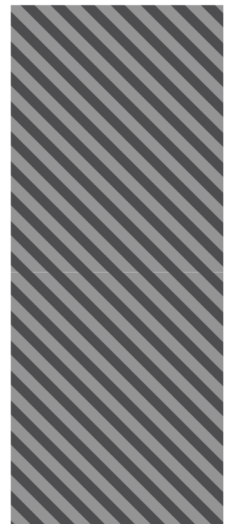


Subdivision of Neighbourhoods 3, 4 and 5 Googong

Statement of Environmental Effects

Client: Googong Township Pty. Ltd.

Date: 17 September 2021



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| | |
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| Date | 17 September 2021 |
| Version | V3 Final |

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Acronyms

| Acronyms | Description |
|----------|---|
| AECs | Areas of Environmental Concern |
| AHIP | Aboriginal Heritage Impact Permit |
| APZ | Asset Protection Zone |
| BC Act | Biodiversity Conservation Act 2016 |
| BCA | Building Code of Australia |
| BCAR | Biodiversity Certification Assessment Report |
| CC | Construction Certificate |
| CIV | Capital Investment Value |
| DA | Development Application |
| DCR | Development Coordination Review |
| DCP | Development Control Plan |
| DPIE | NSW Department of Planning, Industry and Environment |
| EPBC Act | Environmental Protection and Biodiversity Conservation Act 1999 |
| EP&A Act | Environmental Planning and Assessment Act 1979 |
| GDCP | Googong Development Control Plan |
| GFIMS | Googong Foreshores Interface Management Strategy |
| GTPL | Googong Township Propriety Limited |
| JRPP | Joint Regional Planning Panel |
| LEP | Local Environmental Plan |
| LGA | Local Government Area |
| NH | Neighbourhood |
| NH345 | Neighbourhoods 3, 4, and 5 |
| NPW Act | National Parks and Wildlife Act 1974 |
| PTWL | Pink Tail Worm Lizard |
| RFS | Rural Fire Services |
| QDCP | Queanbeyan Development Control Plan |
| QPRC | Queanbeyan Palerang-Regional Council |
| QLEP | Queanbeyan Local Environmental Plan 2012 |
| SEE | Statement of Environmental Effects |
| SEPP | State Environmental Planning Policy |

| Acronyms | Description |
|----------|--|
| SRPP | Southern Regional Planning Policy |
| SQIDs | Stormwater Quality Improvement Devices |
| VPA | Voluntary Planning Agreement |
| WSUD | Water Sensitive Urban Design |

1 Introduction

1.1 Project Overview

Googong Township is a 25 year project being developed in partnership by Peet and Mirvac, operating as Googong Township Pty Ltd (GTPL). The emerging township is located in Southern NSW, 8km from Queanbeyan and 15km from Canberra. The Googong master plan is embedded in Queanbeyan-Palerang Regional Council's (QPRC) Googong Development Control Plan and provides the overarching structure for the township. It has been planned and is being developed as a freestanding township with five neighbourhoods, around 6,600 dwellings and a population of over 18,000 people.

Neighbourhood (NH) 1 and NH2 (also known as Googong North and Googong Central) have completed Structure plans and DAs. NH2 is currently under staged construction.

The next 3 Neighbourhoods to be developed, under this Development Application, are

- » NH3 (including the Hamson land) – also known as Googong West
- » NH4 – also known as Googong South
- » NH5 – also known as Googong East

Neighbourhood's 3, 4 and 5 (NH345) is approximately 235 Ha in size and is bounded by Old Cooma Road to the west, NH2 and NH1B to the north, the Googong Dam foreshore and Pink-Tail Worm-Lizard (PTWL) Conservation Area to the east and rural land to the south. This development application (DA) seeks approval for the subdivision of the majority, but not all, of NH345 and covers approximately 171ha as broadly illustrated in Figure 1 below.

The area around Googong is characterised by existing rural uses, while NH345 itself is characterised as former agricultural land.

Please note that the 'subdivision plans' (including the Composite plan and Boundary Adjustment) prepared by Lonergan Surveying and submitted with this application should be referenced for the correct boundaries of this DA and NH345. Where there are any inconsistencies between the information shown on the 'subdivision plans' and the other drawings submitted with this application or the graphics included in this report, the 'subdivision plans' prevail to the extent of the inconsistency.

1.2 Project Objective

GTPL is seeking development approval under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), for the subdivision of, and associated works within, NH345 within the Googong Township.

This Statement of Environmental Effects (SEE) has been prepared to accompany a DA to QPRC for the proposed subdivision. This SEE describes the development proposal and provides an assessment of the proposal against section 4.15 of the EP&A Act.

The proposal affects land within the Googong Township with the following legal descriptions:

- » Lot 7 DP1246784
- » Lot 42 DP754881
- » Lot 10 DP754881
- » Lot 3 DP1149329
- » Lot 1604 DP1266000

- » Lot 1605 DP1266000
- » Lot 12 DP1266001
- » Lot 13 DP1266001
- » Lot 2 DP1231713
- » Lot 11 DP754881 (please note this lot is to be subdivided to create Stage 14 Residue 2 in DA.123-2017.E as part of the NH2 development)
- » Lot 776 DP1230282 (please note this lot is under QPRC ownership and the proposed subdivision of this lot occurs as part of NH5-Stage 5 to enable the extension of Gorman Drive)

This DA seeks approval for:

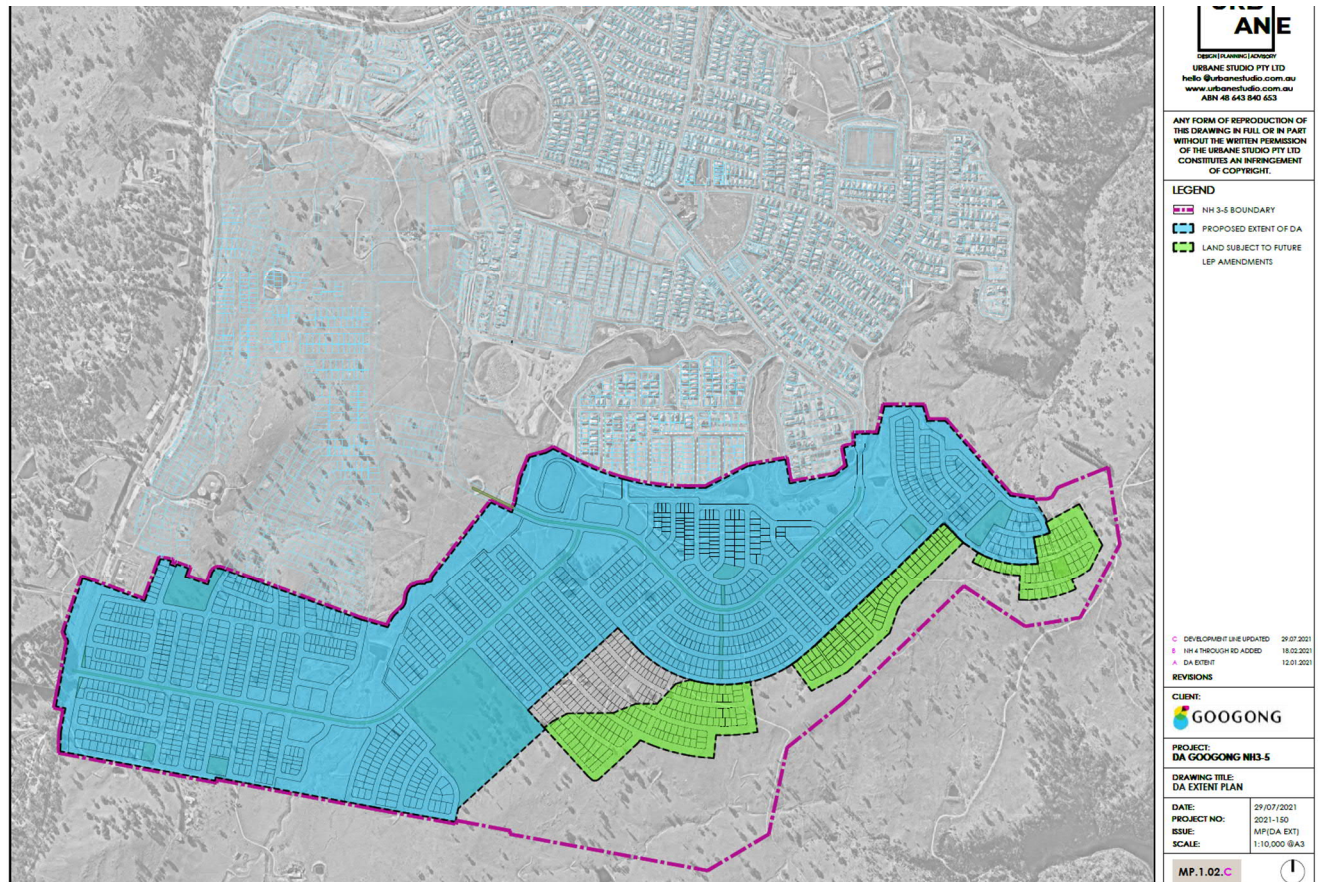
- » Torrens title subdivision of NH345 to create:
 - > 1476 residential lots,
 - > 20 lots for future subdivision of higher density housing and other uses including the Neighbourhood Centre sites, to accommodate approximately 320 dwellings,
 - > 16 lots subject to future approval for residential use (marked (B) and notes on the relevant subdivision plans),
 - > 7 part lots (shown as part of residue lot 2 on the relevant subdivision plans)
 - > Public reserves including, local parks, a sports field and Googong Common
 - > Public roads and drainage reserves.
- » All subdivision works to prepare the land for the future development – comprising site preparation and grading, stormwater and drainage works, road construction, tree removal, public domain landscaping (including structures) and utilities provision.
- » As noted above, residential use of 16 lots zoned E2 and a part lot of residue lot 2 for multi dwelling housing in zone R5 are subject to future approvals.
- » Also, further subdivision of part lots in residue lot 2 within the minimum lot size area of 15,000sqm is subject to future approvals.
- » The construction of all buildings as well as the Neighbourhood Centre sites will be subject of future applications.

The boundaries for this DA and NH345 are broadly illustrated in Figure 1. The area bordered by the pink/purple dashed line shows the extent of NH345. This area includes the physical extent of proposed subdivision of this DA (shown in light blue). It also shows an indicative layout of potential future residential subdivision (in light green) within the boundaries of NH345 that is subject to impending LEP amendments and future DAs. This is provided for context only and no approvals for this potential future subdivision are sought as part of this DA.

Notwithstanding, the civil works and utilities studies for this DA have considered the demand that would be generated by this potential future development (shown in green) in designing the infrastructure network for NH345. This is to ensure the planned infrastructure can accommodate the potential additional demand without the need for further modification or expensive retro-fitting. With a Capital Investment Value (CIV) of approximately \$170 million (excl. GST) the proposal constitutes regional development and therefore will be determined by the Southern Regional Planning Panel (SRPP).

The proposal is Integrated Development under Part 4, Division 4.8 of the EP&A Act as approval is required under the following Acts: *Environmental Protection and Biodiversity Conservation Act 1999*, *Biodiversity Conservation Act 2016*, *Fisheries Management Act 1994*, *National Parks and Wildlife Act 1974*, *Roads Act 1993*, *Rural Fires Act 1997* and *Water Management Act 2000*.

Figure 1 DA Extent Plan



Source: Urban Studio PTY LTD

1.3 Accompanying documentation

The SEE is to be read in conjunction with the accompanying documentation and plans for this development application. These documents are listed in Table 1 below and a copy of each is included in the DA submission package.

This SEE and the accompanying documentation also rely on the technical reports and plans previously prepared in support of the previously approved Structure Plan for NH345. These documents are listed in Table 2 below.

Table 1 Supporting Plans and Documentation

| Document | Prepared by | Final Date |
|--------------------------------------|--------------|---------------------|
| Reports | | |
| Landscape Design Report | AECOM | Rev. D 10.09.21 |
| Stormwater Report (with Appendices) | Spiire | Rev. 01 08.09.21 |
| Site Contamination Assessment Report | GEOTECHNIQUE | September 2021 |
| Civil Infrastructure Design report | Spiire | Rev. 01 10.09.21 |

| Document | Prepared by | Final Date |
|--|--|--------------------------------|
| Biodiversity certification application | GTPL | 03.05.21 |
| Biodiversity Certification Assessment Report | Capital Ecology | Rev. V Final 01 30.04.21 |
| Aboriginal Cultural Heritage Assessment Report | Navin Officer heritage consultants Pty Ltd | Rev. V4 10.09.21 |
| Bushfire Assessment Report | Ember Bushfire Consulting | Rev. Final draft – 14.09.21 |
| Traffic, Transport and Access Assessment | SCT Consulting PTY. LTD. | Rev. 2.0 10.09.21 |
| Subdivision Statement | Lonergan Surveying | 15.09.21 |
| Consideration of Road Traffic Noise | SLR Consulting Australia | Rev. 3.0 07.09.21 |
| Plans | | |
| Civil Infrastructure and Utilities Drawings | Spiire | Rev. A 09.09.21 |
| Landscaping and Open Space Drawings | AECOM | Rev. D 10.09.21 |
| Tree Management Plans | Place Logic | Rev B 01.09.21 |
| Block Typology Plan | Urbane Studio | 15.09.21 |
| Boundary Adjustment Plan | Lonergan Surveying | 15.09.21 |
| Composite Plan | Lonergan Surveying | 15.09.21 |
| QPRC LEP Overlay Plans | Lonergan Surveying | 15.09.21 |
| Subdivision Plans | Lonergan Surveying | 15.09.21 |
| Airspace Submission Plan | Lonergan Surveying | 15.09.21 |

Table 2 Structure plan documentation

| Document | Prepared by | Date |
|---|---------------------------------------|-----------|
| Acoustic Assessment of Road Traffic Noise (Consideration of Road Traffic Noise) | SLR Consulting | May 2019 |
| Bushfire Constraints Assessment (Report) | Ember Bushfire Consulting | May 2019 |
| Cultural Heritage Desktop Assessment Report | Navin Officer Heritage Consultants | May 2019 |
| Electrical Services Assessment | GHD Consulting | May 2019 |
| Infrastructure Report | Calibre Professional Services Pty Ltd | May 2019 |
| Landscape Design Report | AECOM | June 2019 |
| Planning Assessment Report | Elton Consulting | June 2019 |
| Traffic Report | Calibre Professional Services Pty Ltd | May 2019 |

| Document | Prepared by | Date |
|---|---------------------------------------|-------------------|
| Tree Assessment | Spacelab Studio Pty Ltd | February 2019 |
| Urban Capability Report | Douglas Partners | June 2019 |
| Part 1 - Biodiversity Assessment (BAM Stage 1)/ | Capital Ecology | Draft – July 2019 |
| Stormwater Management Strategy | Calibre Professional Services Pty Ltd | May 2019 |
| Updated DCP Maps | Spacelab Studio Pty Ltd | July 2019 |
| Structure Plan and Urban Design Report | Spacelab Studio Pty Ltd | July 2019 |
| Cover Letter | Spacelab Studio Pty Ltd | July 2019 |

1.4 Meetings with Council

The proposed development subject of this DA was considered at several of Council's Development Coordination Review (DCR) Panel meetings. Each of the issues raised at the DCR meetings has been addressed in this SEE and accompanying documentation. Several meetings have been held specifically in relation to the potential relocation of the Shearing Complex Local Heritage Item (refer Section 5.11 for further information).

The table below provides an overview of meetings with Council to date.

