 2018-2028* does not specifically discuss the growth of Bungendore. However, it seeks to manage development taking into account hard and soft infrastructure, the natural environment and community wellbeing through the following key goals:

- 3.1 We consider the environmental impacts of future development
- 3.3 Our natural landscapes and water resources are sustainably managed
- 3.5 We ensure the future planning for the region is well coordinated and provides for its sustainable management

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

	Name of State Environmental Planning Policy	***Consistency with applicable State Environmental Planning Policies***
21	Caravan Parks	Consistent. The planning proposal does not involve the construction of a caravan park.
30	Intensive Agriculture	Consistent. The planning proposal does not involve intensive agriculture. Note: as at Oct 2019 this SEPP has been repealed)
33	Hazardous and Offensive Development	Consistent. The planning proposal does not involve hazardous and offensive development.
36	Manufactured Home Estates	Consistent. The planning proposal does not include manufactured home estates.
44	Koala Habitat Protection	Consistent. A flora and fauna survey did not identify koala habitat.
50	Canal Estates	Consistent. The planning proposal does not involve canal estates.
55	Remediation of Land	Consistent. A contaminated lands assessment has been undertaken (See Section 8.5).
62	Sustainable Aquaculture	Consistent. The planning proposal does not involve sustainable aquaculture. (Note: as at Oct 2019 this SEPP has been repealed)
64	Advertising and Signage	Consistent. The planning proposal does not involve advertising or signage.
	SEPP (Housing for Seniors or People with a Disability) 2004	Consistent. The planning proposal does not involve housing specifically for seniors or people with a disability.
	SEPP (Building Sustainability Index BASIX) 2004	Consistent. The planning proposal does not involve the design of housing.
	SEPP (State Significant Precincts) 2005	Consistent. The planning proposal does not involve development within a State Significant Precinct.
	SEPP (Mining Petroleum Production and Extractive Industries) 2007	Consistent. The planning proposal does not involve mining petroleum production or extractive industries.
	SEPP (Infrastructure) 2007	Consistent. The planning proposal does not involve the development of infrastructure, this will be undertaken following the approval of a subdivision. Cl 87 Impact of rail noise or vibration on non-rail development Determined at development application stage. Appropriate measures must be taken to ensure set LAeq levels (cl 87(3)) are not exceeded for residential accommodation.

	Name of State Environmental Planning Policy	***Consistency with applicable State Environmental Planning Policies***
	SEPP (Miscellaneous Consent Provisions) 2007	Consistent. The planning proposal does not involve the erection of temporary structures.
	SEPP (Rural Lands) 2008	Consistent as Lot 1 DP 798111 is identified as being identified potential residential development in the *Bungendore Land Use Strategy and Structure Plan.* (Note: as at Oct 2019 this SEPP has been repealed)
	SEPP (Exempt and Complying Development) 2008	Consistent. The planning proposal does not involve exempt and complying development.
	SEPP (Affordable Rental Housing) 2009	Consistent. The planning proposal does not involve the specific development of affordable rental housing.
	SEPP (Vegetation in Non-Rural Areas) 2017	Consistent. The SEPP does not apply to land zoned RU1 Primary Production. However, it will apply to the land if it is zoned R2 Low Density Residential. It will be necessary to determine as part of the subdivision determination process if the proposed clearing will exceed the biodiversity offsets scheme threshold and whether consent is required from the Native Vegetation Panel. At the time of the preparation of this document there was no map relating to the SEPP. It should be noted that the *Palerang Local Environmental Plan 2014* Terrestrial Biodiversity map is not suitable for this assessment as it shows a high coverage of native vegetation whereas it is likely that much of the groundcover is not more than fifty per cent is native vegetation due to the use of chemicals for noxious weed control and past agricultural practices. It should also be noted that there is no substantial tree canopy on the site. As part of the preparation of the draft Queanbeyan-Palerang LEP an updated Terrestrial Biodiversity map is being prepared.
	SEPP (Primary Production and Rural Development)	Consistent as Lot 1 DP 798111 is identified as being identified potential residential development in the *Bungendore Land Use Strategy and Structure Plan*.
	Draft SEPP (Environment)	Consistent. The background to this SEPP is currently on exhibition. It is a review and combination of numerous SEPPs. The only applicable SEPP is SEPP 50 Canal Estates, this has been addressed above.

Question 6 Is the planning proposal consistent with applicable Ministerial Directions?

	Name of direction	***Consistency with applicable Ministerial Directions***
1.2	Rural Zones	Inconsistent. The inconsistency is justified because Lot 1 DP 798111 is identified as suitable for potential residential development in the *Bungendore Land Use Strategy and Structure Plan*.
1.3	Mining, Petroleum Production and Extractive Industries	Inconsistent. The inconsistency is justified because Lot 1 DP 798111 is identified as suitable for potential residential development in the *Bungendore Land Use Strategy and Structure Plan.*
1.5	Rural Lands	Inconsistent. The inconsistency is justified because Lot 1 DP 798111 is identified as suitable for potential residential development in the *Bungendore Land Use Strategy and Structure Plan.*
2.1	Environmental Protection Zones	Consistent. The land is not an environmentally sensitive area. A flora and fauna survey has identified several small areas of native vegetation. The identified areas have been discussed with the NSW Office of Environment and Heritage. See also the response to Question 7.
2.3	Heritage Conservation	The planning proposal contains provisions that facilitate the conservation of Aboriginal or non-Aboriginal heritage. An assessment of Aboriginal and non-Indigenous heritage has been undertaken and recommendations included within the planning proposal (Refer to Sections 8.3).
2.4	Recreation vehicle areas	Consistent. The planning proposal does not enable land to be developed for the purpose of a recreational vehicle area.
3.1	Residential Zones	Consistent. Lot 1 DP 798111 is adjacent to an existing town with a range of hard and soft infrastructure including reticulated potable water and sewer. The strategic planning work to be undertaken by Council (outlined above) will enhance the provision of hard and soft infrastructure.
3.2	Caravan Parks and Manufactured Home Estates	Inconsistent. Lot 1 DP 798111 will be zoned R2 Low Density Residential which does not permit caravan parks. The land is currently zoned RU1 Primary Production which permits caravan parks with consent. The inconsistency is justified because the lot is not suitable for a caravan park due to its topography and the R2 Low Density Residential land use zoning.
3.3	Home Occupation	Consistent. The planning proposal does not impact on the ability to undertake a home occupation.
3.4	Integrating Land Use and Transport	Consistent. Lot 1 DP 798111 is adjacent to an existing town which has an existing road network connecting to highways, a rail and bus service and is thirty minutes from an airport.

	Name of direction	***Consistency with applicable Ministerial Directions***
4.1	Acid Sulphate Soils	Consistent. The land is not mapped as having a probability of containing acid sulphate soils. Soil samples carried out by Douglas Partners also found soils are non-saline (Refer to Appendix 8.4 Douglas Partners Preliminary Geotechnical Investigation).
4.3	Flood Prone Land	Consistent. A flood study for Bungendore has been recently completed and a flood planning map based on the study is included in the *Palerang Local Environmental Plan 2014*. Lot 1 DP 798111 is not in the flood planning area or the Probable Maximum Flood area, although the modelling did not extend to this area. Notwithstanding this, there are no major watercourses on the site and the development will include stormwater management features to prevent overland flooding.
4.4	Planning for Bushfire Protection	Consistent. Lot 1 DP 798111 is bushfire prone. A bushfire assessment has been undertaken and the planning proposal will be referred to the NSW Rural Fire Service and Fire and Rescue NSW Refer to Section 8.2.
5.1	Implementation of Regional Strategies	Consistent with *Sydney–Canberra Corridor Regional Strategy*.
5.10	Implementation of Regional Plans	Consistent with *South East and Tablelands Regional Plan 2036* launched on 7 July 2017 by focusing growth in an existing centre identified by a housing strategy.
6.1	Approval and Referral Requirements	Consistent. The planning proposal will not result in development that requires additional concurrence or referral requirements.
6.2	Reserving Land for Public Purposes	Consistent. Following a detailed site assessment, the land required for public purposes will be determined.
6.3	Site Specific Provisions	Consistent. The planning proposal will zone the land R2 Low Density Residential. This zone is currently within the *Palerang Local Environmental Plan 2014*.

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 was no critical habitat listed under the repealed *Threatened Species Conservation Act 1995* (NSW) in the Queanbeyan-Palerang local government area. It should be noted that critical habitat is now known as Areas of Outstanding Biodiversity Value under the *Biodiversity Conservation Act 2016*. A flora and fauna assessment was undertaken in December 2010. The report Kevin Mills Flora and Fauna Report, North Bungendore December 2010 ("Mills 2010") (Appendix 13). identified several areas of native vegetation that may be classed as the endangered ecological community Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory under the *Environmental Protection and Biodiversity Protection Act 1999* (Commonwealth).

On 19 November 2014, Council staff undertook a site inspection with staff from the NSW Office of Environment and Heritage (OEH) to consider the above areas of native vegetation. It was noted that part of the lot had been sprayed for the control of noxious weeds but there were two areas that are consistent with Natural Temperate Grassland (NTG) and the endangered ecological community definition.

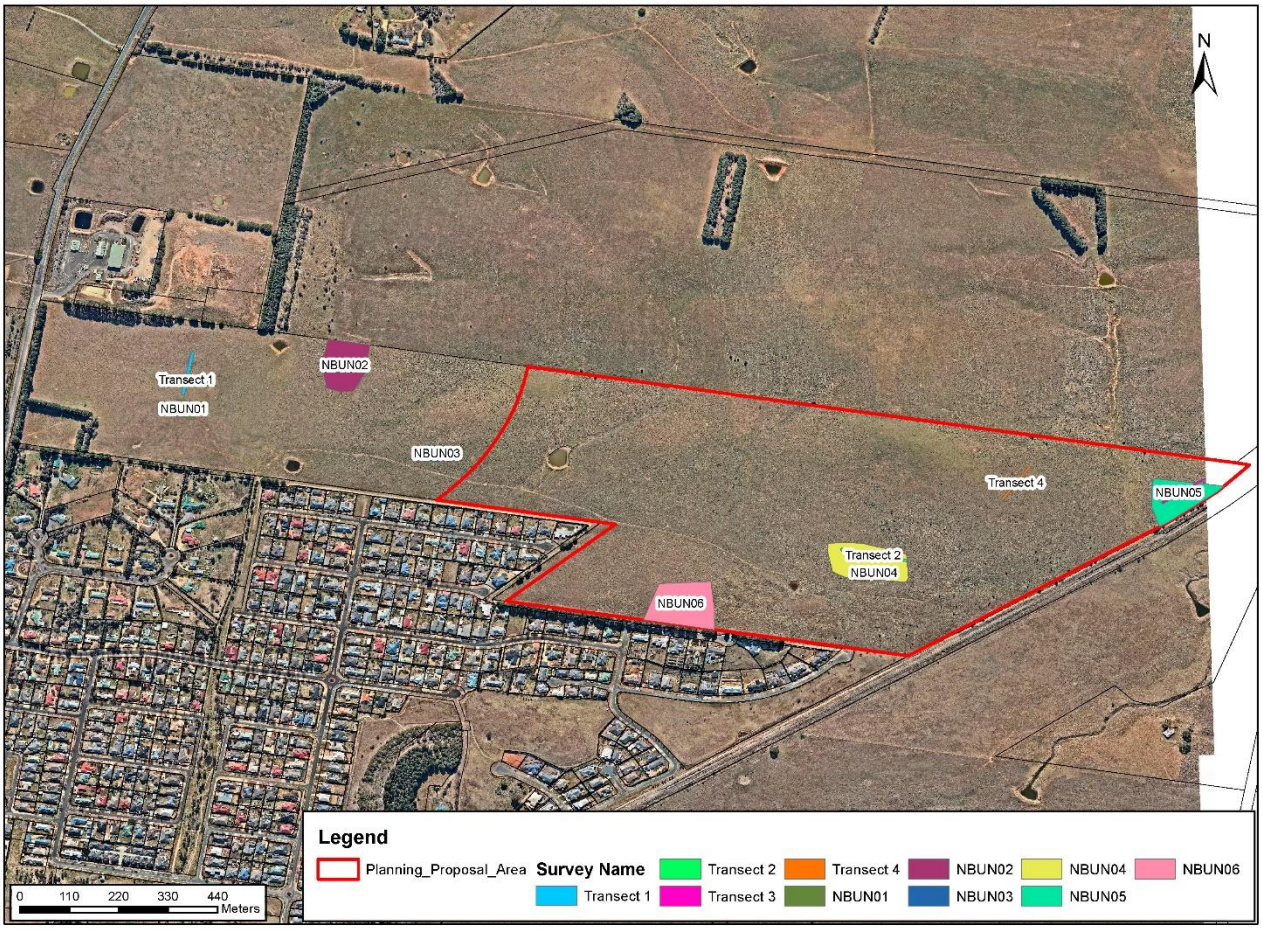
Following advice from the OEH that there was a high likelihood of Suta flagellum (Little Whip Snake) being found in the areas of native vegetation, a survey was undertaken (Appendix 12).

OEH has reviewed the Mills 2010 report and the report concerning the Little Whip Snake and advised Council on 24 February 2016 that "OEH considers the flora and fauna studies undertaken for the North Elmslea planning proposal to be adequate and further ecological study is not required."

"The OEH threatened species unit has reviewed the work undertaken and agreed with the conclusions made. This includes the additional survey done to investigate the possible presence of Little Whip Snake."

The presence of native frogs was also commented on in the Little Whip Snake report. None of the species identified are listed under commonwealth or state legislation. However, given the global trend of declining frog numbers consideration should be given to the translocation of the frogs. It is noted that there is little NSW experience in the translocation of non-listed frog species and that cost and likelihood of success need to be discussed.

The map below shows several small sections of native vegetation based the areas identified in the Mills 2010 report, Little Whip Snake and site inspections by Council staff.



Map 7 *Areas of native vegetation based the areas identified in the Mills 2010 report, Little Whip Snake and site inspections by Council staff.*

Source *Queanbeyan-Palerang Regional Council*

As seen above, the map below shows several small sections of native vegetation. On 17 January 2018, Council staff undertook a site inspection of the following sites; NBUN04, NBUN05 and NBUN06 (previously determined as being the only sites identified being Natural Temperate Grasslands with high floristic value scores). Each of these sites fulfil the Approved Conservation Advice criteria for the critically endangered Natural Temperate Grassland of the South Eastern Highlands (EC152) (NTG-SEH) under the *Environment Protection and Biodiversity Conservation Act 1999.* While much of the rest of the site (apart from the obvious ploughed and cropped areas) does not support native grassland remnants, they are too degraded to be considered part of the critically endangered ecological community.

It is concluded that as the above areas are small and isolated, are surrounded by high levels of Serrated Tussock and that it will be problematic to manage and retain the ecological value of the areas when they are surrounded by residences and associated landuses such as dog walking and bike riding that they should not be retained. The property owner has suggested that an offset area containing NTG-SHE be established on an adjoining lot (Lot 1 DP 880087) owned by them. There has been no flora assessment or determination of the potential size of the proposed offset area.

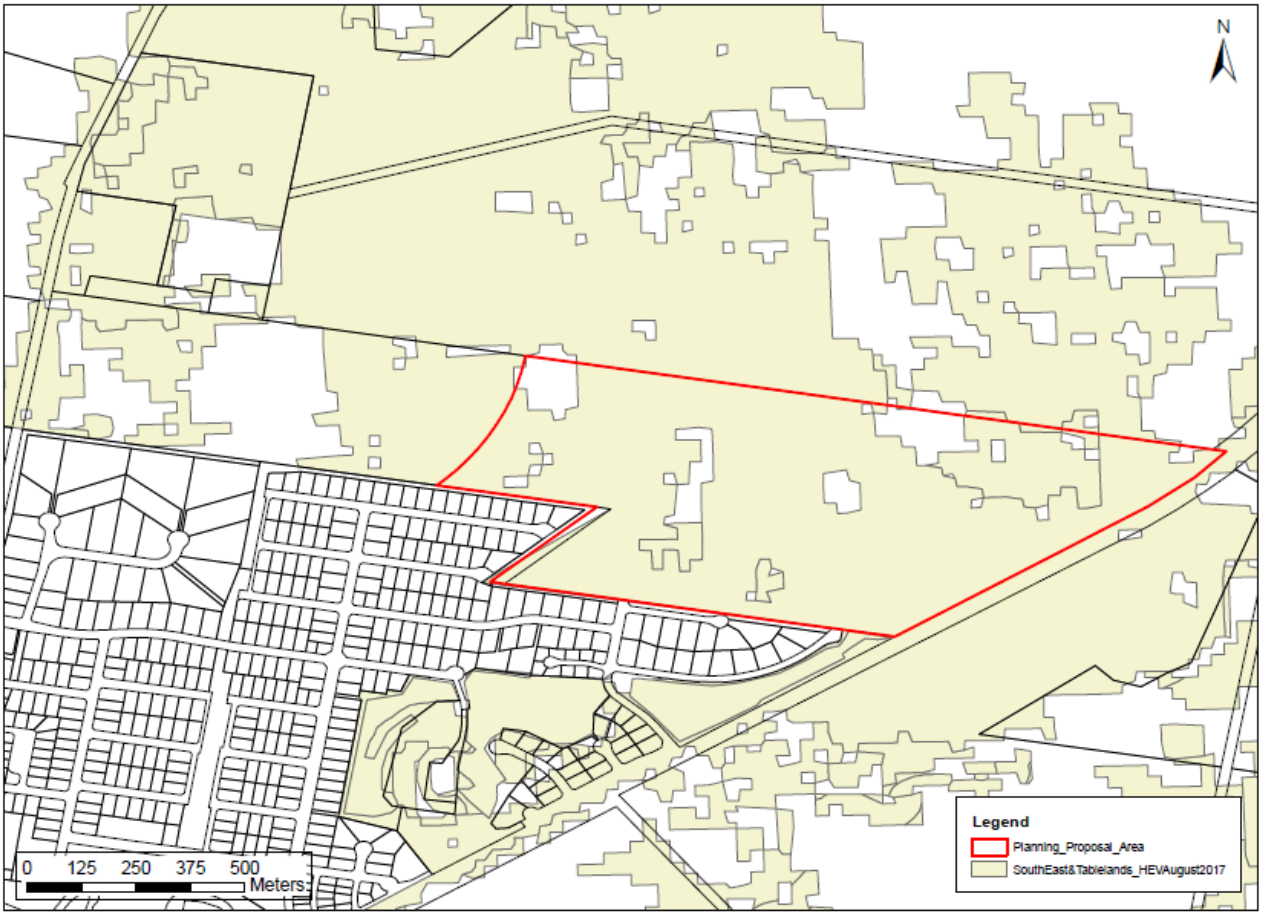
As noted in the comment in Question 7, the removal of the native vegetation may require consideration at the subdivision application stage under the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.*