Table 3 Summary of meetings with Council

| Date | Title | Attendees |
|------------|--|---|
| 16/12/2020 | Googong NH345 DA - Preliminary context | Luke Perkins Malcolm Leslie Katherine Hurley |
| 29/01/2020 | Googong NH345 Discussion | Luke Perkins Graeme Harlor Jacinta Tonner Dirk Jol Michael Thompson Martin Brown Malcolm Leslie Katherine Hurley |
| 26/02/2021 | Googong NH345 Traffic Workshop | Derek Tooth Dirk Jol Graeme Harlor Malcolm Leslie Katherine Hurley Ben Cargill Spiire Chelsea Corcoran Spiire Andy Yung SCT Consulting |

| Date | Title | Attendees |
|------------|--|---|
| | | Jonathan Busch SCT Consulting |
| 15/04/2021 | Shearing Complex – Heritage Inspection with heritage advisor | Martin Brown Pip Giovanelli (Heritage Adviser) Tim Corby Mitchell Alexander |
| 04/06/2021 | Googong Neighbourhood 3, 4 & 5 SPS & Stormwater Pond | Brendan Belcher Gordon Cunningham Katherine Hurley Ben Cargill Spiire Chelsea Corcoran Spiire Ross Carnegie Spiire |
| 15/06/2021 | Googong NH345 - Traffic/Roads | Derek Tooth Dirk Jol Tim Long Eli Ramsland Joanne Wilson Ridley Malcolm Leslie Katherine Hurley Chelsea Corcoran Spiire Andy Yung SCT Consulting Jonathan Busch SCT Consulting |
| 28/06/2021 | Shearing Complex – Heritage Inspection with Council Heritage Committee | Martin Brown Michael Thompson David Carswell Tim Overall Sue Whelan David Loft Tim Corby |
| 12/08/2021 | Shearing Shed relocation and repurposing concept | Tim Corby Tim Geyer Bill Maleganeas |

2 Background

2.1 Googong Township and master plan

The Googong site was identified for future residential development in the Queanbeyan Land Release Enquiry (2006), Queanbeyan Residential and Economic Strategy Review 2015-2031, Queanbeyan Local Environmental Study (2003-2004) and Queanbeyan-Palerang Regional Council Local Strategic Planning Statement "Towards 2040". The outcomes of these investigations culminated in the rezoning of the site for urban development in 2009 through the Queanbeyan Local Environmental Plan (LEP) (Googong) 2009.

That LEP Amendment has since been repealed and the controls for the Googong site have been incorporated into the council-wide LEP – Queanbeyan LEP 2012 (QLEP). A master plan and site-specific Development Control Plan (DCP) were prepared for the site to support the rezoning and currently form part of Council's wider planning framework.

The Googong Master Plan (Refer to Figure 2) is embedded in the Googong DCP and establishes the ultimate development outcomes for Googong. The master plan has been designed to facilitate the provision of around 6,600 dwellings, which will accommodate a population of over 18,000 people and to deliver schools, community facilities, open space areas and employment opportunities over the next 25 years.

To reflect the values of the existing landscape approximately 26% of the total site area is being set aside for open space not only delivering lifestyle amenity for residents but also protecting important habitats. The proposed development seeks to protect landscape features, threatened species' habitats and the catchment of the adjacent Googong Dam.

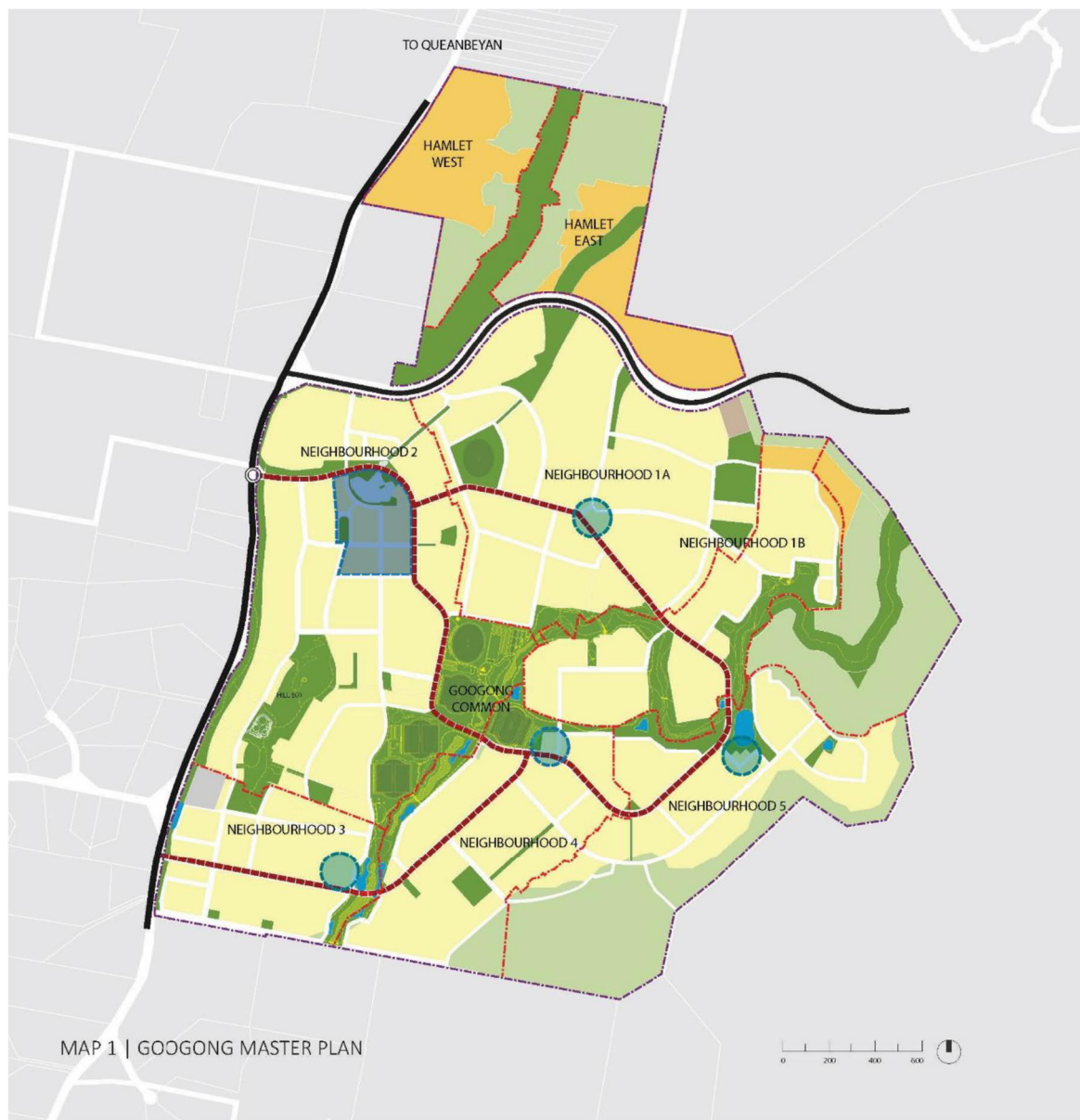
The following objectives underpin the vision and delivery of Googong Township:



Googong Township Objectives

- » Traditional neighbourhood design that promotes five walkable neighbourhoods each with a discernible centre surrounding central parkland, 'Googong Common' as well as two low density neighbourhoods, north of Googong Dam
- » A full range of services to residents and potential localised employment opportunities
- » Easy access to passive and active open space and recreation opportunities close to where people live
- » Increased sustainability of housing with significant reductions compared to standard BASIX requirements on both water and energy consumption
- » New neighbourhoods delivered with soft and hard infrastructure in a co-ordinated manner to optimise urban outcomes.

Figure 2 Googong Master Plan



Source: Queanbeyan & Googong Development Control Plan, 2012

2.2 Previous development approvals

2.2.1 Part 4 development approvals

Several approvals have been granted for development of various types in Googong. Most of these DAs have been granted under Part 4 of the EP&A Act, including the staged subdivision of land in NH1A, NH1B and NH2. The SRPP (formerly Joint Regional Planning Panel) has been the determining authority for some of these DAs as the value of works exceeded \$30 million.

A summary of major development approvals granted under Part 4 of the EP&A Act is outlined in Table 4 below. Note this does not include small lot housing or dwelling DAs or modification applications under s4.55 of the EP&A Act.

Table 4 Summary of Part 4 approvals

| Description | Approved |
|--|---------------------------------|
| Neighbourhood 1A - DA1 Stages 1 and 2 (Consent No. 41-2011) | JRPP |
| » Creation of NH1A and subdivision of Stages 1 and 2 including: | 12 December 2011 |
| > Creation of a Community Scheme for NH1A | |
| > Creation of one lot to accommodate the water recycling plant | |
| > Creation of a Precinct Scheme for NH1A (Stages 1 and 2) which included 'Lot 1' Precinct Property, one neighbourhood park, one local park, one sports field and two open space lots | |
| > Creation of 337 residential lots | |
| » Subdivision works | |
| » Planting and intersection works on Googong Dam Road. | |
| Neighbourhood 1A Exhibition village (Consent no. 171-2012A) | Council |
| Temporary use of land for an exhibition village comprising: | 2 October 2012 – Original |
| » 12 dwellings proposed to be used as exhibition homes | 29 November 2013 – Modification |
| » A sales and information office within Club Googong and project office (subject to modification) | |
| » A temporary car park and landscaping | |
| » Associated signage | |
| » Approval to operate from 9am to 7.30pm daily. | |
| Neighbourhood 1A - DA2 Stages 3, 4 and 5 (Consent No. 233-2012) | JRPP |
| | 24 Jan 2013 |
| » Torrens Title subdivision creating: 493 residential lots, 6 reserves, super lots for future development (including a super lot for Stage 6) and 1 school site lot | |
| » Subdivision works. | |
| Neighbourhood 1A - DA3 Stage 6 and further subdivision and housing development in Stage 3B (Consent No. 186-2013) | JRPP |
| | 8 August 2014 |
| » Torrens Title subdivision creating: | |
| > 10 super lots for future residential development | |
| > 1 super lot for a future neighbourhood centre | |
| > 3 lots for open space and drainage | |
| > 63 residential lots. | |
| > Subdivision works | |
| <i>Note: The proposed community title and erection of dwellings on Lots 785 and 782 (Stage 3B) were amended to exclude this land.</i> | |
| Neighbourhood 1B - DA4 Integrated development for the subdivision of land for housing and infrastructure (Consent No. 378-2014) | JRPP |
| | 7 May 2015 |
| » A staged Torrens Title subdivision to create 592 residential lots public reserves, one super lot for future residential subdivision and large residue lots | |
| » All subdivision works to prepare the land for future residential development comprising site preparation and grading, stormwater and | |

| Description | Approved |
|--|-------------------------------------|
| <p>drainage works, road construction, tree removal and utilities augmentation</p> <p>» All landscaping works to create and embellish two new local parks, as well as open space along the Montgomery Creek corridor.</p> | |
| <p>Neighbourhood 1A - Integrated development for the subdivision of land in Stage 7 (Consent No. 167-2016)</p> <p>» Torrens Title subdivision creating: 120 residential lots, residue lot, public roads</p> <p>» Subdivision and earthworks to prepare the site and create the sports fields within Googong Common.</p> | <p>Council 23 Jan 2017</p> |
| <p>Neighbourhood 1B Exhibition Village and continued use of associated land in Neighbourhood 1A (Consent No. 42-2016)</p> <p>Temporary use of land for a new exhibition village comprising exhibition homes (but not including dwelling construction), car park and landscaping and signage</p> <p>The continued operation of the existing sales and information centre, project office and associated signage within NH1A</p> | <p>Council 29 July 2016</p> |
| <p>Neighbourhood Stage 6C (Consent No. 383-2016)</p> <p>40 Torrens Title plus 4 super lots for future residential subdivision.</p> | <p>Council 15 February 2017</p> |
| <p>Neighbourhood 2 Subdivision (Consent No. DA 123-2017)</p> <p>Integrated Development for NH2 Googong Township Land Subdivision (Torrens Title) including boundary adjustment, creation of 932 residential lots, super lots and residue lots for future developments, associated subdivision works and earthworks, construction of public roads, public reserves, ancillary infrastructure and local services</p> | <p>Council 10 Jan 2018</p> |
| <p>Neighbourhood 1A Stage 4D and Neighbourhood 1B Stage 9 (Consent No. DA 290-2018)</p> <p>Torrens title subdivision to create 67 residential lots and 2 large residential within NH1A Stage 4D and NH1B Stage 9, all subdivision works and landscaping and the creation of 1 residual lot (Lot 425) and 1 public reserve (Lot 901).</p> | <p>NSWLEC 5 November 2019</p> |

2.2.2 Part 5 development approvals

In addition to the above, approval for water infrastructure under the now repealed Part 3A of the EP&A Act, and associated infrastructure approvals under Part 5 of the EP&A Act, has been granted at Googong:

- » Water infrastructure approval (Part 3A): Googong Township has been designed to be one of the first purpose-built, large-scale water-efficient communities in Australia. It has been designed around an integrated water cycle system, which includes:
 - > A dedicated wastewater treatment and recycling plant (WRP) Stages A and B approved in November 2011
 - > Water (potable and recycling) network reticulation including reservoirs – Stages A and B in November 2011
- » Water infrastructure (Part 5)

- > Network reticulation Stage C in April 2016
- > Water Recycling Plant (WRP) Stage C in Dec 2016
- > WRP Stage D and Network Reticulation Stage D in September 2020
- » Associated infrastructure approvals (Part 5): Approvals under Part 5 of the EP&A Act have been granted for:
 - > Edward Land Parkway extension, which has since been opened
 - > Upgrade of Old Cooma Road - minor intersection left turn improvement
 - > Trunk gas and communication works located in a shared services trench association with the Old Cooma Road and Edward Land Parkway upgrades
 - > An easement and alignment for electrical installations as determined by Essential Energy.

2.3 Structure Plan Neighbourhood 3, 4 and 5

Googong Township is being developed as a series of 5 neighbourhoods that are broken down into smaller development stages. Several development stages are governed by broader Neighbourhood Structure Plans embedded in the Googong DCP (GDCP). These structure plans translate the Googong Master Plan to a level of detail which shows the location of developable land, areas of open space and road layouts for each neighbourhood.

The GDCP requires that a 'Neighbourhood Structure Plan' be prepared and approved prior to the subdivision and development of land. It also requires a separate Structure Plan to be developed for the Town Centre and Neighbourhood Centres.

The Structure Plans are developed through a diligent design process involving the assessment of site constraints and opportunities, consultation with public authorities, design pioneering workshops and a range of specialists.

The Structure Plan for NH345, was approved by QPRC in May 2020 and is embedded in the GDCP.

The process of developing a Structure Plan for NH345 has enabled:

- » Alignment with the objectives and core design principles of the Googong Master Plan.
- » An appropriate response to site constraints and opportunities, identifying where further assessment will be required prior to the preparation and submission of future development applications.
- » The development of a defined street hierarchy, public transport routes, and key pathways for pedestrians and cyclists
- » The design of an open space network that enhances the natural features of the site, provides water sensitive urban design, creates sustainable outcomes, encourages walkability and active movement, and supports the commitments under the Local Planning Agreement.
- » The indicative provision of infrastructure servicing the site, including water, stormwater, sewer, energy, gas, and electricity.
- » Indicative details of the subdivision pattern and housing typologies to support a diverse community, including affordable housing.
- » The establishment of desired future character outcomes for NH345 through the articulation of key principles and character statements.
- » Consideration of amendments to development controls to achieve desired outcomes for some housing typologies.

A future separate Structure Plan will be prepared for the NH4 Centre to further define the built form character, land use mix and functionality commensurate with its importance and role.

2.3.1 QPRC Correspondence

The draft NH345 Structure Plan was considered at a meeting attended by representatives from PEET on 17 September 2019. The level of detail of the NH345 Structure Plans was considered to be generally suitable for inclusion into the GDCP, however amendments were made to address the following comments as relevant.

The table below provides an overview of the comments made.

Table 5 Comments made QPRC

| Theme | Comments Made | Actions |
|-------------------|--|---|
| Land-Use Planning | Development within Googong Catchment | |
| | » Plans to be amended to locate all proposed lots outside of the boundary of the Googong Catchment as defined by the ACT Government. | » Amended plans showing the location of the lots proposed for subdivision under this DA, and the Googong Catchment boundary are submitted with this application. |
| | » Formal amendment to the Queanbeyan LEP 2012 relevant lot size maps for this R5 to E2 in order to allow the proposed lots to be subdivided. | » The proposed lot subdivision under this DA satisfies the Minimum Lot Size (MLS) requirements for areas zoned E2 and R5. |
| | Zoning and Lot Sizes | |
| | » Amending the draft plan to remove the smaller lots shown on the R5 zoned land. | » As above, no small lots are shown on the R5 zoned land. See LEP overlays in section 5.11 of the SEE. |
| | Lot Sizes | |
| | » In the event a reduction in lot sizes is not progressed for the south-west corner of the site with a current minimum lots size of 600sqm, all lots will need to meet the current minimum lot size. | » A reduction in lot sizes for the south-west corner of the site is applied for through the submission of a clause 4.6 variation statement to satisfy a breach from the minimum lot sizes development standard that applies to this area. |
| | Land Within Googong Dam Foreshore Buffer | |
| | » PEET intends to implement a covenant on land subject of the Googong Dam Foreshore Buffer under the Queanbeyan LEP 2012 to give effect to the site management requirements. | » Subject to on-going discussions with Council and relevant stakeholders. |
| | Googong Common | |
| | » Proposed subdivision plans for NH345 are consistent with the | » No residential lots are proposed within Googong Common area. |

| Theme | Comments Made | Actions |
|--------------------|--|---|
| | <p>updated Googong Common Map. No residential lots should be located within the newly proposed Googong Common Area.</p> <p>Consistency with Voluntary Planning Agreement (VPA)</p> <p>» Subdivision plan is consistent with any obligations set out under the relevant VPA applying to the area between PEET and Council.</p> <p>Location of Neighbourhood Centres</p> <p>» An amendment to the Queanbeyan LEP 2012 is required to change the location of the proposed neighbourhood centres.</p> <p>DCP Amendment</p> <p>» A fee of \$5,500 will be applicable to amend the DCP</p> | <p>» The subdivision plans are consistent with the relevant VPA.</p> <p>» This has been communicated with Council and is anticipated to be captured as part of the "Housekeeping" LEP Amendment process that is currently underway.</p> <p>» Satisfied as part of the approval for the NH345 Structure Plan.</p> |
| Natural Landscapes | <p>Connectivity of Habitat</p> <p>» Habitat connectivity could be improved between some of the open space/parks and the larger E2 parcel of land to the south-east of the site.</p> | <p>» Habitat connectivity has been improved by limiting the proposed development to the boundary of R1 zoned area and separating it from the E2 zoned land, together with expansion of Yellow Box Reserve.</p> <p>» Approximately 72% of the original woody vegetation covering the Googong Township site has been historically cleared and as such, the mature remnant trees are unlikely to comprise part of an important biodiversity corridor or other notable habitat connectivity feature.</p> <p>» The proposed development avoids and protects the Pink-tailed Worm-lizard habitat, ensuring the habitat connectivity of the local population is not comprised.</p> <p>» The proposed development's proximity to existing and approved neighbourhoods of Googong Township reduced the potential impact on habitat and landscape connectivity.</p> |

| Theme | Comments Made | Actions |
|--------------------------------|---|---|
| Engineering and Infrastructure | Public Transport Infrastructure | |
| | » Roads should be of Street Type 2 where bus routes are proposed. | » Bus route is proposed on local sub-arterial and collector street – deviation roads with 7.1m carriage ways. |
| | » Bus bays will be required if the verge is less than 11.2 metres. | » Bus stops are proposed on civil drawings. Provision of bus bays, if necessary, will be addressed at the later CC stage. |
| | » A maximum radius of 400 m from a dwelling to a bus stop is required in area that is on a bus route. | » 1440 proposed lots are within the 400m catchment of a bus stop, aside from 56 that are within a 500m catchment. |
| | » Consultation with public transportation utilities should be undertaken to determine bus routes as access to each neighbourhood centre with commercial lots. | » Bus routes and bus stops service all neighbourhood centres. » QCity was consulted and agreed in principle to the bus routes and stops proposed. Minutes of a meeting held with QCity are appended to the <i>Transport and Access Assessment</i> attached to this submission. Correspondence from QCity is appended to the <i>Civil Infrastructure Design Report</i> attached to this submission. |
| | Bunyip Drive | |
| | » Bunyip Drive should be a dual carriageway with roundabouts at main intersections. Some consideration can be made for a signalised intersection at the Wellsvale Dr/Bunyip Dr Intersection at the DA stage to cater for pedestrian movement. | » Bunyip Drive is designed with one trafficable lane and one parking lane in each direction, in accordance with the traffic volumes and analysis in the <i>Bunyip Drive – Cross-Section Review</i> memo included in the <i>Traffic, Transport and Access Assessment</i> , attached to this submission. » The Wellsvale Drive and Bunyip Drive intersection at the corner of NH4 centre is signalised to cater for pedestrian movement. |
| Development Assessment | Bio-Certification | |
| | » PEET seeking Bio-Certification for the project is supported by Council | » Noted |
| | Heritage | |
| | » A heritage assessment report in respect to the relocation of the woolshed will be required at the DA stage. | » The relocation of the woolshed has been supported by Council subject to satisfying the requirements contained in the correspondence between PEET and Council. This issue is discussed extensively in section 5.11, |

| Theme | Comments Made | Actions |
|---------------|--|---|
| | Contamination | assessment against the QLEP 2012, of this SEE. |
| | » All areas of environmental concern will need to be remediated as part of any future DA. | » Potential areas of contamination and the necessary remediation actions are discussed under sections 5.10.2 and 6.3 of this SEE. |
| | Tree Overlay | |
| | » The retention of trees is a significant matter for both Council and the Joint Regional Planning Panel (JRPP) who will assess any future DA for the site. | » Where feasible trees are retained, and open space areas are planned to provide context for long term wellbeing of the trees. The tree management plan and civil infrastructure drawings provide details on the location and types of trees proposed for retention or removal. |
| Miscellaneous | » The Neighbourhood Structure Plans should be amended to ensure that the boundaries of the Natural Areas are changed to match the E2 Environmental Conservation Zone boundary as it currently exists in the LEP. | This requirement has been satisfied as discussed above and as shown on the LEP overlay plans. |
| | » The open space shown on the Neighbourhood Structure Plans needs to be consistent with the RE1 Public Recreation Zone as shown in the LEP. | » The proposed open space along Montgomery Creek is aligned with the RE1 zone as shown on the LEP overlay maps submitted with the DA. |
| | » The south eastern larger lot residential area should be amended and be shown as Natural Areas where the land is currently zoned E2. | » All large residential lots have been removed from this DA and may be included in future DAs. |
| | » Roads are permitted with consent in the E2 Zone and the road location can remain unchanged. | » The proposal complies with this requirement. |
| | » Map NH345 Structure Plan – North Facing Private Open Space – the legend shows the Neighbourhood centre and 200 zone around the centres as “B2” which is a local centre. These are the only neighbourhood centres and should be shown as proposed B1 Neighbourhood Centre on the map, including the legend. | » No changes are proposed to the current land use zoning as it applies to the site. » Not relevant to this application (but will be addressed in future applications). |
| | » Private Open Space in front of dwellings facing Gorman Drive would not be desirable due to this road being a high traffic generating | » Detail design of future dwellings does not form part of this application and will be addressed in future DAs. |

| Theme | Comments Made | Actions |
|-------|---|---------|
| | road. How any potential noise impacts can be reduced should be addressed at the DA stage and detailed design solutions should form part of any subsequent DA. | |

Amended Neighbourhood Structure Plans were submitted to Council on 5 February 2020. These plans addressed the concerns raised by Council staff and were referred to Council for consideration. PEET received Council's satisfactory confirmation of the amended Neighbourhood Structure Plans on 10 February 2020.

The comments that necessitate the provision of more detailed assessment at the DA stage have been addressed by the provision of technical reports and drawings that accompany this DA as discussed in the table above.

3 The site

3.1 Googong Township

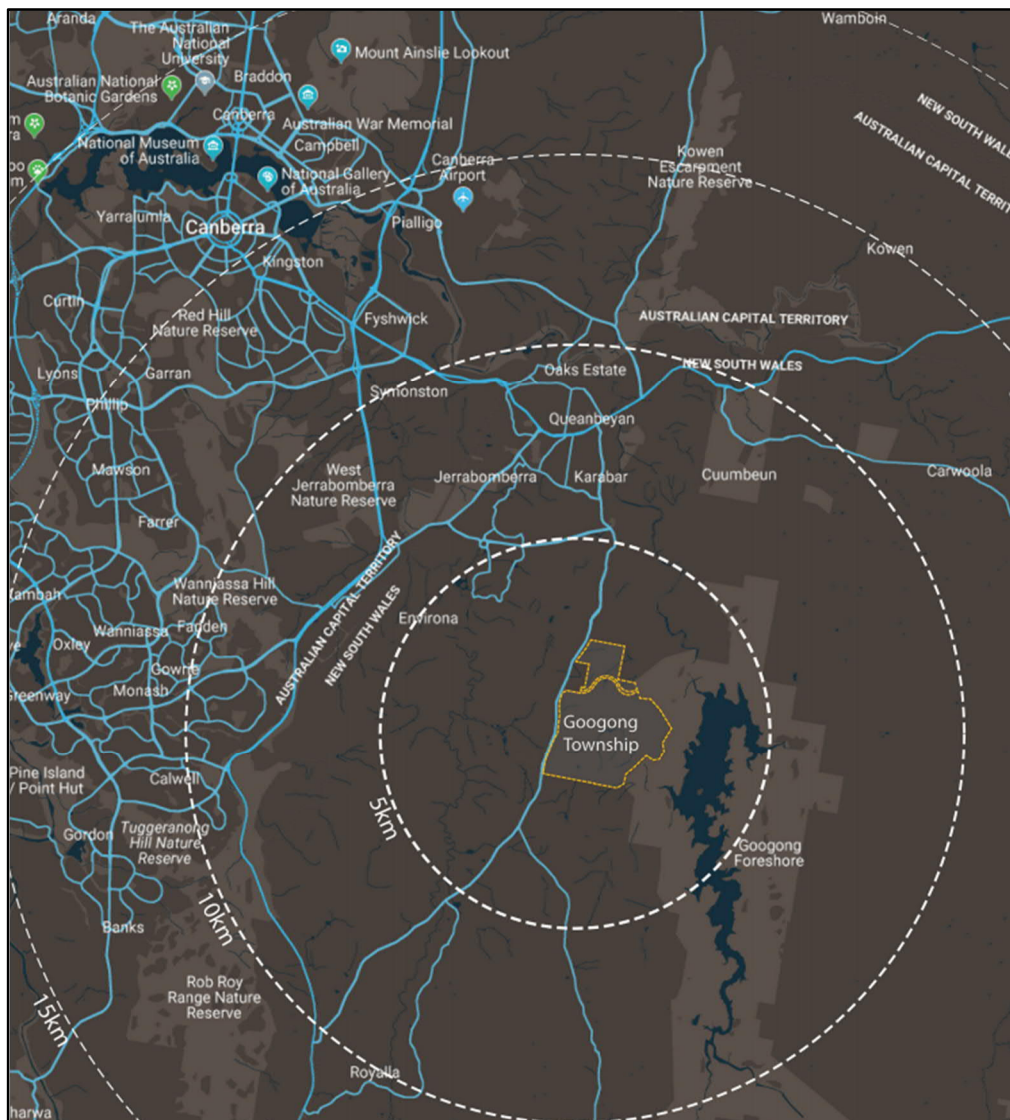
Googong Township comprises approximately 790 hectares of land zoned for a range of urban development purposes. It is approximately eight kilometres south of the Queanbeyan Central Business District, 16 kilometres' south-east of the centre of Canberra and less than four kilometres south of Jerrabomberra. The proximity of the site to Canberra and Queanbeyan makes Googong well placed to support future growth for the region.

The area within which Googong is located is characterised by a variety of land-uses including nature reserves, low-intensity forestry, rural residential, cattle and sheep grazing and recreation.

Googong Dam is east of the site and an operating quarry is located north west of the site on the western side of Old Cooma Road.

Figure 3 below shows the location of the Googong Township in the context of surrounding region.

Figure 3 Googong Township Context



Source: SPACELAB, 2019

3.2 Neighbourhood 3, 4, and 5

The site comprising NH345 - being the land subject of this DA – is located in the southern section of Googong Township and is the last area of the township to be developed. NH345 are also referred to as Googong West, Googong South and Googong East respectively.

The site comprises a total area of approximately 235 ha. This development application (DA) seeks approval for the subdivision of the majority, but not all, of NH345 and covers approximately 171ha as broadly illustrated in Figure 1 above. The site and includes the following lots:

- » Lot 7 DP1246784
- » Lot 42 DP754881
- » Lot 10 DP754881
- » Lot 3 DP1149329
- » Lot 1604 DP1266000
- » Lot 1605 DP1266000
- » Lot 12 DP1266001
- » Lot 13 DP1266001
- » Lot 2 DP1231713
- » Lot 11 DP754881 (please note this lot is to be subdivided to create Stage 14 Residue 2 in DA.123-2017.E as part of the NH2 development)
- » Lot 776 DP1230282 (please note this lot is under QPRC ownership and the proposed subdivision of this lot occurs as part of NH5-Stage 5 to enable the extension of Gorman Drive)

Copies of the 'subdivision statement' prepared by Lonergan Surveying accompanies this application.

NH345 is bounded by Old Cooma Road to the west, NH2 and NH1B to the north, the Googong Dam foreshore and Pink-Tail Worm-Lizard (PTWL) Conservation Area to the east and rural land to the south. During the development of the Structure Plan, the original boundaries of these neighbourhoods were adjusted to cover the remainder of Googong Township. Figure 4 shows the boundary of NH345 in the context of the Googong release area. Access to NH345 is available via Old Cooma Road to the west and NH2 and NH1B to the north.

A Development Management Agreement (DMA) was executed between GTPL and the Hamsons in 2018. Effectively, the DMA appoints GTPL to undertake the development of their land while the Hamsons retain ownership. The Hamsons have granted GTPL Power of Attorney (PoA) to execute planning documents such as this DA. A copy of the POA is submitted with this DA.

Figure 5 Hamson Land



Source: Googong Master Plan, 2010

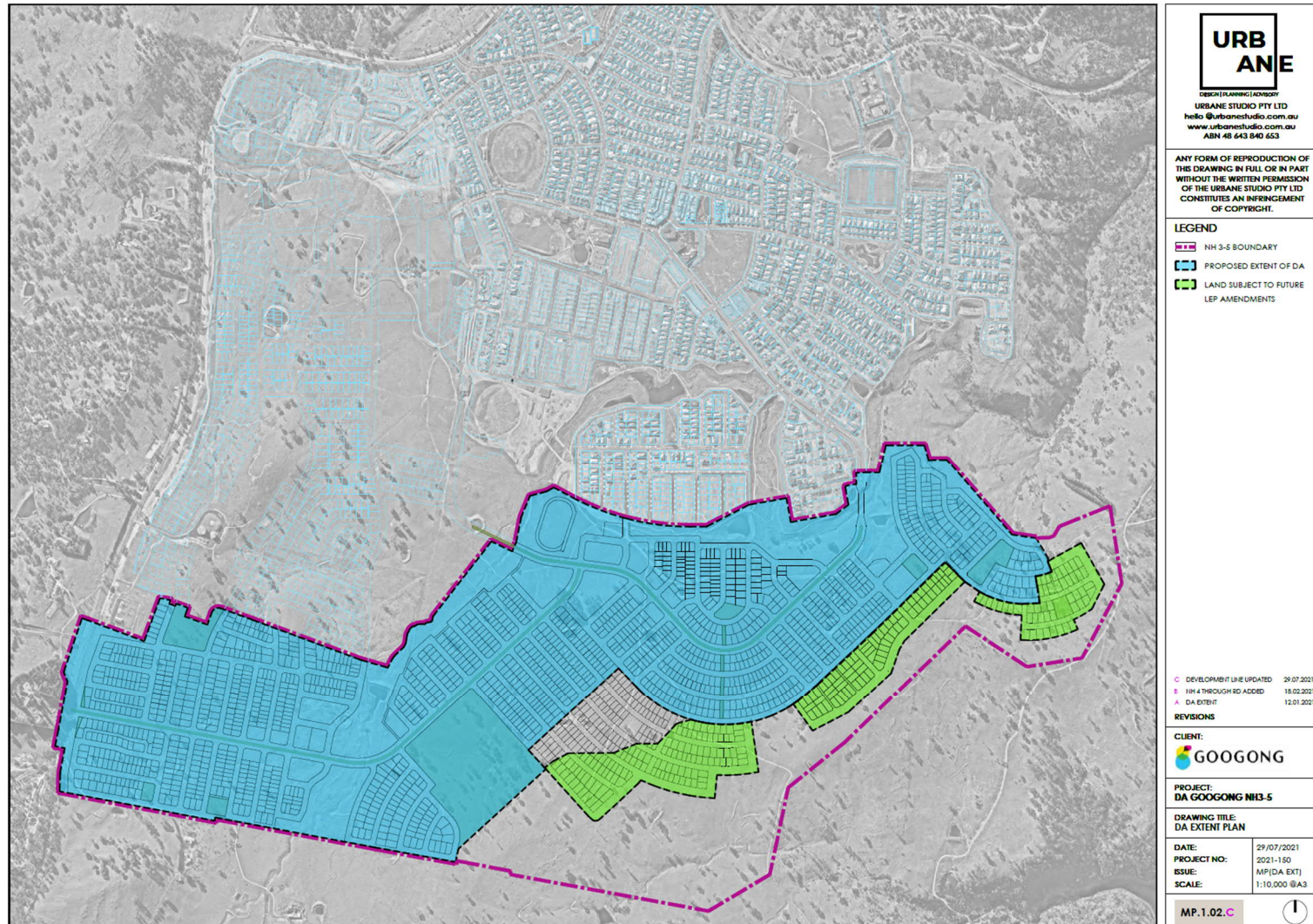
3.2.2 NH345 DA Study Area

The boundaries for this DA and NH345 are shown in Figure 5. The area bordered by the pink dashed line shows the extent of NH345. This area includes the extent of this DA, shown in blue, and the land that may be developed for residential uses in future - subject to separate DAs and impending LEP amendments, shown in green.