The *South East and Tablelands Regional Plan 2036* includes two directions relating to the management of natural resources which are relevant to this planning proposal:

- Direction 14: Protect important environmental assets
  - 14.2 Protect the validated high environmental value lands in local environmental plans.
  - 14.3 Minimise potential impacts arising from development on areas of high environmental value, including groundwater-dependent ecosystems and aquatic habitats, and implement the 'avoid, minimise and offset' hierarchy
  - Direction 15: Enhance biodiversity connections

The Regional Plan identifies environmental assets including vegetation determined to be 'High Environmental Value' (p36). Whilst it is not possible to see individual lots on the Plan map, GIS data shows the lot as containing a large area of High Environmental Value (refer to Map 8 below). The lot is not within a State and Regional Biodiversity Corridor.

It is suggested that the proposed offset area will be more effective in meeting the directions of the *South East and Tablelands Regional Plan 2036* than attempting to retain the above areas.

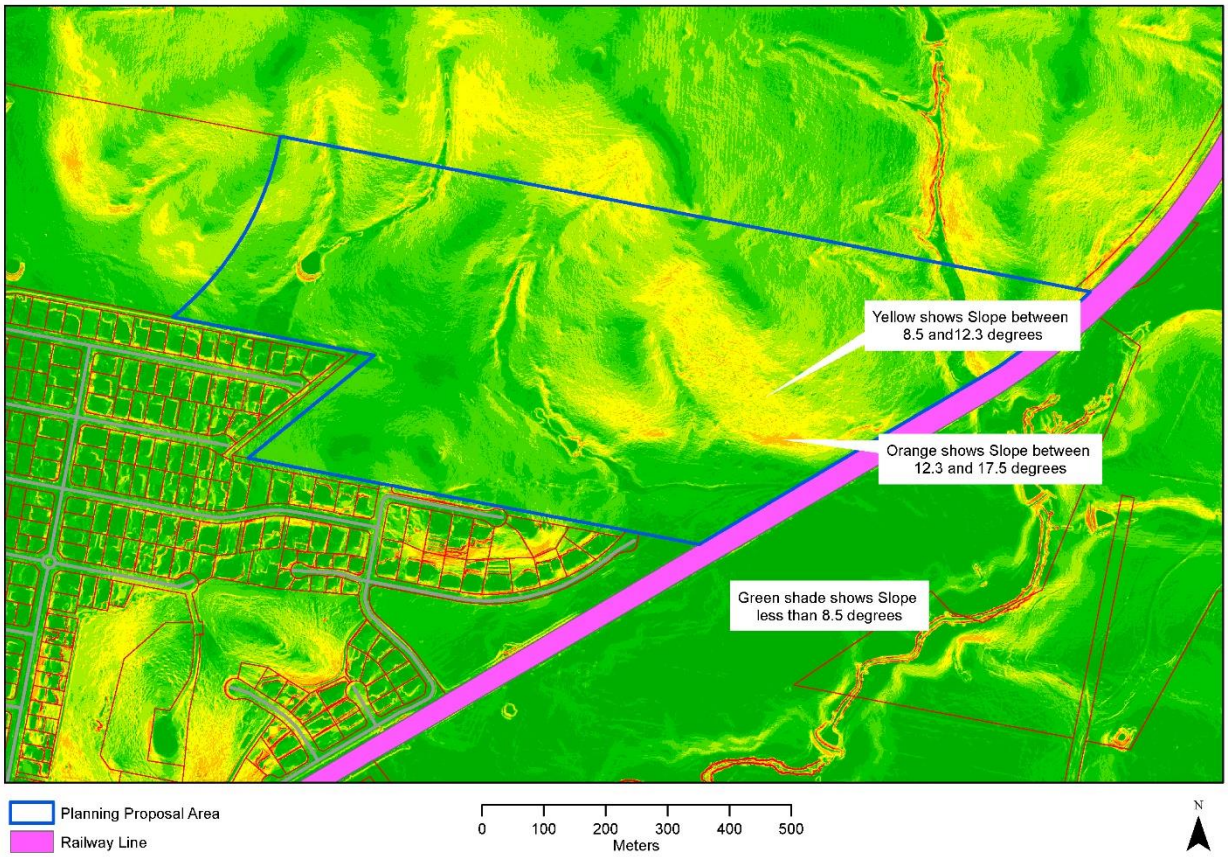


Map 8 *South East and Tablelands Regional Plan 2036, High Environmental Value vegetation*
Source *NSW Office of Environment and Heritage and Queanbeyan-Palerang Regional Council*

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

8.1 Visual impact

Lot 1 DP 798111 is at a higher elevation than the existing town of Bungendore and as a result of this, the development of the land will have a visual impact. It is likely that two story dwellings will be erected in the proposed development, that will be seen from the Kings Highway and that will intrude on the rural character of the area. The highest point on the lot is approximately 750 metres with the majority of the land adjacent to the railway (viewed from the Kings Highway) being between 700 and 730 metres. The Elmslea areas adjacent to the railway line are approximately 700-710 metres. Approaching Bungendore, parts of the highway are at a height of approximately 760 metres. However, the existing development can be seen from the highway and as Bungendore grows, views of the residential development on the higher area will be one of the associated negative externalities if not treated carefully. Additionally, the water reservoir will have a visual impact. To address these, consideration could be given to specific controls in Part D Area Specific Provisions in the *Palerang Development Control Plan 2015*. Additionally, the conditions of the subdivision consent should reflect these controls and include matters such as the planting of street trees and screening trees in association with infrastructure such as the reservoir. The review of *the Bungendore Land Use Strategy and Structure Plan* will also include strategies for managing development, visual amenity and the character of Bungendore.



Map 9 *Slope within the planning proposal area and surrounds*
Source *Queanbeyan-Palerang Regional Council*

8.2 Bushfire

As all of Lot 1 DP 798111 is bushfire prone, a bushfire assessment has been undertaken and the planning proposal and assessment referred to the NSW Rural Fire Service (NSW RFS). The NSW RFS have advised that as long as any future subdivision of the land complies with *Planning for Bushfire Protection, 2006*, they do not object to the proposal. In addition the NSW RFS request that 'all future development provide through access road and 'incorporate a perimeter road which delineates the extent of the intended development'.

Council commissioned EcoLogical Australia Pty Ltd (ELA) to prepare a bushfire protection assessment (BPA) for the proposed rezoning of Part Lot 1 DP 798111 in North Bungendore. A copy of the report is included as Appendix 7. That report concluded that the rezoning can potentially proceed based on the bushfire assessment and constraints contained within the report.

ELA was engaged to investigate the current bushfire risk of the study area and the appropriate combination of bushfire protection measures to mitigate this risk. Specifically, the ELA investigation responds to the requirements of *Planning for Bush Fire Protection 2006* (PBP), *Australian Standard AS 3959 Construction of buildings in bushfire-prone areas* (AS3959). The report details the outcomes of these investigations in the context of the proposed land use.

The report identifies potential bushfire constraints to the future urban development of the study area, and considered if the rezoning may or may not proceed based on the bushfire assessment. The report also provided recommendations to guide the preparation of future planning and infrastructure.

The objectives of the report were to:

- Ensure the statutory requirements for bushfire protection are identified and can be adequately met
- Consider the vegetation and ecological constraints of the study area, and the conservation and management of environmental values while providing appropriate bushfire protection
- Consider the likely rehabilitation of requirements and the recommendations of the flora and fauna study to preserve and enhance ecological communities

Any future subdivision of land and the construction of buildings will require an assessment against PBP.