The civil and utilities studies for this DA have considered the demand that would be generated by the potential future development of the land to the south (shown in green) in designing the infrastructure network for NH345. This will ensure the planned infrastructure can accommodate the potential additional demand without the need for further modifications. It will also assist the assessment and determination of future DAs. The impending LEP amendment was initiated by GTPL and negotiation with QPRC and other relevant stakeholders and is currently underway as part of a broader 'housekeeping' LEP amendment process.

The physical extent of this DA has been kept within the limits of the current LEP to avoid confusion with QPRC and broader stakeholders. The area of potential future development on land coloured in green has been provided for context only and no approvals for this are sought at this time. Notwithstanding, the potential impacts of the impending LEP Amendment are considered and reflected appropriately on the DA plans, where relevant.

Figure 6 DA Extent Plan



Source: Urbane Studio Pty Ltd, 2021

3.3 Key characteristics

An evaluation of the existing conditions and constraints of the NH345 site has been undertaken concerning the slope and topography, biodiversity and vegetation, significant trees, bushfire risk, European and Aboriginal heritage, and contamination. This evaluation informed the development of the Structure Plan that identifies constrained land or buffer zones that cannot be developed. The Structure Plan facilitates the provision of an appropriate design response and informs the additional assessments required to support this DA.

Key areas within NH345 include:

- » A neighbourhood centre in each neighbourhood accommodating retail and commercial uses that support the remainder of the Googong township release area.
- » The interface with Googong Common that is designated for conservation, open space and recreational activities, and incorporates water sensitive urban design strategies.
- » The Pink-tailed Worm-lizard (PTWL) Conservation Area located adjacent to NH5. This 27.5ha land parcel is the southern portion of the Googong PTWL Conservation Area to be established in accordance with the *Environmental Protection and Biodiversity Conservation Act 1999*.
- » Googong Foreshore Interface on the east and south east boundaries of NH4 and NH5.

Table 5 below provides a summary of key characteristics and landform features of the site as well as its opportunities and constraints.

The information has been summarised from the plans and supporting documentation prepared as part of the structure planning process, as well as this SEE.

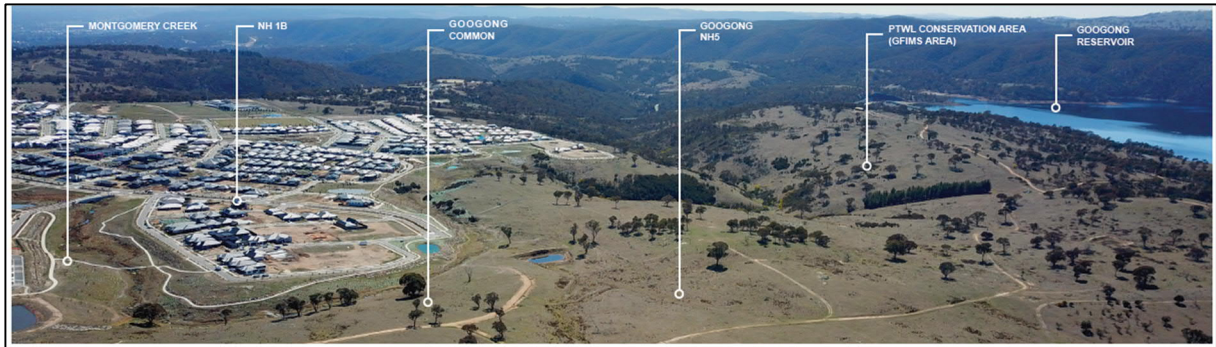
Table 6 Key characteristics of NH345

| Item | Description |
|--------------------|---|
| Current Conditions | <p>The site is presently being used for grazing and is characterised by a series of ridges and gullies with a number of farm dams constructed within these gullies. The site is lightly to moderately grassed with scatterings of mature trees, cleared animal tracks and dirt access tracks that are generally either cut into the landscape or built up. Extensive rock outcropping and/or cobbles/boulders sub-cropping are present across the majority of the site.</p> <p>The site is segmented into a series of small to large paddocks separated by fences and gates.</p> <p>Existing structures (stockyards, warehouses, silo's and sheds) are limited to midway along the northern boundary of the site. An old slab is also located to the east of this area.</p> <p>The Googong South zone substation is located at the north west corner of the site along old Cooma Road. An existing 132kV aerial transmission line extends to the south from the Zone Substation passes through the Hamson land. It is proposed this line be relocated to the Old Cooma Road buffer area, in a similar manner to the line to the north of the zone substation. Essential Energy have indicated general endorsement of this proposal.</p> <p>There are also two 11kV aerial distribution feeders extending south from the Zone Substation through the Hamson land which ultimately supply Michelago and Royalla. It is proposed to relocate these power lines underground as part of the development.</p> <p>The relocation of these power lines will be managed by GTPL outside of the DA process.</p> |

| Item | Description |
|--------------------------|---|
| | An aerial view of the site is provided at Figure 4 and 6. Site photos are also available at Figures 7-11. |
| Bushfire | <p>While the subject site does not contain vegetation that has been mapped as bushfire prone species, surrounding lots contain such species. Also, from a practical approach the landscape is capable of carrying fire. Moreover, the proposed subdivision is in proximity to bushfire prone land as declared by QPRC.</p> <p>A Bushfire Constraints Report prepared in support of the NH345 Structure Plan found that due to its mostly grassland setting and gentle topography the surrounding environment possesses a low bushfire threat to the subject site. This threat can be further moderated given the standard suite of protection measures offered by <i>Planning for Bushfire Protection 2018</i> and for which the proposed development can comply.</p> <p>Further consideration of bushfire is provided in Section 6.4 of this SEE.</p> |
| Contamination | <p>Various studies have been carried out across the Googong Township to identify Areas of Environmental Concern (AECs). The resultant AECs Map is embedded in GDCP. The DCP requires further contamination assessment and potentially remediation of land as the staged development proceeds.</p> <p>There are two identified AECs in NH4 – AEC 5 and 6.</p> <p>Further consideration of contamination is provided in Section 6.3 of this SEE.</p> |
| Ecology and Biodiversity | <p>A Biodiversity Certification Assessment Report (BCAR) found that the study area is predominantly highly modified and degraded by its current and past land uses, predominantly Merino sheep grazing in recent years. The resulting vegetation across the subject land is characterised by an absent or low-density canopy of mature remnant eucalyptus, an absent mid-storey and shrub-storey and a low diversity ground-storey dominated by disturbance tolerant native grasses.</p> <p>The subject site supports three Plant Community Types (PCTs): open forest (PCT999), moist grasslands (PCT1110) and grassy woodland (PCT1334). PCT1334 zones found in the site support vegetation which meets the criteria for Box-Gum Woodland threatened ecological community (TEC). The 54 ha Pink-tailed Worm-lizard (PTWL) Conservation Area is known to support 47.3 ha of PTWL <i>Aprazia parapulchella</i> habitat. The proposed development will not impact the PTWL population or conservation area found in the south-eastern corner of the study area.</p> <p>Dusky Woodswallow, Large Bent-winged Bat and Eastern False Pipistrelle (all BC Act vulnerable) were recorded in the study area. No Golden Sun Moths or Koalas were detected in the study area. As a result of the degraded habitat value for threatened flora, no threatened flora species were recorded in the study area.</p> <p>Further consideration of the ecological and biodiversity values of the site is provided in Section 6.2 of this SEE.</p> |
| Geology | <p>Reference to the Canberra Geology Sheet indicates that the site is underlain by three rock units.</p> <p>The majority of the site is mapped as being underlain by the Colinton Volcanics of Silurian age which typically comprises limestone and dolomitic limestone or dark green dacitic ignimbrite and minor volcaniclastic sediments. Part of the western end of the site is underlain by an unnamed subgroup of the Colinton Volcanics which typically comprises tuffaceous</p> |

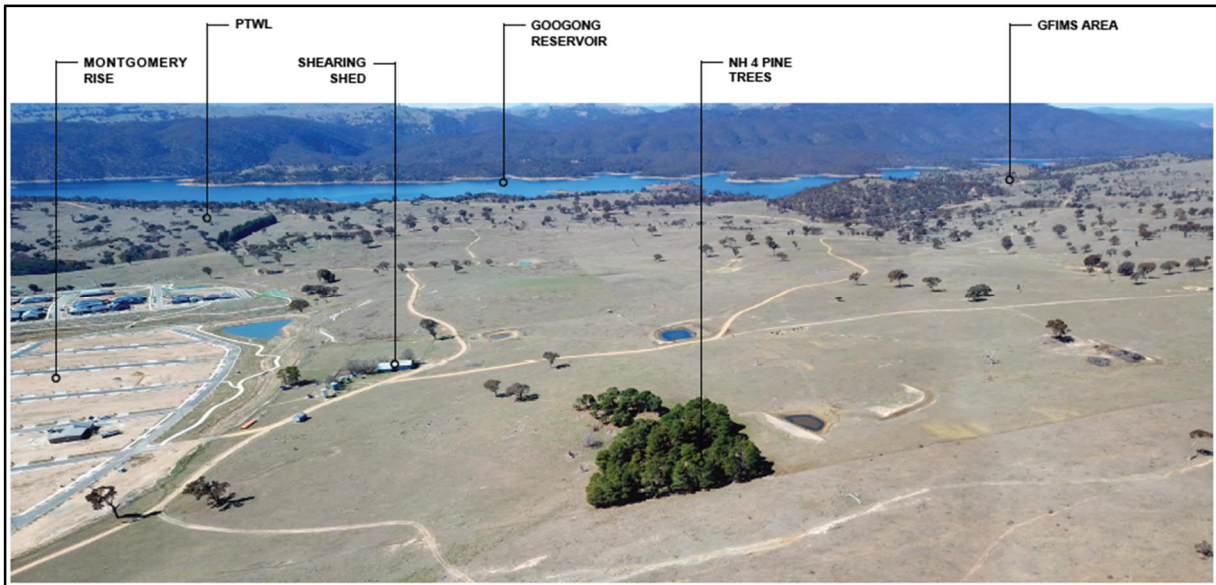
| Item | Description |
|--------------------|--|
| | <p>shale. The small area approximately midway along the southern boundary comprises an unnamed unit of Early Devonian age which typically comprises minor granitoid stocks.</p> <p>A fault line is shown to cross the western end of the site in a northeast to southwest orientation. The relative displacement of the fault is shown to have been moved in the same orientation.</p> <p>Further consideration of geotechnical issues is provided in Section 6.7 of this SEE.</p> |
| Heritage | <p>A Cultural Heritage Desktop Assessment report prepared as part of the NH345 Structure Plan identified 24 Aboriginal Sites and 5 European Heritage Items within the boundaries of NH345.</p> <p>Further consideration of the heritage values of the site is provided in Section 6.12 of this SEE</p> |
| Topography | <p>The site generally comprises undulating to steeply undulating grazing land associated with high points within and adjacent to Nangi Pimble (South).</p> <p>A Slope Analysis of NH 345 was prepared as part of the NH345 Structure Plan and identified areas where gradient presents constraints to development. These areas include the following locations:</p> <ul style="list-style-type: none"> » The eastern side of Nangi Pimble South in NH3 » South of Montgomery Rise in NH5 » The area south of the PTWL conservation area in NH5 |
| Traffic and Access | <p>Access to NH345 is via Old Cooma Road from the west and NH2 and NH1B to the north.</p> <p>A new intersection is to be constructed approximately 200m south of Fernleigh Drive, and will connect Bunyip Drive in NH3 to Old Cooma Road. The Bunyip Drive / Old Cooma Road intersection is proposed to form a priority-controlled T-intersection with channelised right and left turn lanes on Old Cooma Road. A number of local sub arterial, collector and local street roads are proposed to connect NH345 with NH1 and NH2.</p> <p>Further consideration of traffic and access arrangements is provided in Section 6.10 of this SEE.</p> |
| Waterways | <p>The drainage paths within the site consist of grassy swales, and undulating grass landscapes draining into a number of farm dams, and Montgomery Creek. This Site is partially cleared over the years for farmland use.</p> <p>The major drainage line running through the Site stormwater catchment is Montgomery Creek. Montgomery Creek has been classified as a 2nd Order stream by others (Aecom NH2 Landscape Report). No piped drainage systems are currently present within the Site. Previous neighbourhoods, NH1B and NH2, included Stormwater Quality Improvement Devices (SQIDs) and basins which outlet into Montgomery Creek.</p> |