Rezoning or planning proposals require consultation with the NSW RFS as the lead agency for managing bushfire. As such the requirements of the PBP are to be addressed. This includes having regard to the following planning principles of PBP:

- Provision of a perimeter road with adequate two way access which delineates the extent of the intended development
- Provision at the urban bushland interface, for the establishment of adequate asset protection zones for future housing
- Specifying minimum residential lot depths to accommodate asset protection zones for lots on perimeter roads
- Minimising the perimeter of the area of land interfacing the hazard, which may be developed
- Introduction of controls which avoid placing inappropriate developments in hazardous areas
- Introduction of controls on the placement of combustible materials in asset protection zones

The Bushfire Assessment has provided the following recommendations and conclusions:

> "Bushfire hazard has been assessed across the subject study area and if a rezoning were to occur it is feasible for future residential development to comply with Planning for Bushfire Protection and Direction 4.4 rezoning.
>
> The rezoning can potentially proceed based on the bushfire assessment and constraints contained within this report. More detailed assessment and consideration of the relevant bushfire protection strategies will be required at subdivision stage. This report indicates that it is feasible for a subdivision to achieve compliant bushfire protection measures. Statement of capability
>
> This bushfire assessment demonstrates that the subject land is capable of accommodating future development and associated land use with the appropriate bushfire protection measures and bushfire planning requirements prescribed by s.117 (2) Direction 4.4 – 'Planning for Bush Fire Protection' and PBP."

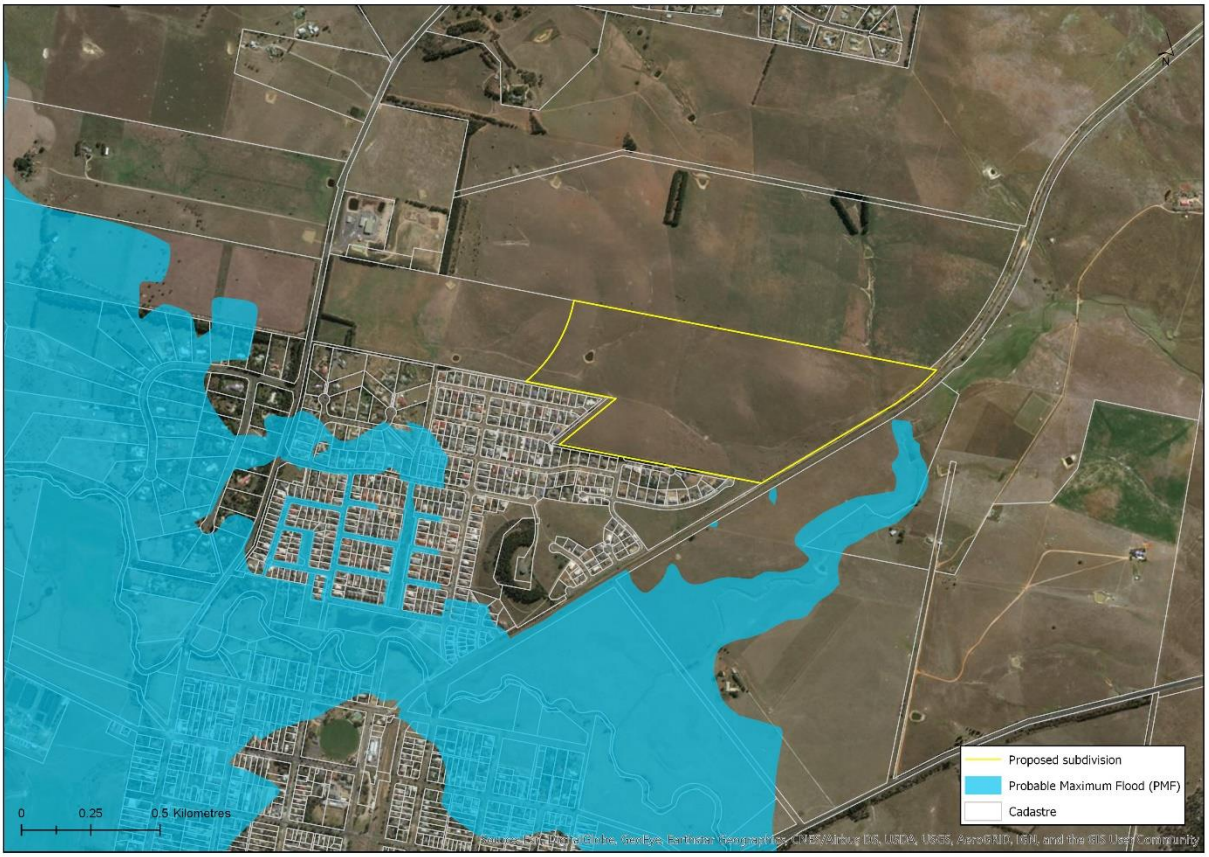
8.3 Flood

The site is not mapped as being in the flood planning area in the *Palerang Local Environmental Plan 2014* nor is the site mapped as being within the Palerang Probable Maximum Flood area. Map 10 below shows the Probable Maximum Flood area and the proposal. However, the primary road access to the site is Tarago Road and both Tarago road and a secondary access road, Turallo Terrace are mapped as being flood effected and as a result the site is likely to experience reduced access at times of flooding.

As required by the Gateway determination, the planning proposal was forwarded to the State Emergency Services (SES) for comment. The SES raised concerns that the proposal will allow development of 'additional number of residences and associated population increase significantly increases the number of people indirectly affected by flooding. Indirect impacts include the:

a. inability to enter and leave the area,
b. inability for residents to maintain their normal daily lives (attending work or school, accessing shops),
c. Potential loss of services (such electricity, water and sewer),
d. Inability for other emergency services to access and service the area during floods.

Secondary emergencies, such as a medical emergencies requiring emergency service response, can occur during a flood. While residents in this area are not flooded, the ability for emergency services to access and assist during a flood will be impaired; Emergency assistance may not be able to be provided. It is important Council and the Community are aware of this risk and the limitations of isolation. In addition the SES noted that the "Floodplain Risk Management Study shows that Tarago Road and Turallo Terrace are cut by flooding from Turallo Creek in as little as the 20% AEP event" and that as a result of the "loss of access at such a low level of flooding poses a risk to life. Research and statistics show that most lives are lost during floods when people drive through flood water. It is noted that Tarago Road is available to the north, however, in a large event, it is likely this area will also be inundated by local overland flow paths and creeks crossing the road. Appreciating the intricacies of road raising, it is recommended this be considered to provide increased warning and subsequent flood free evacuation time to the community". This matter will be addressed in the review of the Bungendore Structure Plan and in the implementation of flood management strategies for Bungendore.



Map 10 *Probable Maximum Flood area and the proposal*
Source *Queanbeyan-Palerang Regional Council*

8.4 Heritage

8.4.1 European Heritage

The subject land does not contain a heritage item included in the *Palerang Local Environmental Plan 2014* environmental heritage schedule or on the state heritage register. In regard to non-Indigenous heritage the planning proposal has been referred to Council's Heritage Advisor for assessment. Advice from Council's Heritage Advisor is outlined below:

> **"Heritage Status**
> None identified
>
> **Matter Advice**
> Sought on potential heritage issues arising from a planning proposal to rezone land in Bungendore from Rural to Residential.
>
> **Advice**
> I inspected the site and do not foresee any heritage issues. The site is currently grazing paddocks with standard stock fencing. Minor structures include small dams and sheds, none of which have heritage significance."

8.4.2 Aboriginal Cultural Heritage

An Aboriginal cultural heritage assessment has been undertaken given the proximity to Lake George and the fact that some of the higher parts of Lot 1 DP 798111 have not been significantly disturbed. Lake George is of importance to the Aboriginal community and is mentioned in the *South East and Tablelands Regional Plan 2036* (p47)

In late 2016 and early 2017 BIOSIS were engaged by Council to undertake an Aboriginal Cultural Heritage Study. The North Bungendore Planning Proposal Aboriginal Cultural Heritage Due Diligence Assessment Final Report prepared by BIOSIS was completed and submitted to Council in January 2017. A copy of the report is included as Appendix 5.

Background research by BIOSIS into the heritage values of the study area included a search of the OEH Aboriginal Heritage Information Management System (AHIMS) database and a review of previous assessments in the local area. This research found no previously recorded Aboriginal sites or objects within the study area. The AHIMS search results identified 39 Aboriginal sites within a 10 kilometre by 10 kilometre search area, centred on the study area.

An archaeological survey of the study area in accordance with the Code of Practice for the Archaeological Investigation of Aboriginal objects in New South Wales (the Code) (DECCW 2010b) was conducted on 18 and 21 October 2016 by Biosis staff. During the site survey, areas of previous disturbance were noted and recorded, and areas of ground surface exposure were targeted in order to identify any Aboriginal objects within the study area.

The survey identified three isolated artefacts, two artefact scatters, and areas of potential archaeological significance and one scarred tree. The three isolated artefacts consisted of two quartz flakes found on the surface of a vehicle access track in a lower slope landform, and a quartz core located on a hill crest. The artefact scatter was located on the surface of a sandy deposit associated with Lake George and consisted of five stone artefacts, one of which was a chert backed blade. A culturally modified scar tree was identified in a saddle between two crests. It featured eight scars along the length of its trunk and exhibited 4-6 centimetre long steel axe marks. It is noted that only one artefact site and several areas of moderate potential were located within the planning proposal area, the other sites are on the western part of the lot or on the lot to the north.

The North Bungendore Planning Proposal Aboriginal Cultural Heritage Due Diligence Assessment Final Report prepared by BIOSIS included the following recommendations:

Recommendation 1 Rezoning can commence in the planning proposal area.
Rezoning can proceed in the planning proposal area; however recommendation 2 should be undertaken prior to any works occurring in area. As rezoning does not involve any ground disturbance further assessment is not required at the rezoning stage.

Recommendation 2: Further Aboriginal archaeological and cultural heritage assessment and testing for areas of moderate archaeological potential and site NBA1 prior to ground disturbance works commencing in the study area
The site survey of the study area identified areas of moderate archaeological potential in the study area and an artefact scatter NBA1. Under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) if Aboriginal objects or areas of archaeological potential are identified, and if impacts are proposed that will disturb the ground surface of these areas, then further archaeological and cultural heritage assessment is required prior to development occurring.

It is recommended that further assessment of the planning proposal area should include archaeological test excavations to collect information about the nature and extent of potential sub-surface Aboriginal objects and NBA1 artefact scatter.

If future ground disturbance works will impact on known site (NBA1) located within the planning proposal area it is recommended that an application for an Aboriginal Heritage Impact Permit is made to allow impacts to the site. This will also require the preparation of an Aboriginal Cultural Heritage Assessment (ACHAR), an Archaeological Report, and will include consultation with Aboriginal stakeholders in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010c).

Advice preparing AHIPs
An AHIP is required for any activities likely to have an impact on Aboriginal objects or Places or cause land to be disturbed for the purposes of discovering an Aboriginal object. OEH issues AHIPs under Part 6 of the NPW Act.

AHIPs should be prepared by a qualified archaeologist and lodged with the OEH. Once the application is lodged processing time can take between 8-12 weeks. It should be noted that there will be an application fee levied by the OEH for the processing of AHIPs, which is dependent on the estimated total cost of the development project.

Where there are multiple sites within one study area an application for an AHIP to cover the entire study area is recommended.

Recommendation 3: AHIP application for site NBA1 in the planning proposal area.
It is recommended that an AHIP be obtained from the Office of Environment and Heritage for any impacts to known Aboriginal site NBA1 within the planning proposal area, including test excavations.

Recommendation 4: Further Aboriginal archaeological and cultural heritage assessment and Testing AHIP application in areas mapped as having high and moderate archaeological potential within the wider study area.
This recommendation is to be implemented prior to ground disturbance. The site survey of the study area identified Aboriginal objects and areas of moderate and high archaeological potential in the study area. Under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) if Aboriginal objects or areas of archaeological potential are identified, and if impacts are proposed that will disturb the ground surface of these areas, then further archaeological and cultural heritage assessment is required, which may include an Aboriginal Heritage Impact Permit (AHIP) application to impact upon aboriginal sites and objects.

If sub-surface impacts are proposed to the areas of moderate and high potential, then under part 6 of the National Parks and Wildlife Act 1974 (NPW 1974) archaeological test excavations are required to collect information about the nature and extent of potential sub-surface Aboriginal objects. This will require a testing
AHIP and will involve the preparation of an Aboriginal Cultural Heritage Assessment (ACHAR) and Archaeological Report, with Aboriginal stakeholder consultation in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010c) also required. An AHIP will also be required if any impacts within the extents of known Aboriginal sites NBA2, NBA3, NBA4 and NBA5 are planned.

Recommendation 5: Discovery of unanticipated Aboriginal cultural material
All Aboriginal places and objects are protected under the *National Parks and Wildlife Act 1974.* This protection extends to Aboriginal objects and places that have not been identified but might be unearthed during construction. The following contingency plan describes the actions that must be taken in instances where Aboriginal cultural material is discovered:

5. Discovery: Should unanticipated Aboriginal cultural material be identified during any works, works must cease in the vicinity of the find.

6. Notification: OEH must be notified of the find.

7. Management: In consultation with OEH, the Ngambri Local Aboriginal Land Council and a qualified archaeologist, a management strategy should be developed to manage the identified Aboriginal cultural material. This may include the requirement to apply for an Aboriginal Heritage Impact Permit.

8. Recording: The find will be recorded in accordance with the requirements of the *National Parks and Wildlife Act 1974* and OEH guidelines.

Recommendation 6: Discovery of Unanticipated Human Remains
The following contingency plan describes the actions that must be taken in instances where human remains or suspected human remains are discovered. Any such discovery at the activity area must follow these steps:

9. Discovery: If suspected human remains are discovered all activity in the vicinity of the human remains must stop to ensure minimal damage is caused to the remains, and the remains must be left in place, and protected from harm or damage.

10. Notification: Once suspected human skeletal remains have been found, the Coroners Office and the NSW Police must be notified immediately. Following this, the find must be reported to OEH and it is recommended that it is also reported to the Ngambri Local Aboriginal Land Council.

11. Management: If the human remains are of Aboriginal ancestral origin an appropriate management strategy will be developed in consultation with Aboriginal Stakeholders and OEH.

12. Recording: The find will be recorded in accordance with the requirements of the *National Parks and Wildlife Act 1974* and OEH guidelines.

Recommendation 7: Newly identified Aboriginal sites NBA1 to NBA5 should be recorded on the AHIMS register.
Section 89A of the *National Parks and Wildlife Act 1974* requires that identified Aboriginal objects must be reported to OEH in a reasonable time. It is recommended that Biosis Pty Ltd register Aboriginal sites NBA1, NBA2, NBA3, NBA4 and NBA5 into the Aboriginal Heritage Information Management System (AHIMS) at the earliest convenience. The AHIMS Aboriginal Site Recording Form should be used for recording Aboriginal objects.

During a site inspection undertaken by Council and the OEH on 15 December 2017, an artefact was found outside of the areas of moderate or high potential archaeological significance. The site has been registered in AHIMS as site no. 57-2-1044.

The *South East and Tablelands Regional Plan 2036* includes Direction 23: Protect the region's heritage and the following actions which are relevant to the planning proposal:

- 23.2 Consult with Aboriginal people and the broader community to identify heritage values at the strategic planning stage
- 23.3 Conserve heritage assets during local strategic planning and development

Recommendations 1 and 3 of the study have not been undertaken at this stage and an application to remove the artefacts (AHIP) identified in the report or the newly located artefact has not been submitted to OEH. It is suggested by the property owner that the AHIP is undertaken at the subdivision application stage. Consultation with the Aboriginal community has not been undertaken, this could occur as part of the exhibition of the revised planning proposal.

8.5 Soil

Douglas Partners were engaged by Council to undertake a preliminary geotechnical investigation for the subject site to enable consideration within this planning proposal. The report *Preliminary Geotechnical Investigation Proposed Residential Development Lot 1 DP 798111, North Bungendore July 2017* is included as Appendix 4.

A site investigation was carried out to provide information on subsurface conditions with preliminary comments given on site classification, site preparation measures, excavation conditions, the performance of suitable foundation systems, likely bearing pressures, pavement design parameters and likely geotechnical constraints.

The investigation comprised test pit excavation with in-situ testing and sampling of the subsurface strata, followed by laboratory testing, engineering evaluation and analysis. Details of the work undertaken are outlined within the report, together with comments relating to design and construction practice.

The investigation was undertaken concurrently with a preliminary site investigation (PSI) for soil contamination assessment purposes (Appendix 6).

The report notes that further investigation of the site will be required following conceptual design to provide more detailed and specific advice on excavation conditions, support requirements, foundations options and pavement design parameters.

The site investigation undertaken indicates that the site is suitable from a geotechnical perspective for rezoning of the land for residential development. Comments have been provided on the various geotechnical aspects of the proposed development.

Conceptual comments on design and construction aspects are also included in the report. Further testing and assessment will be required as the design of the subdivision proceeds.

8.6 Contamination

An assessment of land for contamination is required under clause 6, *State Environmental Planning Policy No.55 (Remediation of Land*).

A preliminary site investigation (PSI) was undertaken for the site in December 2016 (DP, 2016) by Douglas Partners (Appendix 6). The PSI comprised a review of historical information and a site walkover to identify potential sources of contamination.