Figure 7 Birdseye View towards NH5



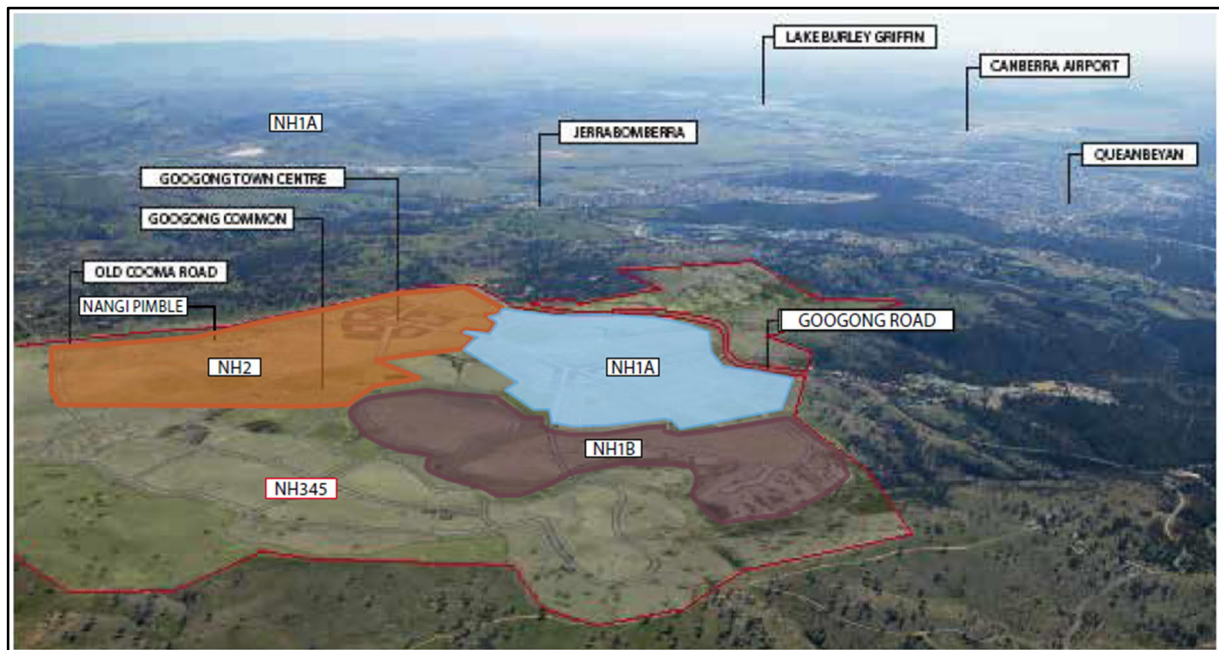
Source: SpaceLab, 2019

Figure 8 Birdseye View from Common towards NH4 and NH5



Source: SpaceLab, 2019

Figure 9 Proposed NH345 Extent



Source: AECOM, 2021

Site Photography

Figure 10 Existing Beltana Avenue tree planting



Source: AECOM, 2021

Figure 11 'Terraformis' main entry sign



Source: AECOM, 2021

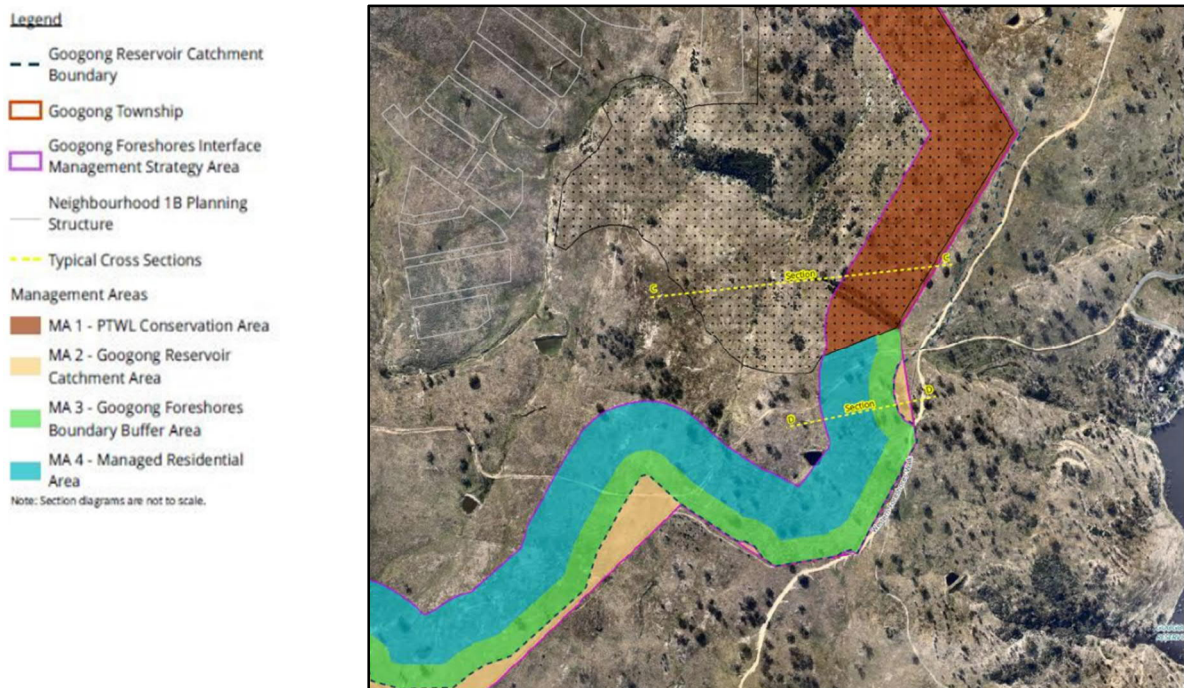
3.3.1 Googong Foreshore Interface

Googong township directly adjoins Googong Foreshores along its entire eastern boundary of NH1B, NH4 and NH5. The primary purpose of the Googong Foreshore area – which surrounds the Googong reservoir - is the provision of high-quality raw water for the supply of potable water to the Australian Capital Territory and Queanbeyan. Most of the catchment is in NSW however the ACT Parks and Conservation Service manages the Googong Foreshores area on behalf of the ACT Government, under a formal 150-year lease between the Commonwealth and ACT governments.

Protection of the Googong Foreshore and Reservoir has been paramount in the planning process of Googong township. Consequently, a Googong Foreshore Interface Management Strategy (GFIMS) was developed and implemented. The GFIMS provides a managed zone between Googong Township and Googong Foreshores. The GFIMS will provide for the effective prevention of impacts associated with the development and occupation of Googong township on water quality within the Googong Reservoir, listed threatened species, ecological communities and the environment within the adjoining Googong Foreshores.

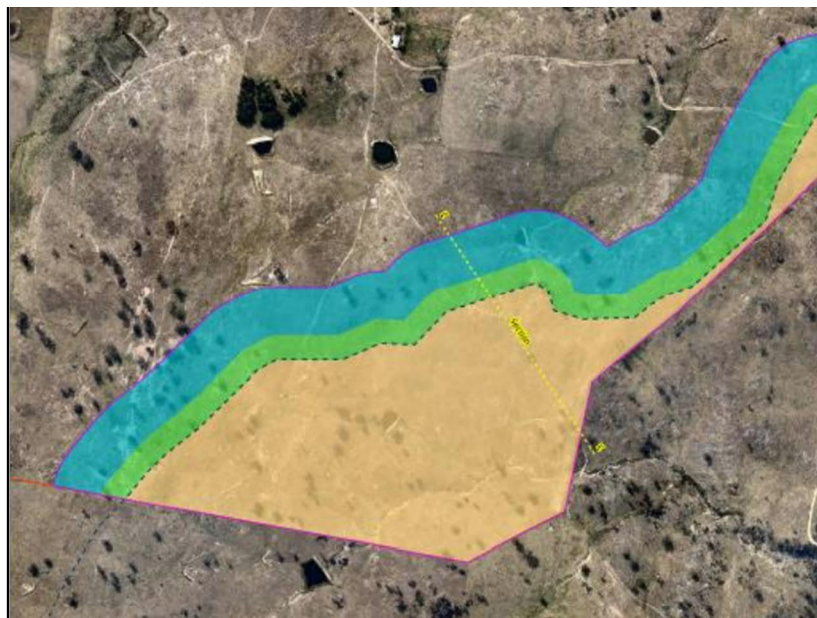
The GFIMS applies to south and south-eastern areas of NH4 and NH5 (refer Figure 12 and 13 below).

Figure 12 GFIMS Management Section C and D



Source: GFIMS, 2014

Figure 13 GFIMS Management Section E



Source: GFIMS, 2014

As illustrated above the GFIMS area is divided into the following four broad Management Areas (MAs):

- » MA 1 – PTWL Conservation Area: comprising all land encompassed by the GFIMS Area overlapped by the approved PTWL Conservation Area
- » MA 2 – Googong Reservoir Catchment Area: comprising all E2 Environmental Conservation zoned land occurring within the Googong reservoir catchment
- » MA 3 – Googong Foreshores Boundary Buffer Area: comprising all E2 Environmental Conservation zoned land not occurring within MA 1 – PTWL Conservation Area or MA 2 – Googong Reservoir Catchment Area
- » MA 4 – Managed Residential Area: comprising all R1-General Residential and R5-Large Lot Residential zoned land occurring within the GFIMS Area.

Assessment of the proposed development against the GFIMS is undertaken in Section 5.12 of this report.

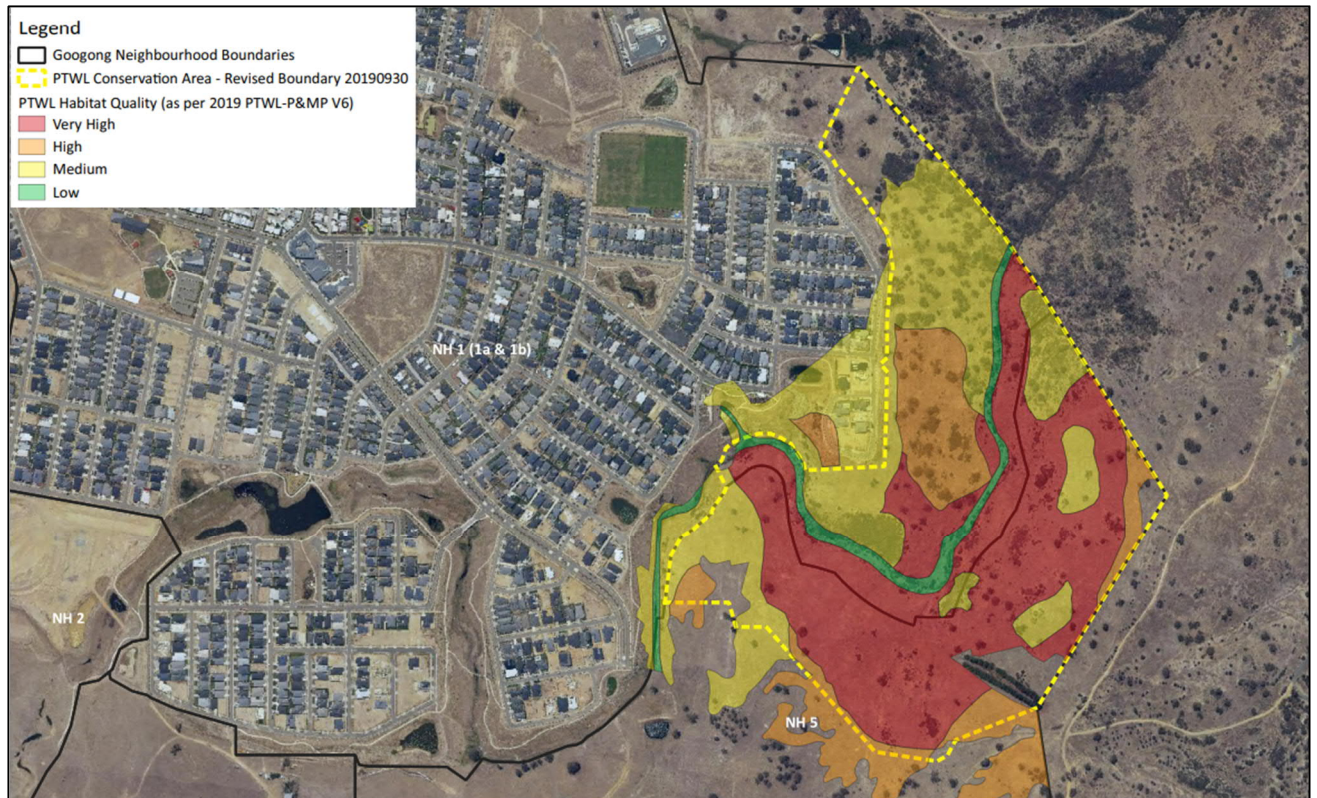
3.3.2 PTWL Conservation Area

Within Googong Township itself, the location of the urban development area was chosen to avoid impacts to significant ecological values, in particular the Pink-tailed Worm-lizard (PTWL). As a result, the PTWL Conservation Area was established in 2013 and includes the top north of NH5.

As shown in Figure 14, the boundary of the PTWL Conservation Area was delineated to ensure that the vast majority of Pink-tailed Worm-lizard habitat occurring in the Googong Township (including all very high quality habitat and the majority of the high quality and medium quality habitat) is protected in perpetuity and appropriately managed to improve habitat condition and ensure the on-going viability of this threatened species in the locality.

A Condition of the PTWL Management Plan was to relocate rock and potential sited habitat from the developable areas that were mapped as medium and high habitat zones.]This condition was completed in February 2020 and a compliance report sent to the Department of Environment in September 2020.

Figure 14 PTWL Conservation Area



Source: Capital Ecology, 2019

4 Proposed development

4.1 Overview

- » Torrens title subdivision of NH345 to create:
 - > 1476 residential lots,
 - > 20 lots for future subdivision of higher density housing and other uses including the Neighbourhood Centre sites, to accommodate approximately 320 dwellings,
 - > 16 lots subject to future approval for residential use (marked (B) and notes on the relevant subdivision plans),
 - > 7 part lots (shown as part of residue lot 2 on the relevant subdivision plans)
 - > Public reserves including, local parks, a sports field and Googong Common
 - > Public roads and drainage reserves.
- » All subdivision works to prepare the land for the future development – comprising site preparation and grading, stormwater and drainage works, road construction, tree removal, public domain landscaping (including structures) and utilities provision.
- » As noted above, residential use of 16 lots zoned E2 and a part lot of residue lot 2 for multi dwelling housing in zone R5 are subject to future approvals.
- » Also, further subdivision of part lots in residue lot 2 within the minimum lot size area of 15,000sqm is subject to future approvals.
- » The construction of all buildings as well as the Neighbourhood Centre sites will be subject of future applications.

The following sections provide more details about each component of the proposal.

4.2 Subdivision of land

The layout of NH345 has been developed from the approved Structure Plan prepared by SpaceLab for GTPL and adopted by QPRC in 2020. The street layout and lot yield has been refined from the detailed design work undertaken by GTPL. Refinements to the Structure Plan are highlighted in this SEE and the drawings accompanying this DA.

The proposed subdivision will create a variety of lot types and sizes as set out in the table below and as shown on the Composite Plan (Figure 15).

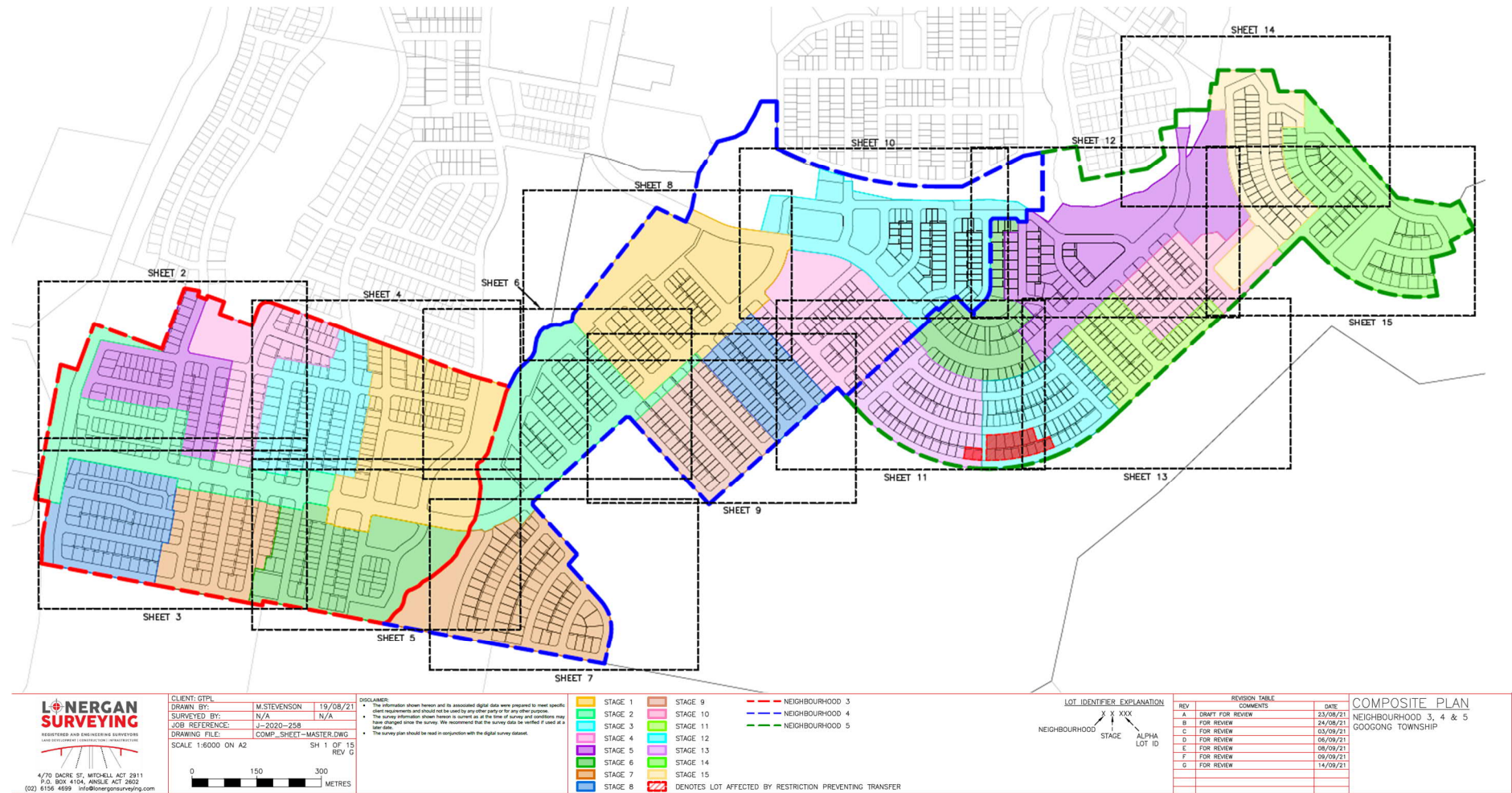
Table 7 Proposed subdivision of NH345

| Neighbourhood | Stage | Description |
|---------------|-------|--|
| NH3 | 1 | The NH3-Stage 1 proposed Deposited Plan is a subdivision of the Neighbourhood 3 Superlot. The NH3- Stage 1 proposed Deposited Plan creates 61 residential lots, 3 multi-unit lots, 2 neighbourhood centres, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH3 | 2 | The NH3-Stage 2 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 1. The NH3-Stage 2 proposed Deposited Plan creates 55 residential lots, 1 multi-unit lot, public |

| Neighbourhood | Stage | Description |
|---------------|-------|---|
| | | roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH3 | 3 | The NH3-Stage 3 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 2. The NH3-Stage 3 proposed Deposited Plan creates 90 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH3 | 4 | The NH3-Stage 4 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 3. The NH3-Stage 4 proposed Deposited Plan creates 47 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH3 | 5 | The NH3-Stage 5 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 4. The NH3-Stage 5 proposed Deposited Plan creates 70 residential lots, public roads, etc. |
| NH3 | 6 | The NH3-Stage 6 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 2. The NH3-Stage 6 proposed Deposited Plan creates 67 residential lots, 2 multi-unit lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH3 | 7 | The NH3-Stage 7 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 6. The NH3-Stage 7 proposed Deposited Plan creates 62 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH3 | 8 | The NH3-Stage 8 proposed Deposited Plan is a subdivision of the residue lot created in NH3-Stage 7. The NH3-Stage 8 proposed Deposited Plan creates 77 residential lots, public roads, etc. |
| NH4 | 1 | The NH4-Stage 1 proposed Deposited Plan is a subdivision of the Neighbourhood 4 Superlot. The NH4- Stage 1 proposed Deposited Plan creates 73 residential lots, 1 multi-unit lot, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH4 | 2 | The NH4-Stage 2 proposed Deposited Plan is a subdivision of the residue lot created in NH4-Stage 1. The NH4-Stage 2 proposed Deposited Plan creates 62 residential lots, 1 multi-unit lot, public roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH4 | 3 | The NH4-Stage 3 proposed Deposited Plan is a subdivision of a residue lot created in NH4-Stage 2. The NH4- Stage 3 proposed Deposited Plan creates 62 residential lots, 3 multi-unit lots, 2 neighbourhood centres, public roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH4 | 4 | The NH4-Stage 4 proposed Deposited Plan is a subdivision of a residue lot created in NH4-Stage 3. The NH4- Stage 4 proposed Deposited Plan creates 69 residential lots, 3 multi-unit lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH4 | 7 | The NH4-Stage 7 proposed Deposited Plan is a subdivision of a residue lot created in NH4-Stage 2. The NH4- Stage 7 proposed Deposited Plan creates 84 residential lots, public roads, etc. |

| Neighbourhood | Stage | Description |
|---------------|-------|---|
| NH4 | 8 | The NH4-Stage 8 proposed Deposited Plan is a subdivision of the residue lot created in NH4-Stage 4. The NH4-Stage 8 proposed Deposited Plan creates 61 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH4 | 9 | The NH4-Stage 9 proposed Deposited Plan is a subdivision of the residue lot created in NH4-Stage 8. The NH4-Stage 9 proposed Deposited Plan creates 75 residential lots, public roads, etc. |
| NH5 | 5 | The NH5-Stage 5 proposed Deposited Plan is a subdivision of the Neighbourhood 5 Superlot and Lot 776 in DP1230282. The NH5-Stage 5 proposed Deposited Plan creates 49 residential lots, 1 multi-unit lot, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH5 | 6 | The NH5-Stage 6 proposed Deposited Plan is a subdivision of the residue lot created in NH5-Stage 5. The NH5-Stage 6 proposed Deposited Plan creates 52 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH5 | 10 | The NH5-Stage 10 proposed Deposited Plan is a subdivision of the residue lot created in NH5-Stage 6 and the Neighbourhood 3, 4 & 5 Boundary Adjustment – Residue 1 lot. The NH5-Stage 10 proposed Deposited Plan creates 49 residential lots, 1 neighbourhood centre, public roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH5 | 11 | The NH5-Stage 11 proposed Deposited Plan is a subdivision of a residue lot created in NH5-Stage 10. The NH5-Stage 11 proposed Deposited Plan creates 58 residential lots, public roads, etc and a large residue lot which will be utilised for future subdivision. |
| NH5 | 12 | The NH5-Stage 12 proposed Deposited Plan is a subdivision of the residue lot created in NH5-Stage 11 and a residue lot created in NH5-Stage 10. The NH5-Stage 12 proposed Deposited Plan creates 61 residential lots, public roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH5 | 13 | The NH5-Stage 13 proposed Deposited Plan is a subdivision of a residue lot created in NH5-Stage 12. The NH5-Stage 13 proposed Deposited Plan creates 74 residential lots, public roads, etc. |
| NH5 | 14 | The NH5-Stage 14 proposed Deposited Plan is a subdivision of a residue lot created in NH5-Stage 10 and a residue lot created in NH5-Stage 12. The NH5-Stage 14 proposed Deposited Plan creates 61 residential lots, public roads, etc and 2 large residue lots which will be utilised for future subdivision. |
| NH5 | 15 | The NH5-Stage 15 proposed Deposited Plan is a subdivision of residue lots created in NH5-Stage 14. The NH5-Stage 15 proposed Deposited Plan creates 57 residential lots, public roads, etc. |

Figure 15 Composite Plan



Source: LonerGAN Surveying, 2021

Lots marked in red are located in zone E2 and the residential use of these lots is subject to future approvals.

4.3 Urban Design

The layout of NH345 has been developed from the Structure Plan prepared by SpaceLab. The street layout, block structure and lot yield have been refined through the design process and for the purpose of this DA.

4.3.1 Urban Design framework

The following characteristics from the Structure Plan have been considered in the planning of NH345 to establish the desirable design outcomes established by the Structure Plan.

Layout

The Structure Plan establishes a framework for the development of an environmentally, socially and economically sustainable urban structure. The structural elements of the plan are interlinked and combined to create a built environment which supports the development of a strong community and a sense of place for the precinct.

A sense of place has been fostered through the enhancement of local attributes such as the retention of natural topography to the degree feasible, the provision of views to and from the existing vegetation, and careful planning of community infrastructure such as open spaces and sporting fields, which have close spatial relationships with residential parts of the neighbourhoods.

Since the Structure Plan was approved, and as a consequence of the BCAR process, the large NH Reserve has been incorporated into the layout to protect significant vegetation.

An environment for positive community interactions is further enhanced by co-locating the Neighbourhood centres with open spaces in NH3 and NH5. In Neighbourhood 4 this approach has been extended to include sporting fields and a regional playground in addition to large areas of open space. The provision of a connected network of open spaces with different levels and variety of equipment throughout the precinct provides additional opportunities for community interaction.

The NH4 neighbourhood centre is to be developed with a specific desire to see it grow over time as a place that offers more than just retail services. The centre will provide for opportunities to establish non-retail related businesses such as food and drink premises, gym facilities, a childcare centre and a medical centre. It will be developed to become a location for providing a broad range of community related Council services.

NH345 will be easily identifiable through their navigable grid patterned street network and an integrated signage strategy, walkable distances between residences, ease of access to amenities and the emphasis on capturing views and features which celebrate Googong's natural environment. Each neighbourhood, however, has its own sense of place and character as follows:

- » NH3 will be easily identifiable on approach through its distinctive grid patterned local streets that generally follow the topography of the land at the base of Nangi Pimble and maximise capture of viewsheds to the east and the Googong Common. Multiple access points are provided to maximise permeability and access to Googong Common
- » NH4 is characterised by a direct connection to the natural environment in which it is located and which adjoins along its eastern edge; this establishes a character zone and sense of place which residents can recognise and in which they can take pride for the long-term
- » NH5 evokes the prestigious inner south suburbs of Canberra such as Red Hill and Forrest and will be recognised for its curvilinear street layouts set on undulating land.

Housing choice, diversity and affordability

The proposed subdivision will provide for a range of lifestyle opportunities through a diversity of housing and lot sizes, characterised by an average density of approximately 10 dwellings per hectare across the precinct.

Medium density housing (smaller lots) in a variety of styles are located on flatter land near services and amenities, including the neighbourhood centre, community facilities, Googong Common and the public transport corridor.

A mix of housing and lot sizes at more conventional residential densities are located throughout the neighbourhoods in order to achieve a diverse range of lot sizes. Lots on steeper land are typically larger in size.

The proposed residential lot mix for the site and staging of the subdivision process are provided on the Lot Mix Plan and Subdivision Plans submitted with this application.

NH345 will contribute to GTPL's commitments towards affordable housing outlined in the LPA. Affordable housing will be located within the NH centres where higher density development is envisaged, and social amenity is at its highest.

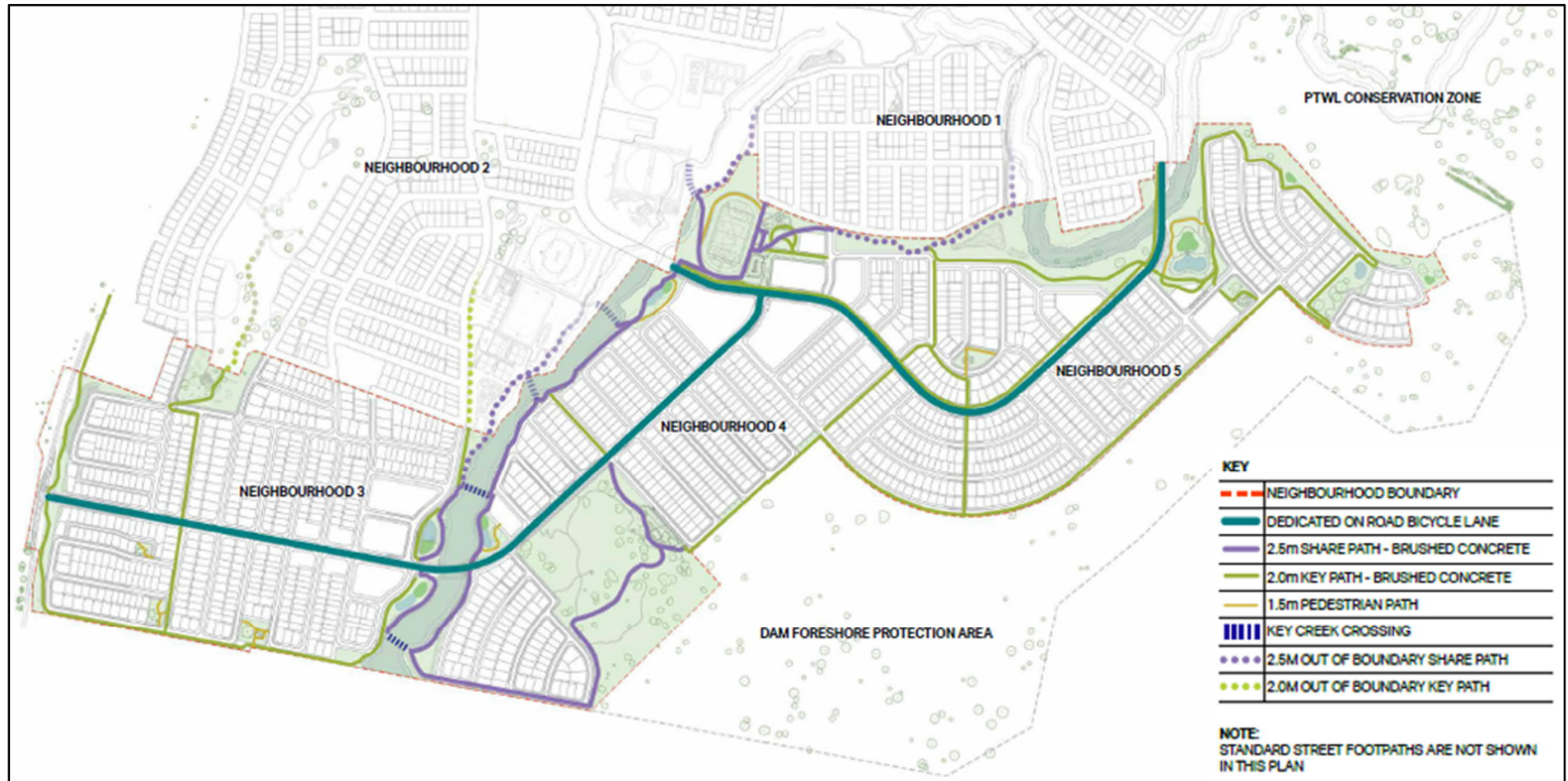
Walkability and cycling

The layout of NH345 supports walking and cycling links which are provided either within linear open space corridors or as dedicated and shared paths within road reserves. The combined open space network and pedestrian and cycle network form an integral community asset which eventually connect to Googong Common.

There are a number of path networks proposed for NH345, including dedicated on-road cycle lanes, share paths, key paths, and a series of smaller scale pedestrian paths throughout streets and open spaces to connect between the primary paths (such as boardwalks and bush tracks).

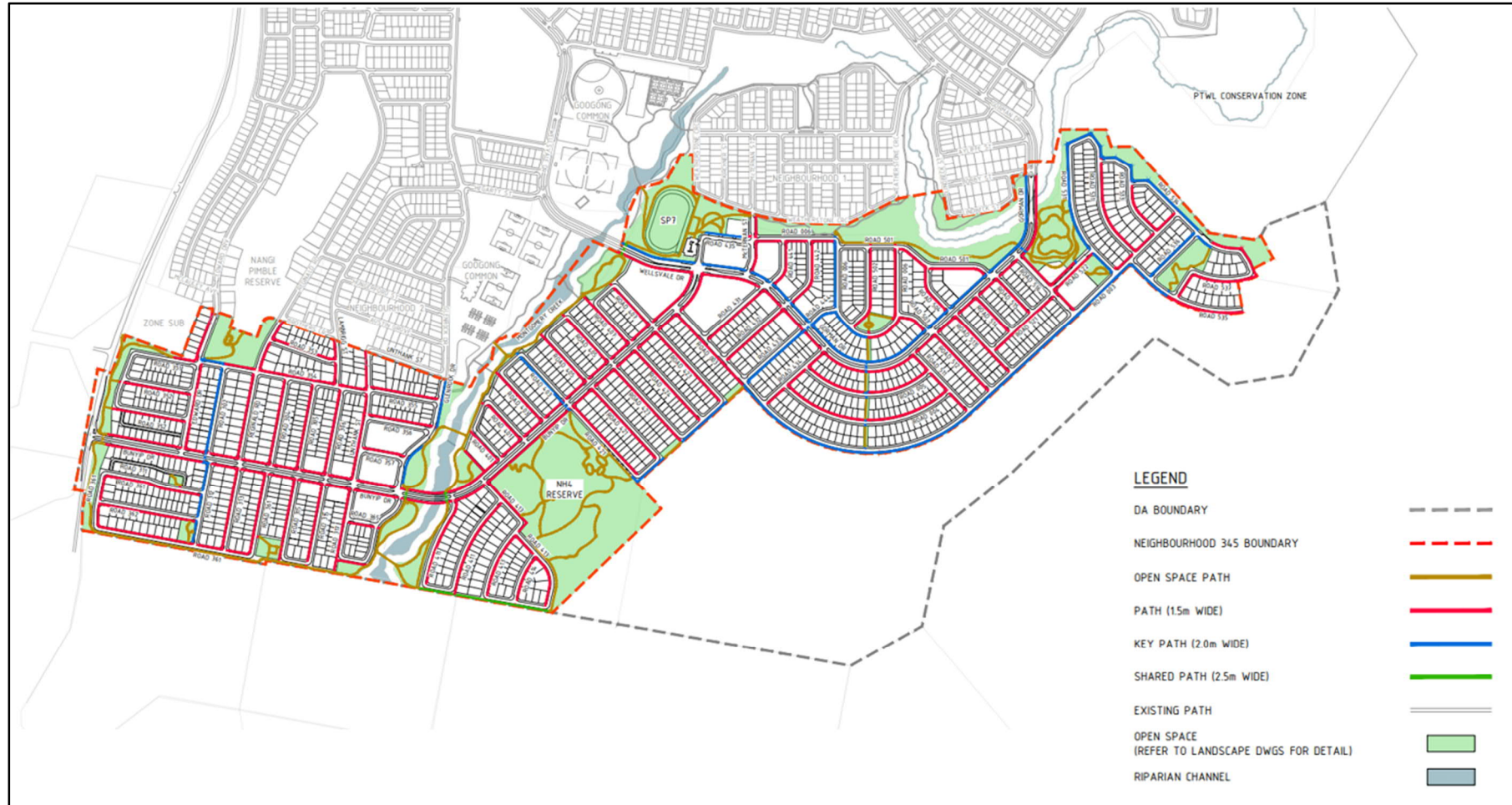
Refer Figures 16 and 17 below for Open Space and Street path details.