DP (2016) outlines that the main sources of potential contamination are considered to be:

- Potential impacts from agricultural land use including weed control. Potential contaminants associated with agricultural use are: metals: arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), zinc (Zn); organochloride pesticides (OCP), organophosphate pesticides (OPP) and herbicides.
- Potential impacts from filling associated with the historical buildings, disturbed ground (historical), dirt tracks (historical and observed). Potential contaminants associated with fill from unknown and contaminated sources are: metals; total recoverable hydrocarbons (TRH); benzene, toluene, ethylbenzene, xylene (BTEX); polycyclic aromatic hydrocarbons (PAH); polychlorinated biphenyls (PCB); OCP; OPP; phenols and asbestos.
- Potential impacts from the separate toilet with a hole dug in the ground. Potential contaminants associated with holes dug in the ground for waste from a toilet are: e.coli, faecal coliforms and salmonella.

- Potential impacts migrating from the adjacent landfill (refer to section 10.5 for the background to the landfill site). Potential contaminants associated with a landfill are: landfill gas and leachate (in groundwater).

DP (2016) noted that at the time of the investigation the toilet had been removed with the concrete slab remaining.

An additional report (Appendix 15) describes the methodology and results of a limited subsurface investigation undertaken as an addendum to the Preliminary Site Investigation (PSI), conducted by Douglas Partners Pty Ltd (DP) for Lot 1 DP 798111, Bungendore ('the site'). The PSI was completed by DP in December 2016 with the results presented in the report entitled: Report on Preliminary Site Investigation, Lot 1 DP 798111, Bungendore, dated December 2016 (DP 2016).

The PSI and the addendum were undertaken having regard to the planning proposal for the proposed development of the site as a residential estate (i.e. a low density residential land use).
The objectives of the addendum to the PSI were to:

- Undertake a limited subsurface investigation with sampling and laboratory testing for a suite of common contaminants.
- Comment on the need for further investigation and/or management (if required) in order to determine the compatibility of the site with its intended residential development. This addendum to the PSI comprised a limited investigation with sampling and laboratory testing of soil. This addendum to the PSI was undertaken concurrently with a geotechnical investigation which has been reported separately; Report on Preliminary Geotechnical Investigation, Proposed Residential Development, Lot 1 DP 798111, North Bungendore, Project 88336.01, dated June 2017 (DP 2017).

The report outlines that the results of the subsurface investigation and laboratory analysis indicated an absence of significant contamination within the soils encountered with most of the recorded concentrations of the COPC being below the laboratory PQL and all recorded concentrations of the COPC being less than the adopted SAC. Douglas Partners noted that therefore the risk to human and environmental receptors based on the results was considered to be low.

Groundwater testing was not undertaken as part of the addendum to the PSI, however, the results of the subsurface investigation and laboratory analysis indicate an absence of significant contamination within the filling encountered. Douglas Partners noted that there are risks from off-site sources, in particular the adjacent unlined landfill, including migrating leachate contaminated groundwater and landfill gas (particularly methane) on to the site. An unexpected finds protocol (UFP) was recommended for any future development to address any potential contamination encountered.

Areas that may be impacted by potential contamination (from on-site sources) were identified on the basis of the available site information and limited subsurface investigation. Based on the findings of the assessment, the potential for significant contamination to be present within the site from on-site sources was considered by Douglas Partners to be low.

However the report noted that risks from off-site sources, in particular the adjacent unlined landfill, include migrating leachate contaminated groundwater and landfill gas (particularly methane) could not be discounted). It was recommended that these issues be fully explored, particularly noting the levels of methane reported on the boundary of the landfill and the subject site and that ground gas (methane) may have the potential to migrate in the substrate for hundreds of metres.

Council undertakes regular monitoring of the landfill area, including of methane levels. Investigations to date have indicated that the adopted buffer (250 metre from the landfill) is sufficient to manage the risk from the landfill site.

Douglas Partners suggested in this regard a suitable no – build buffer zone may be appropriate unless testing can confirm that any potential risks from contaminants potentially migrating from the landfill are minimal.

The results of the investigation indicate that the site is suitable for the intended low density residential subject to the above and the implementation of an unexpected finds protocol (UFP) to address potential contamination and bonded ACM encountered and a "safe working methodology". It is also noted that during development and after the removal of the concrete slab from the former toilet, any hole used for septic waste should be validated.

As noted in DP (2016), in regards to the scattered rubbish across the site, a more secure barrier was recommended to be placed between the landfill and the site to minimise the rubbish migrating into the site. The rubbish could also periodically be collected by hand across the site and should be done just prior to site preparation and earthworks commencing for the development.

The report recommended that should soil be proposed to be removed from the site it must be stockpiled first and tested for the listed contaminants and subjected to a formal waste classification assessment with reference to the *NSW EPA: Waste Classification Guidelines, Part 1: Classifying Waste* (Ref 4).

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

At the time of the 2011 Population and Housing census, the town of Bungendore (UCL115035) had a population of 2,754 people. There was an average of 2.9 people per household. At the time of 2016 (ABS) census there were 3,317 people and 1,186 dwellings. The average household size was 3, this is a small increase since 2011.

Based on this it is estimated that the proposed development would result in a population increase of approximately 900 people. Given this, the planning proposal has been referred to the government agencies responsible for education, health, community infrastructure and services and emergency management.

NSW Department of Education and Communities

"No issues or concerns"

NSW Health

1. "Access to regular transport services between Bungendore and Queanbeyan and Canberra will be essential, as will the ongoing improvement of the Kings Highway.
2. Evidence does suggest that the health of individuals and the community is affected by the built and social environment. SNSWLHD would like to express strong support for environmental design features that promote health. The following elements were identified as important following a Health Impact Assessment of Bungendore in 2006. To promote physical activity in Bungendore:
    - Mixed land use.
    - Housing density.
    - Footpaths, cycleways and facilities for physical activity.
    - High street connectivity.

- Street design that is attractive and safe.
- Transport infrastructure and systems linking residential commercial and business areas as well as other destinations.

The following elements have been identified as important in the provision of water for Bungendore:

- Quantity of water available for residential, recreational and commercial uses.
- Quality of water (fluoridation).

The following elements have been identified as important in promoting neighbourliness in Bungendore:

- Opportunities for incidental contact.
- Conflict management.
- Participation in decision making by the community.
- A shared sense of local identity.
- Local community groups and volunteering.
- Cultural and personal diversity.
- Civic spaces.
- Local businesses and local employment".

Transport for NSW

Transport for NSW has advised that a future subdivision should be designed to ensure that:

- options for extending the existing bus route are retained,
- the internal road design is bus capable; and
- the internal street network is well-connected, legible and provides direct safe and convenient pedestrian and cycle access to existing and future neighbourhoods.

Fire and Rescue NSW

Fire and Rescue NSW has advised that a future subdivision should be designed to ensure that:

- The road layout design (road widths, turning circles, bends and roundabouts) complies with FRNSW policy No.4 - Guidelines for Emergency Vehicle Access and
- A ready water supply is available and fire hydrants installed as per cl.142 *Local Government (General) Regulation 2005*

Bungendore has both a preschool and primary school, a developing retail and commercial precinct, police station and a medical practice and community health centre. There are bus services to Queanbeyan, Canberra and the south coast. An increase in population would provide the opportunity for these services to expand. Council is developing a network of pedestrian and cycle paths throughout the town and a recreation strategy. The review of the *Bungendore Land Use Strategy and Structure Plan* will include the consideration of soft infrastructure.

Section D State and Commonwealth interests

Question 10 Is there adequate public infrastructure for the planning proposal?

10.1 Potable Water Supply

Raw Water Supply and Treatment

Bungendore town water is sourced from groundwater which is then distributed via a reticulated system. The groundwater in the Bungendore area is managed through the *Water Sharing Plan for the Murrumbidgee Unregulated and Alluvial Water Sources 2012*, a plan made under section 50 of the *Water Management Act 2000*. From this plan, Bungendore has access to 472ML/year of groundwater, with 272ML/year available from the Turallo borefield, and 200ML/year from the Currandooly borefield. This amount is based on the consideration of the long term average annual extraction limits (LTAAEL), environmental flows, annual groundwater recharge and the needs of other users within the system. Consultation with NSW DPI Water has indicated that it is unlikely that an additional allocation from this alluvial water source would be granted.

Council has adopted an Integrated Water Cycle Management Strategy (IWCM) for the former Palerang local government area. The IWCM – Palerang Communities is a thirty year strategy and incorporates a total asset management and financial plan for Councils' water and sewerage businesses. The growth of Bungendore and necessary water allocations to meet that growth is being considered as part of this work. Early findings of the report are that water supply will constrain growth of the town in the medium term.

Recognising this constraint, Council is undertaking investigations to determine if additional groundwater can be secured. Consultation with NSW DPI Water indicated that it is unlikely that an additional allocation from the Turallo or Currandooley borefields would be granted due to groundwater allocation constraints imposed by the Murray-Darling Basin Plan.

In light of this, Council separately engaged a consultant to undertake field investigations into sourcing additional town groundwater supplies from the Lachlan Fold Belt Fractured Rock system (a deeper aquifer system with largely unallocated groundwater). Eleven test bores were constructed and, of these, two potential production bores known locally as Bungendore East (or Manwarings) and Jim Gray Park were selected and developed. From these two bores, it was established that an annual extraction of 765ML per annum from the Lachlan Fold Belt is feasible, giving Council a potential total town water supply of 1,237ML/year.