Figure 16 NH 2-5 Open space pedestrian and cycle network



Source: AECOM, 2021

Figure 17 NH345 Street path network plan



Source: Spiire, 2021

Neighbourhood Centres

The layout includes a centrally located neighbourhood centre within each neighbourhood. The largest centre will be in NH4 where local shops and services will provide local employment opportunities and community-based services, including the NH Community Facility required by the LPA.

Two smaller Neighbourhood centres/civic spaces are also located within NH3 and NH5 on key corner sites (refer Figure 6).

Each neighbourhood centre is located appropriately with regard to active and public transport networks to reduce dependency on private motor vehicle transport

Orientation

The topography and slope of the ground have been considered in design and development of the subdivision plan to optimise solar access. Lots have, wherever possible, been orientated to fall within an optimal solar orientation to maximise passive solar access and the ability to achieve more energy efficient homes.

Access

There is one entry into NH3 from Old Cooma Road onto Bunyip Drive. There are multiple smaller order connections between NH2 and NH3 via Reginald Road, Edward Drive, Lambrigg Street, Unthank Street and Glenrock Drive. There is an entry into NH4 from NH2 via Wellsvale Drive and a connection to NH1B via McTernan Street. NH1B and NH5 are connected across Montgomery Creek via Gorman Drive.

The entry from Old Cooma Road is a secondary Googong Township entry and will not compete visually with the main entry in NH2. The wayfinding theming at this entry will be through landscaping such as feature trees and meadow bulb planting.

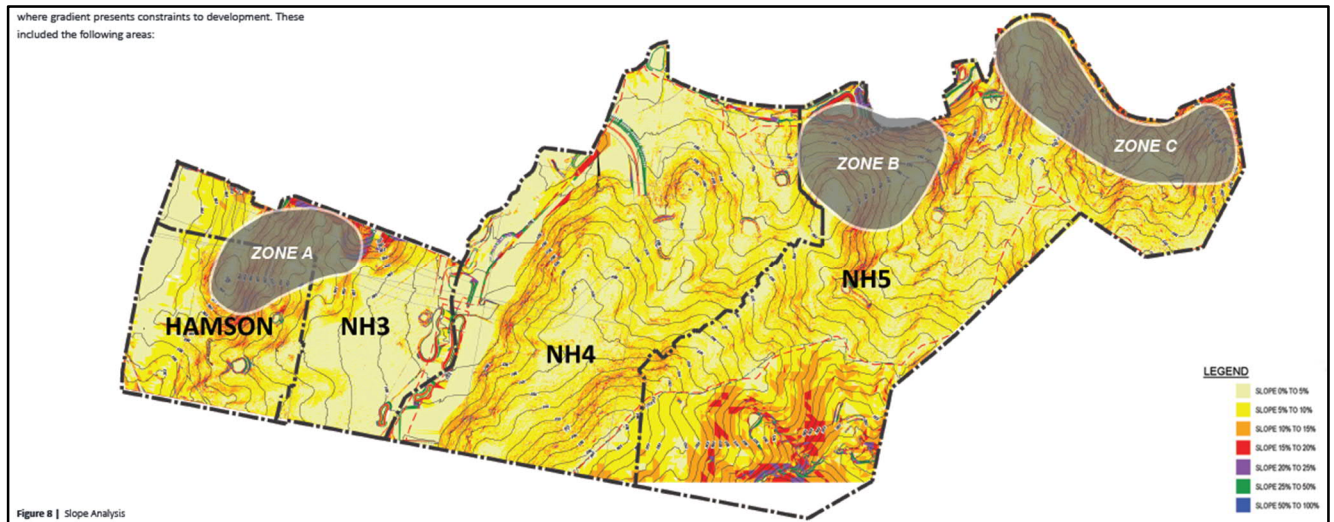
A design language based around a clear use of form and material is proposed for all the entries to establish a visual identity and orientation for the site. This will create a clear sense of arrival and departure and assist in navigation throughout Googong and will support the development of unique marketing and neighbourhood identities for these 3 precincts.

Landform

In general, the road layout has been designed to take advantage of the topography and leverage slope and elevation as an opportunity where possible, as follows (refer Figure 18 below):

- » Zone A the Eastern side of Nangi Pimble South in NH 3 (10-15% slope): The road layout follows the site contours in this area and provides opportunity for view sharing towards the Common. The layout aims to minimise crossfall across blocks, thus limiting the need for retaining walls between blocks. The road layout also results in a pedestrian-legible streetscape, including accessible footpaths, without the need for transition spaces between driveways.
- » Zone B south of NH1B in NH 5 (5-10% slope): The road layout maximises connection points to Googong Common and follows the road alignment of the Montgomery Rise area. This will optimise physical and visual permeability towards the Common as well as key view corridors from the top of the hill. It also caters for efficient stormwater management.
- » Zone C the area south of the PTWL conservation area in NH 5 (10-15% slope): Similar to Zone A, the road layout takes advantage of topography to maximise opportunities for view capture towards the PTWL conservation area. It also minimises the number of lots with crossfalls while providing multiple access points to the open space. The road layout also responds to natural stormwater flow.

Figure 18 Slope Analysis



Source: SpaceLab, 2019

Water sensitive urban design

Water Sensitive Urban Design (WSUD) features will be incorporated into the overland flow paths and integrated within the open space network, mainly within the Common, to facilitate water quality treatment, retardation and creation of high-quality, self-sustaining landscapes.

The main water sensitive feature of the precinct is Googong common and its contained wetlands network, which will incorporate recreation trails and facilities, and provide a connection to Montgomery Creek to the east of the Common and connecting to NH345.

Biodiversity and native vegetation

Remnant native vegetation has been retained wherever possible to assist in creating a distinctive landscape character for the area and to enhance biodiversity values.

Special consideration was also given to retention of hollow bearing trees wherever possible, with a focus on those with large to extra-large hollows, with several small to medium hollows, or which are likely to provide large quantities of nectar (i.e. large mature Yellow Box or Red Box trees).

Roads and the development footprint were amended to make sure all exceptional quality vegetation will be retained; however, since vegetation clearance could not be avoided in all areas, a BCAR was prepared by Capital Ecology to identify and assess the significance of the impacts the proposed development will have on the biodiversity values of the subject land.

More detail is provided in Section 6.2 of this SEE.

4.4 Subdivision works

4.4.1 Street (vehicle) network

The application seeks approval for the construction of all internal streets in NH345 and the construction of new intersection on Old Cooma Road. Key features of the proposed street network are detailed below.

The street design elements will ensure adequate, safe and convenient use by future residents and visitors, and further establish Googong as a walkable active community. For further information refer to the accompanying Civil Engineering Report and associated drawings as well as the Transport Study.

Street types

The Street Hierarchy Plan (Figure 19) provides for an interconnected network that can cater for the movement needs of all street users.

Street cross sections (Drawing No 308534CA120 to 308534CA341 in the accompanying plans) are proposed to either meet or exceed the typical design requirements. Variations proposed to Structure Plan layout are a result from detailed design and aimed at improving operation and capacity of the street network. Further assessment of the proposed street network against the Googong DCP is provided in Appendix A.

An overview of the street types proposed for NH345 is provided below.

Old Cooma Road

Old Cooma Road is classified by TfNSW as a Regional Road. The proposed road cross section for Old Cooma Road will remain unchanged other than the introduction of a 3.5m auxiliary lane, 2.5m line marked median and 3.5m channelised right turn for the intersection of Bunyip Drive.

Local Sub-Arterial

The proposed Local Sub-Arterial has been designed in accordance with QPRC's D1.07.07 and is consistent with the existing cross sections of Gorman Drive and Wellsvale Drive in NH1 and NH2 respectively.

Collector Street

The proposed Collector Street has been designed in accordance with QPRC's D1.07.06.

The proposed Collector Street Deviation adopts the typical cross section of a Local Sub-Arterial on Gorman Drive where the traffic volumes are consistent with a Collector Street.

Local Street

Four Local Street cross sections have been proposed and meet QPRC's minimum design requirements outlined in QPRC's D1.07.5. A summary of the four different cross sections is provided in Table 8 below.

Table 8 Local street cross section breakdown

| Typical cross section | Road reserve width | Carriageway width | Changes between cross section |
|-----------------------|--------------------|-------------------|-------------------------------|
| Local Street | 18.00m | 8.00m | - |

| Typical cross section | Road reserve width | Carriageway width | Changes between cross section |
|--|--------------------|-------------------|--|
| Local Street Deviation | 19.70m | 9.70m | Formal parking added |
| Local Street Deviation 2 | 20.60m | 10.60m | Formal parking added with wider travel lanes |
| Local Street Deviation – 90 Degree Parking | 23.00m | 15.50m | Deviation with 90 degree parking added |

Access Street

The proposed Access Street cross section has been designed in accordance with QPRC's D1.07.05.

Laneway (Public)

The proposed one-way public laneways are located for lots fronting Bunyip Drive where traffic volumes prohibit driveway access. The laneways service standard residential lots with the proposed circulation:

- » Road 352: Clockwise to remove the option of a right turn onto Edward Drive too close to Bunyip Drive intersection
- » Road 311: Anti-clockwise to allow exiting traffic from the laneway to see traffic approaching from both directions

Both laneways are proposed to include a different pavement treatment intermittently through the laneway to indicate it is a slow speed environment.

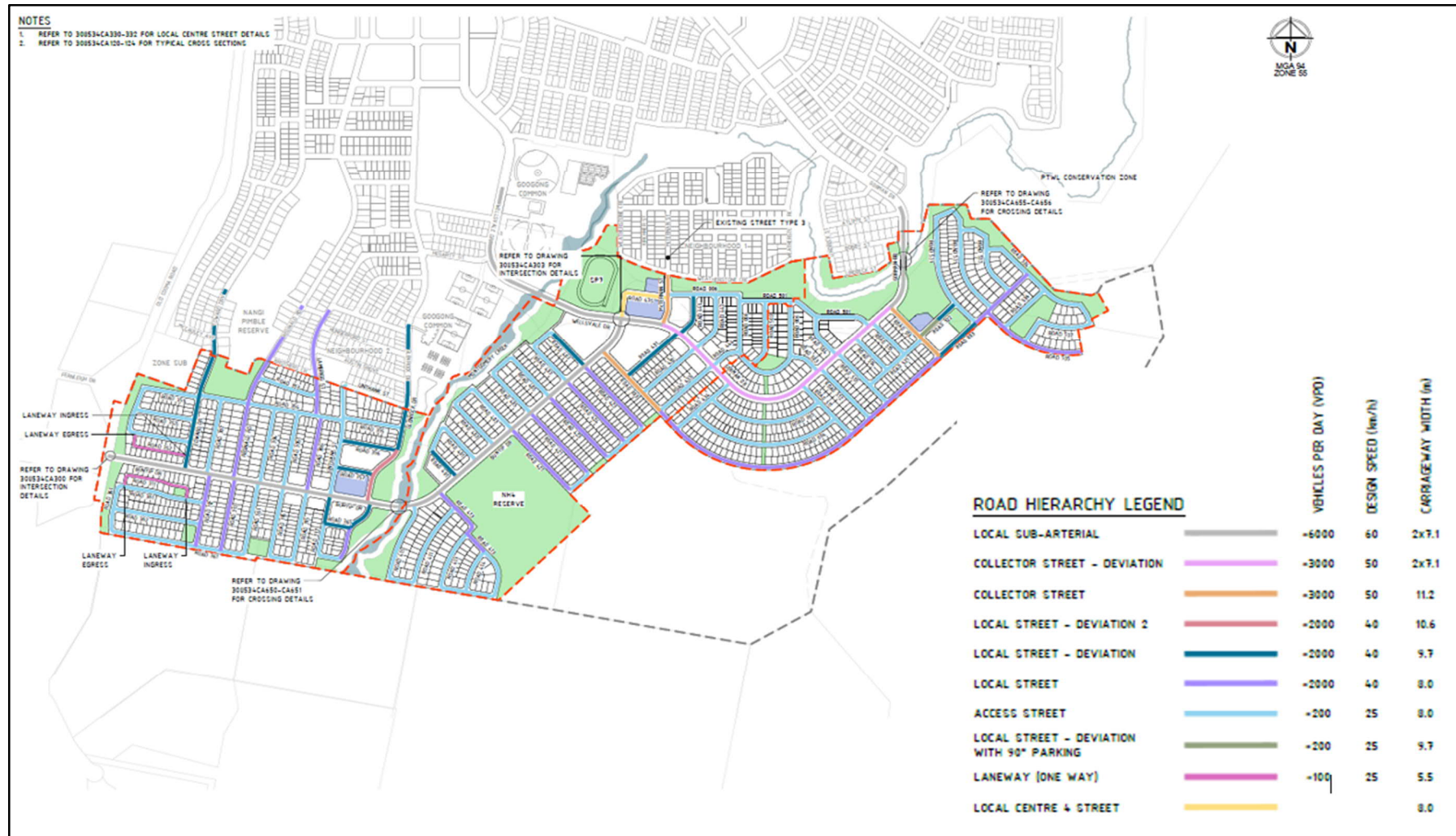
The proposed laneways differ from QPRC's D1 specification with the following departures:

- » Maximum length is greater than 65m – As standard residential lots are serviced by the laneway the average lot frontage is 16m, therefore requiring additional length to accommodate the standard lot frontage. The introduction of 90 degree bends have been included along with intermediate deviations in the laneway to discourage vehicles inappropriately accelerating through.
- » 1.2m footpath – Standard residential lots will address Bunyip Drive and Road 361 where pedestrian paths are provided. Therefore, a footpath within the laneway is not warranted.

Neighbourhood Centre Street

The proposed Neighbourhood Centre Street incorporates the design elements of a Local Street however with the addition of indenting parallel parking and 90 degree parking between the two neighbourhood centre 4 blocks. This road also accommodates with the widening of kerbs the turning movements of a prime mover and semi-trailer to service the neighbourhood centre blocks.

Figure 19 Street Hierarchy Plan



Source: Spiire, 2021

Design Speed

The adopted design speeds for NH345 are in accordance with D1.09.3 and summarised in Table 9 below.

Table 9 Design and posted speed summary

| Road hierarchy | Design speed | Posted speed | QPRC D1.09.3 Design Speed |
|------------------------------|--------------|--------------|---------------------------|
| Old Cooma Road | 90km/h | 80km/h | - |
| Local Sub-Arterial | 60km/h | 50km/h | 60/80km/h |
| Collector Street - Deviation | 60km/h | 50km/h | 50km/h |
| Collector Street | 50km/h | 40km/h | 50km/h |
| Local Street | 40km/h | 30km/h | 40km/h |
| Access Street | 25km/h | 15km/h | 25km/h |
| Laneway | 25km/h | 15km/h | 25km/h |

Street gradients

Drawings No 308534CA290 show the typical gradients on the streets which vary from 0.5 percent up to a maximum of +25 percent. Most of the roads have grades 10% or less. The steeper grade roads are around Nangi Pimble and the PTWL conservation zone as a result of the site topography. Streets in the Neighbourhood Centre are typically two percent or less.

All streets throughout this development are provided with a cross fall of three percent. Where appropriate streets adjoining public open space or vegetated swales are provided with one way cross fall and flush/permeable kerb to allow drainage of roadway stormwater flows into the vegetated space in accordance with Water Sensitive Urban Design (WSUD) principles.

Emergency/services vehicle access

The proposed NH345 road network will allow access by the 8.8 m service vehicle. This is consistent with previous stages of the Googong Township and will permit fire services and waste collection vehicles to access the whole of the road network.