Council has now received the additional allocation through DPI Water. The additional groundwater will be sent via raw water lines to the existing Bungendore Water Treatment Plant, which will require augmentation due to differences in the water quality of the various borefields. Plant upgrades and borefield construction will be forward funded by Council and recouped via voluntary planning agreements or Section 64 Contributions.

Water Reticulation Network

Separately to the groundwater supply issues discussed above, Council engaged Calibre Consulting to undertake an investigation into the reticulated water network (Appendix 8).

The report found that there were no constraints to development related to a reticulated water network and that the following upgrades would be required:

- Construction of a treated water transfer pump station and associated 225mm main
- Construction of a 3.0 megalitre reservoir to the north of the proposal area. However, if further development outside of the existing town boundary was to occur consideration will be given to a reservoir at another location

Costs for the upgrades listed above are directly attributable to the proposed development and will be fully funded by the proponent via a revised Section 64 plan with Council undertaking the works.

The report did also consider the potential for a recycled water main. At this stage, Council staff do not support the supply of recycled water to consumers for regulatory and compliance reasons, but do support the use of recycled water for the irrigation of public spaces.

10.2 Sewer

Sewerage Network Capacity

There is capacity within the sewerage network but upgrades are required.

Council engaged Calibre Consulting to undertake an assessment of the proposed development on Council's sewerage network. Calibre were engaged to:

- Undertake a review of the information provided by proponents within the submitted planning proposal as relevant to this study.
- Prepare a concept plan for the study area, identifying existing sewerage network short falls.
- Recommend strategies to service the study area in accordance with the Sewerage Code of Australia and Sewage Pumping Station Code.
- Prepare a report including maps, areas identifying that require further assessment (if identified), and recommendations.
- Include the methods used for the gathering of data.

As the proponent has expressed a desire to develop areas to the north of the land subject to the planning proposal, the consultant was engaged to look at the planning proposal area in isolation, and a wider study area. For the purposes of this report, all references are to the planning proposal area only. The full report is shown in Appendix 9.

The report found that the proposed development will increase the equivalent population by 896 equivalent persons (EP). It found that the existing sewer network downstream of the proposed connection points generally complies with the desired standards of service. It was noted, however, that the majority of the existing network is nearing its capacity, notably Catchment 7 and Catchment 8. Any additional demand within these catchments will therefore trigger augmentations within the catchments.

Subject to final design, the following specific upgrades were noted in the report:

- A portion of existing Catchment 7 may need to be diverted to Pump Station 9 via a 300mm gravity main.
- The rising main from Pump Station 8 will need to be upgraded to a 225mm main.
- Pumps will need to be upgraded at Pump Station 8, 9, and 10.
- Pump Station 10 will require increased emergency storage.

Costs for the upgrades listed above are directly attributable to the proposed development and will be fully funded by the proponent via a revised Section 64 plan with Council undertaking the works.

Sewage Treatment Plant Capacity

As discussed previously, the development will increase the sewage load by 896 EP. The recently upgraded Bungendore sewage treatment plant (STP) has a capacity of 5,000 EP, although the STP is only operating at approximately 3,000 EP at this time. To cater for future growth in the town, a concept design for an upgrade of the STP to a 12,000 EP plant has been completed. Given there is approximately 2,000 EP capacity remaining in the plant, the capacity of the STP is not considered

to be a constraint at this time. Plant upgrades (when required) will be forward funded by Council and recouped via Section 64 contributions.

10.3 Stormwater Management

Stormwater quality and quantity can be effectively managed within the proposed development without adverse impact on downstream receivers.

Strategies for the management of urban stormwater runoff and its effects on flows and water quality on receiving waters or properties have been considered. An assessment of options for the management of stormwater have been undertaken by Calibre Consulting (see Appendix 10).

Appropriate strategies for the management of urban stormwater runoff and its effects on flows and water quality on receiving waters or properties has been investigated in the report, with Water Sensitive Urban Design (WSUD) principles.

The following stormwater quality and quantity devices were recommended by Calibre should the planning proposal area be developed:

- A 22.5 kL rainwater tank is required for each residential block.
- Gross Pollutant Traps are required upstream of each wetland.
    - Two detention basins are required for the planning proposal area. The detention basins are listed below and locations are shown on Drawings F003, F004, F005 and F006 in Appendix B.
    - 4,400m3 detention for Catchment 2 which discharge to the Larmer Street Open Channel.
- 4,450m3 detention for Catchment 5 which discharges to the neighbouring railway corridor.
- The planning proposal developed area in Catchment 6 does not require attenuation due to location of the developed area. If the upstream area is to be developed a detention basin is likely to be required, as a result the major overland flow path though the catchment should remain clear from development.
- To meet the required WQOs, stormwater quality management will be provided via following:
    - Rainwater tanks for residential allotments in all the catchments.
    - End of line fringe wetlands with a surface area of 2,860 m2 for Catchment 2 and 7,000 m2 for Catchment 5.
    - Wetland for Catchment 6 with a surface area of 1,240 m2 which is outside the existing overland flow path.

10.4 Traffic

Existing public infrastructure is able to service the development with some minor upgrades.

Calibre Consulting was commissioned to undertake a Traffic Impact Assessment (TIA). A copy of the assessment is included as Appendix 10.

The objective of the Traffic Impact Assessment was to determine any implications resulting from the proposed development of the planning proposal and the broader Study Area. The report provides a discussion of traffic impacts including:

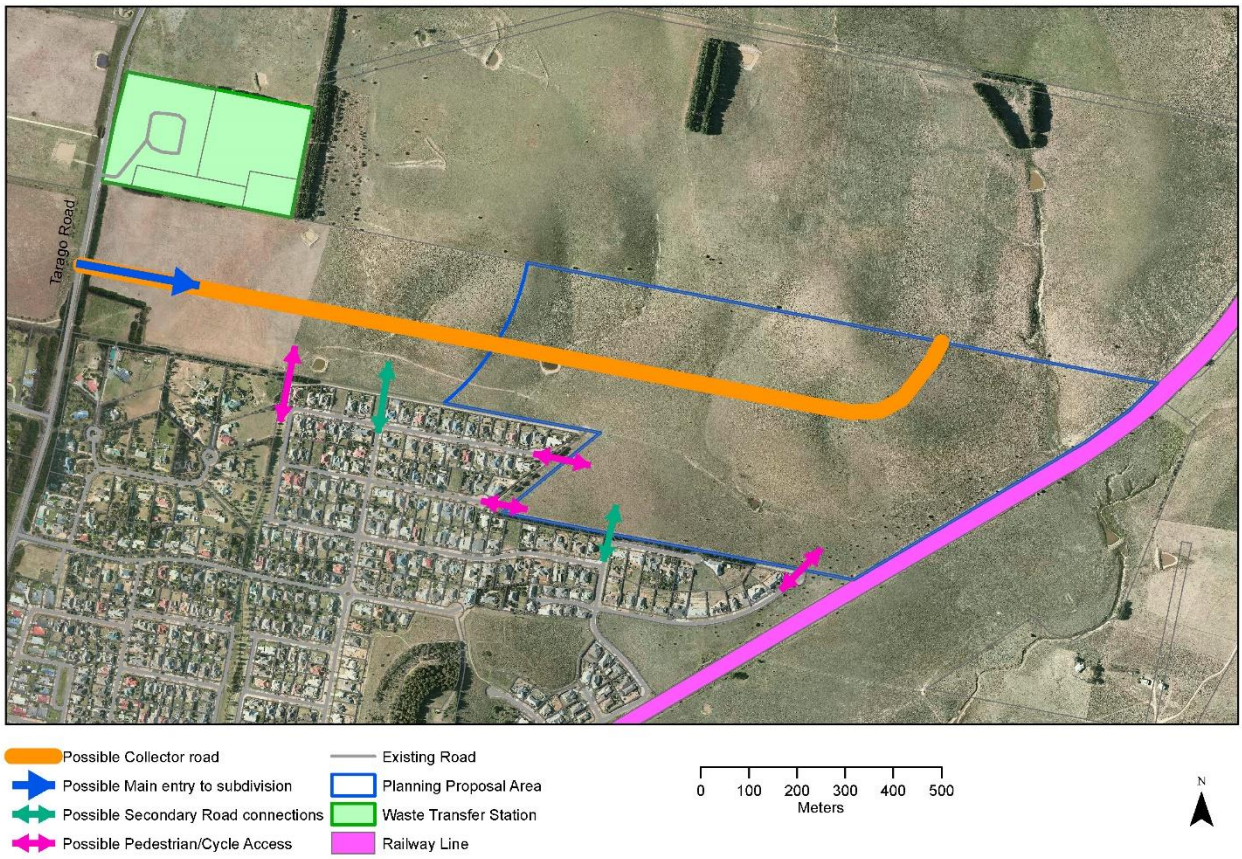
- Review of potential development yield and determination of vehicle traffic generation
- Traffic generation and point of access
- Traffic impacts on nearby existing intersections and proposed intersections

- Potential intersection layout arrangements and adjustments

That assessment considered a preliminary road layout including the following:

- A collector road off Tarago Road running generally east-west (major access road).
- A major secondary access road running north-south along the approximate alignment of McCusker Drive.
- Minor secondary access roads connecting to Simms Drive and Lithgow Place.
- Pedestrian connections to Eyre Street and the eastern and western ends of Larmer Street.
- Roads parallel to the east-west collector.

The map below illustrates a potential road layout and access points.



Map 11 - Possible road layout and access points

Source Queanbeyan-Palerang Council and Land and Property Information

The primary means of accessing and egressing the planning proposal area was found to be via Tarago Road and McCusker Drive. Ten intersections around the planning proposal area were analysed to determine if there was any significant impact from increased traffic on the existing intersections. As part of the North Bungendore planning proposal, it is anticipated that a new intersection with Tarago Road will be created to facilitate the access and egress of traffic from the planning proposal area.

Analysis of the existing and proposed intersections found that the existing intersections operated satisfactorily based on the expected amount of traffic which may be generated by the proposed development. The Traffic Impact Assessment provided the following recommendations:

- The existing intersections operated at a satisfactory level of service for both the existing and future scenarios modelled.
- The existing intersection of McCusker Drive / Larmer Street should be modified to become a four-way intersection, providing access to the Study Area / Planning Proposal Area.
- The proposed intersection of Tarago Road / North Bungendore Road should be a BAL and CHR intersection to provide access to the Study Area / Planning Proposal Area.
- The major internal intersections of McCusker Drive / North Bungendore Road and McCusker Drive / Road 1 were found to function well in either a priority controlled intersection or a roundabout. The form of these intersections will be decided by the applicant responsible for developing the North Bungendore Estate (in consultation with Council).
- Several paths within the proposed development were found to have steep grades. The grades may change during the development application or detailed design phase so that the paths comply with the relevant standards.
- Two major paths should be considered as works external to the proposed development to provide a means of connecting the proposed development pedestrian demand areas, namely west of Larmer Street and within the verge of McCusker Drive.

The TIA also stated that there is no difference in the intersection geometry requirements for either the Planning Proposal Area or the broader Study Area. The above works are likely to be required for the development of either the Planning Proposal Area or the Study Area.

Pedestrian, cyclists and people with a disability

Council encourages increased cycling and walking rates within the community through the provision of suitable pedestrian and cyclist facilities. Planning for the development should consider pedestrians, cyclists and people with a disability through the provision of high quality shared, bike-only and pedestrian-only paths and suitable street furniture. The paths should tie into Council's adopted Pedestrian and Mobility Plan (currently being revised) and internal transport routes.

The Traffic Impact Assessment report considered that the proposed development has grades which comply with the relevant pedestrian, bicycle and disabled access standards. However careful review of grades for the identified roads and streets will need to be undertaken during the detailed design phase of the project to ensure compliance with the relevant standards.

10.5 Bungendore Landfill and Bungendore Resource Recovery Facility and Waste Transfer Station

The land subject to this planning proposal is adjacent to the Bungendore Resource Recovery Facility and Waste Transfer Station (RRF) and the former Bungendore landfill.

Following the closure of the landfill, the RRF commenced operation. The RRF accepts municipal, commercial and industrial, and construction and demolition waste, and has a greater focus on resource recovery through the diversion of materials such as recyclables, household chemicals, green waste and other problem materials (for example mattresses and gas bottles) to reuse or recycling facilities. Residual waste is loaded on to waste transport vehicles for disposal at a licensed landfill.

RRF site operations such as the loading of waste, heavy vehicle movements and waste compaction result in the generation of dust, noise and vibration. Windblown litter and odour issues are also

experienced periodically. Site controls are in place to minimise the above, and are routinely reviewed for improvement, however incidents do occur that may result in complaints from neighbours if new residences are constructed in close proximity to the RRF.

The former landfill no longer receives waste and will be fully reinstated by the end of the 2017/18 financial year. The former landfill is unlined, overlying silty-clay soils and has no leachate collection system. The site was operational since the 1950s as a Council facility, and the site may also have been used prior to this period for waste disposal. The landfill was staffed since 2000 and ceased operation in December 2014.

At the time the planning proposal was submitted to Council, there had been no assessment or a monitoring program established to consider the impact of the landfill on adjacent land. The NSW Office of Environment and Heritage (EPA) provided a response on 15 October 2013 to a request from Council regarding a buffer between the landfill and proposed residential land in the planning proposal. It was agreed that there initially be a buffer of 500 metres and the area of the planning proposal was revised to reflect this. The EPA has been involved in the preparation and approval of the landfill closure plan (as outlined below).

Council engaged a consultant to develop a landfill closure plan for the Bungendore landfill. The project objectives were to:

- Establish a monitoring regime to meet the requirements of the NSW EPA Environmental Guidelines: Solid Waste Landfills (1996) and comply with the requirements of the NSW *Protection of the Environment Operations Act 1995*.
- Assess the risk to existing residential dwellings located within 500m of the landfill.
- Determine an appropriate buffer distance around the landfill site to guide future development.
- Develop a groundwater monitoring program to assess existing and future groundwater contamination.
- Develop a gas monitoring program to assess existing and future landfill gas generation rates and extents.
- Recommend, any remedial action to be undertaken to remove or reduce existing and future risk to groundwater and surrounding properties.

A preliminary qualitative risk assessment was undertaken for the landfill site and found that there are currently no unacceptable risks for the existing Elmslea development. There are, however, a small number of unacceptable risks related to the RRF and these are being managed.

Groundwater, surface water and landfill gas monitoring bores were installed to improve the risk assessment. Following installation and early testing, it was established that the landfill was not generating substantial levels of methane and that the overall risk profile permitted a reduction in the initial buffer from 500 metres to 250 metres.

The planning proposal has not been amended to reflect the revised buffer (250m) as consideration of the operational needs of the RRF such as visual, noise and odour amenity have not been assessed. It should be noted that monitoring will need continue, possibly for a long period to ensure that adjacent land is not affected by methane even once landfill closure is complete.

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

As outlined in Section C, the NSW Office of Environment and Heritage has been consulted regarding the findings of the flora and fauna report and Aboriginal cultural heritage. The planning proposal has also been discussed with the EPA in relation to the landfill.

Council has consulted with the following government agencies, prior to consultation with the community:

- NSW Office of Environment and Heritage
- NSW Rural Fire Service
- NSW Roads and Maritime Services
- Transport for NSW
- NSW Department of Industry-Water
- NSW Environmental Protection Authority
- Fire and Rescue NSW
- NSW Department of Education and Communities
- NSW Police
- NSW Health
- Ambulance Service of NSW
- John Holland (railway infrastructure)
- NSW State Emergency Service

Part 4 Mapping

Four amended, Palerang Local Environmental Plan 2014 maps have been prepared:

- *Palerang Local Environmental Plan 2014* Land Zoning Map 4A
- *Palerang Local Environmental Plan 2014* Height of Buildings Map 4A
- *Palerang Local Environmental Plan 2014* Lot Size Map 4A
- *Palerang Local Environmental Plan 2014* Lot Averaging Map 4.

Part 5 Community consultation

The planning proposal will be exhibited for 28 days as it is likely to generate significant local interest and it is not a minor amendment to the *Palerang Local Environmental Plan 2014*.

In addition to advertisements being placed in the local newspapers, the notification of adjoining property owners and advice being placed on Council's website and social media accounts. Council's online portal "Your Voice" will be utilised to assist with the collection of community comments.

Part 6 Project timeline

Task	Anticipated completion date
Date of Gateway determination	April 2015 (completed)
Completion of technical information (required studies)	November 2017 (completed)
Government agency consultation	June 2018 (completed)
Report to Council	February 2019
Community consultation (	18 Nov – 16 Dec 2019
Consideration of submissions by Council (report to Council)	Jan/Feb 2020
Submission to the NSW Department of Planning and Environment	March 2020
Amendment of the *Palerang Local Environmental Plan 2014.*	May 2020

Appendices

1. Report to Palerang Council meeting 4 December 2014
2. *Bungendore Land Use Strategy and Structure Plan*
3. Study 1: Soil Capability
4. Study 2: Aboriginal Cultural Heritage
5. Study 3: Contamination
6. Study 4: Bushfire
7. Study 5: Water Supply
8. Study 6: Sewerage
9. Study 7: Traffic and Transport
10. Study 8: Stormwater
11. SMEC, Little Whip Snake Report
12. Kevin Mills Report
13. DP 798111 and road
14. Addendum to Study 3: Contamination
15. Title search
16. Gateway Determination