A single unit truck (12.5m) and passenger vehicle can turn simultaneously at the intersection of Collector Streets with Local Street Deviations and Sub-Arterial Roads. They can also perform all movements at the intersection of Wellsvale/Bunyip/Gorman Drive.

A prime mover and semi-trailer (19m) can navigate around all streets fronting the three local centres and enter/exit the proposed Local Centre Road 435. A 19m long vehicle can also perform all movements at the intersection of Old Cooma Road/Bunyip Drive except the left turn from Bunyip onto Old Cooma Road which has been designed for a single unit truck (12.5m).

The Local Arterial and Sub-Arterial Roads (Bunyip Drive, Gorman Drive and Wellsvale Drive) are proposed to form public transport routes through NH345.

Refer to the accompanying Civil Infrastructure Design Report and associated drawings for further information.

Creek Crossings

Googong NH345 is proposed to contain 2 creek crossings over Montgomery Creek. One entirely within NH345 (the culvert crossing on Bunyip Drive connecting NH3 and NH4) and a bridge on Gorman Drive connecting NH5 to NH 1.

Bunyip Drive

The proposed Montgomery Creek crossing along Bunyip Drive will maintain the typical Sub-Arterial cross section. A reinforced concrete box culvert and headwalls will be provided in this location to connect NH3 to NH4.

Gorman Drive

The creek located beneath Gorman Drive connecting NH1 and NH5 is incised and warrants the construction of a bridge crossing. The proposed bridge will span 28m and be constructed utilising 6 1.2m deep Super T units with a cast in-situ deck slab. The cross section at the bridge will consist of:

- » 3.0 m wide footpath (including the width of the bridge barriers) in each direction,
- » 1.5 m wide on-road bicycle lane in each direction, and
- » 3.5 wide traffic lane in each direction.

The posted speed along Gorman Drive is 50km/h, therefore permitting a 300mm high non-mountable kerb between the travel lane and the pedestrian path. The inclusion of the mountable kerb negates the requirement for traffic barriers. An integrated pedestrian handrail and bridge barrier is also proposed along the crossing.

Driveways

A Driveway Plan has been prepared to illustrate the proposed location of vehicular crossings and driveways to the standard residential lots. The Civil Contractor will construct vehicular crossings. The builders of the houses will construct residential driveways. Rear laneways (not part of this application) will provide access to the future small lot housing developments in future DAs.

Refer to accompanying Drawings (308534CA180 - 308534CA182).

4.4.2 Street pedestrian and cyclist network

On-road cycling

On road cycling has been provided along Bunyip Drive, Wellsville Drive and Gorman Drive. No on-road cycling has been provisioned for along Old Cooma Road due to the rural character of the existing road and the proposed shared use path adjacent the road. The shared use path parallel to Old Cooma Road is a continuation from NH2 and is located along the future electrical easement. This path will continue along Old Cooma Road and along the Township's southern boundary.

Footpaths

It is proposed within NH345 for footpaths to be provided on one side of the road (ranging in size from 1.5m to 2.5m). The extents of the proposed path network and crossing locations is shown on Figures 17 and 19 above. An accessibility compliant footpath network has been considered in the road grading to maintain at a minimum, one accessible path of travel to key open space and neighbourhood centre locations.

4.4.3 Utilities

Provision for all utilities has been included within the subdivision in accordance with the relevant QRPC and Utility design standards.

NH345 will be serviced by a reticulation network via a shared trench with gas, electricity and telecommunications in the road verges in accordance with typical configurations found in NH2.

A summary of the proposed infrastructure provision is provided in the table below. For more information refer to accompanying Civil Infrastructure Report and associated drawings.

Table 10 Provision of utility services

| Infrastructure | Description of Provision |
|----------------|--|
| Water supply | <p>NH3's reticulation system is located wholly within the boosted zone and is serviced via connections to the existing NH2 infrastructure. A distribution main along Lambrigg Road has been designed to supply the portion of boosted zone located within NH4. No zone valves are required within NH3.</p> <p>NH4's reticulation system consists of both the boosted and intermediate pressure zones. The boosted zone is supplied by the distribution main along Bunyip Drive from NH3 with the pressure boundary being configured to eliminate the need for zone valves and dead-end mains. The intermediate zone is supplied by a distribution main that is connected to the Nangi Pimble Reservoirs and is located along Hungerford Street and Glenrock Drive in NH2.</p> <p>This distribution main will cross Montgomery Creek to supply NH4. A second connection proposed for the intermediate zone is at Wellsdale Drive with main feeder pipes running along Bunyip Drive and Gorman Drive to service the zone. A non-return valve is required along McTernan Street to promote water flows servicing the existing NH1B Stage 4, 6 & 8 (Montgomery Rise) from the currently constructed NH1B Gorman Drive mains and not via the Wellsdale Drive connection.</p> <p>NH5's reticulation system consists of both the intermediate and reduced pressure zones. NH5 will connect to the existing reticulation main along Gorman Drive in NH1B, which is connected to an existing Pressure Reducing Valve (PRV). An additional PRV is proposed in NH5 on Road 003. The location of the reduced pressure zone boundary requires one zone valve located on Road 501.</p> |
| Sewer | <p>The NH345 sewer network is proposed to connect into the existing Googong sewer system at 4 locations:</p> <ul style="list-style-type: none"> » NH3 catchment is proposed to connect into the existing network through the 300mm diameter carrier main running along the west side of Montgomery creek » Catchments NH4-A, B & C are proposed to connect into the existing network through the 300mm diameter carrier main on the Eastern side of Montgomery creek which continues through NH1B » NH4-D catchment is proposed to connect into the existing network through the 225mm diameter carrier main which extends south of NH1B » NH5 catchment is proposed to connect to the existing at the 225mm diameter carrier main within NH1B. In order to connect into the existing network, the proposed carrier main will cross the Gorman Drive bridge. The main will be located in the services void with a tie-rod and cradle pipe support under the bridge deck. |

| Infrastructure | Description of Provision |
|--------------------|--|
| | <p>All flows from the catchments in NH345 ultimately flow to SPS2 within NH1.</p> <p>The proposed sewer network of NH345 will be comprised of PVC pipe with 150mm diameter pipes servicing majority of the area with 225 diameter carrier mains within NH3, NH4-B & C and NH5 catchments.</p> <p>The proposed sewer network has been designed in accordance with WSA02 2002-2.3 and QPRC-D12.</p> <p>A sewer pump station is proposed to service the eastern most catchment of NH5. The sewer pump station (SPS4) will connect into the 225mm diameter carrier main along Road 003 in NH5 via a rising main. SPS4 design parameters will be subject to detailed design at Construction Certificate phase.</p> <p>SPS4 is proposed to be maintained by a 12.5m service vehicle with a dedicated layby bay. The required overflow relief headwall is located to the north east of the SPS.</p> |
| Gas | <p>Googong is currently supplied via the Queanbeyan maximum pressure main which connects to the District Regulator for medium pressure reticulation at the Googong Road/Beltana Intersection. An additional District Regulator to reduce the pressure from a proposed High Voltage gas steel main along Old Cooma Road (1050kPa) to acceptable reticulation pressures (210kPa) is required at the intersection of Old Cooma Road and Bunyip Drive. The District Regulator is typically a 1.5m x 1m x 1m underground chamber. Consultation with Zinfra has highlighted that the trunk gas network (110PE) will be extended from the mains constructed in Gorman Drive NH1B and Wellsville Drive NH2. The trunk gas will be located along Bunyip, Gorman and Wellsville Drive in NH345.</p> |
| Telecommunications | <p>NBN has confirmed that they can service the development as well as the proposed signalised intersection. GTPL propose to continue the existing roll out of NBN Fibre to the Home (FTTH) in NH345 with a new Developer Agreement. NBN highlighted that 2 P100 express conduits is required along Bunyip, Wellsville and Gorman Drive.</p> <p>Telstra has confirmed that no provision is required within NH345 for a P100 Telstra conduit. An existing Telstra service adjacent to the Old Cooma Road reserve will need to be relocated clear of the residential areas. It is proposed that this relocation will be similar to the relocation arrangement adopted for NH2 where the Telstra assets were located within the 11kV overhead to underground relocation trench. The proposed relocation of the Telstra assets will be designed and constructed with the electrical relocations. The arrangement adopted previously and proposed for NH345, will see the alignment being prepared by GTPL's consultancy team, trenching and backfilling completed by GTPL's preferred contractor and Telstra designing and constructing the pit and pipe only</p> |
| Electricity | <p>The Googong South zone substation is located at the north west corner of the site along old Cooma Road. An existing 132kV aerial transmission line extends to the south from the Zone Substation passes through the Hamson land. It is proposed this line be relocated to the Old Cooma Road buffer area, in a similar manner to the line to the north of the zone substation. Essential Energy have indicated general endorsement of this proposal.</p> <p>There are also two 11kV aerial distribution feeders extending south from the Zone Substation through the Hamson land which ultimately supply Michelago and Royalla. It is proposed to relocate these power lines underground as part of the development.</p> |

| Infrastructure | Description of Provision |
|----------------|---|
| | <p>The relocation of these power lines will be managed by GTPL outside of the DA process.</p> <p>As detailed at the Structure Plan phase; The existing Zone Substation has adequate capacity to service the proposed development. Low voltage power will be provided to residential and commercial lots throughout the development from ground mounted kiosk substations.</p> |
| Smart Cities | <p>Googong's NH2 Wellsvale Drive includes smart cities infrastructure to provide WiFi connectivity and smart streetlight systems to the residents of Googong and QPRC. Provision has been made in the typical cross sections and shared trench details for similar smart cities infrastructure. It has been assumed two trench types are required along Bunyip Drive, Gorman Drive and Wellsvale Drive:</p> <ul style="list-style-type: none"> » One communications P100 conduit located on one side of the verge » Four (two communications and two electrical) P100 conduits located on the other side of the verge |

4.4.4 Earthworks

As shown in Figure 20 and accompanying Slope Analysis Plans, the proposed slope of the development ranges between <5% and 25%. There are no locations within the development area that is disturbed that will be greater than 25%.

The proposed site grading has adopted the following criteria:

- » Road Grades <16% in accordance with QPRC's Design Specification D1
- » Interface Batters <25% in accordance with QPRC's Design Specification D6
- » Residential lots <20% in accordance with QPRC's Design Specification D6

The grading and resultant earthworks are resolved to a level of detail to confirm that the DA layout can be achieved in accordance with the statutory requirements. Final design of the grading and earthworks will be resolved in detail design and subsequent construction certificate (CC) approval.

Site grading

As shown in Figure 21 and accompanying Site Grading Plans, regrading is proposed across majority of the site. The proposed site grading considers the following design principles:

- » Creating roads that comply with QPRC's D1 Specification
- » Connecting to existing roads and design levels in NH1 and NH2
- » Avoiding earthworks outside of the DA boundary
- » Avoiding earthworks within the Riparian Corridor, PTWL Conservation Zone and NH4 Reserve
- » Allowing stormwater assets along Montgomery Creek to service the site and still outlet to the creek.
- » Connecting to existing infrastructure provided in NH1 and NH2
- » Preserving high value trees and archaeological assets
- » Maintaining overland flow paths and management of upstream catchments

- » Providing necessary 1% AEP freeboard from Montgomery Creek to the proposed roads and blocks

The proposed grading across the three neighbourhoods involves the filling of minor gullies and farm dams to avoid localised trapped low points in the road grading. The proposed grading has been largely dictated by the three sub-arterial roads connecting to NH1 & NH2 across Montgomery Creek.

The earthworks quantities result in a net import of material however is subject to final design of the which will be further developed for the CC approval.

Block grading

As adopted in NH2, GTPL intends to provide lot benching across the development of NH345 to provide greater regularity for the built form. Lot benching opportunities can be accommodated with the current road grades and earthworks shown on the DA. Although the site has been graded for the DA such that on-block retaining walls are not needed, it is GTPL's desire to introduce at detailed design, lot benching as previously documented and constructed in NH2 to achieve flatter blocks for builders. Specific locations of the lot benching will be further developed for the CC approval.

Retaining walls / Rock batters

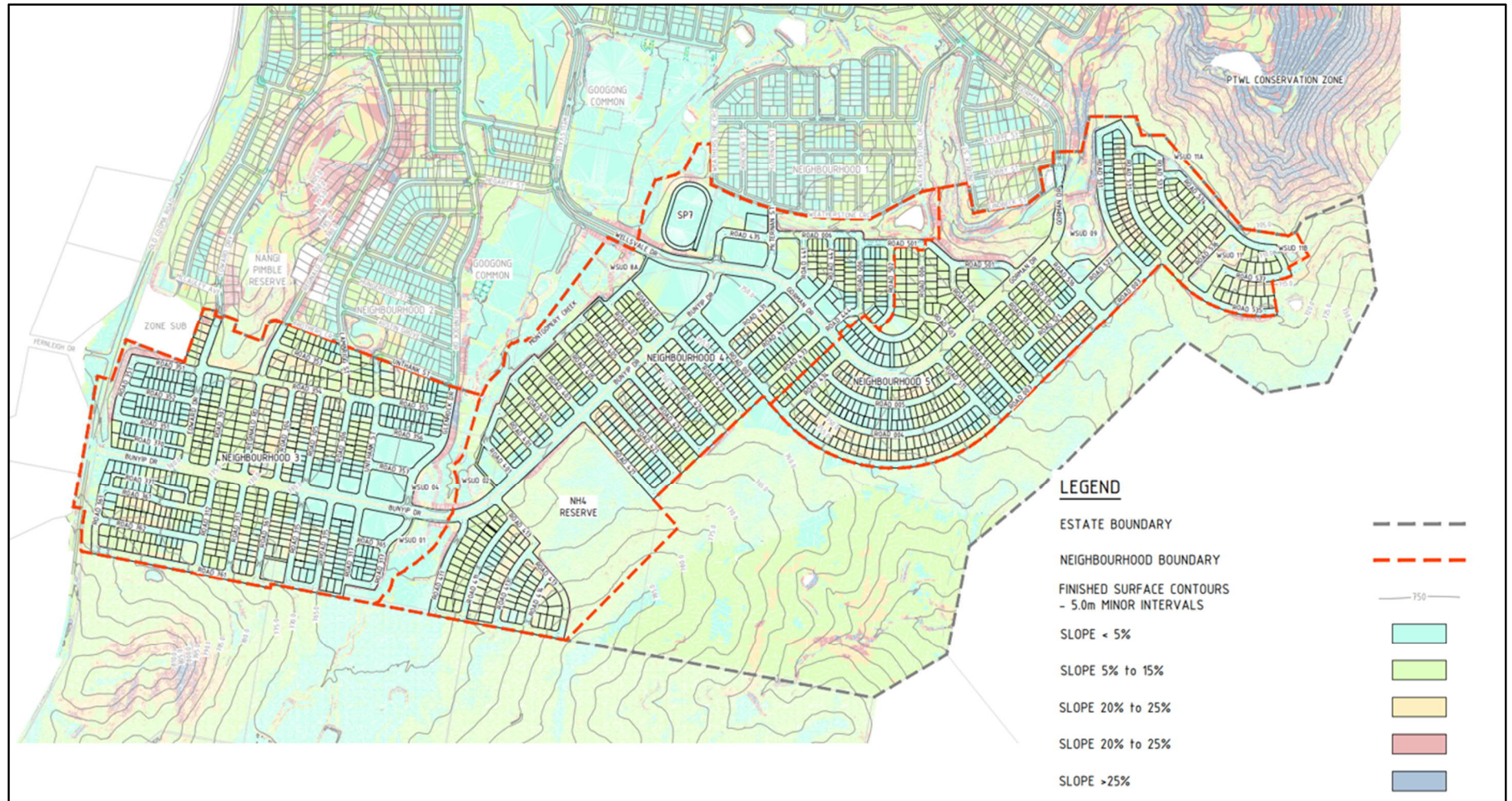
Retaining walls / rock batters have been located within NH345 with the most significant ones along road 534 to the north and north-eastern boundaries of NH5 to manage the interface with the PTWL Conservation Zone. These retaining walls / rock batters are proposed to be of a similar nature to those already constructed along Montgomery Rise in NH1B. Rock walls integrated with soft landscaping are proposed to soften the interface between the estate and the PTWL Conservation Zone.

Two stepped 900mm retaining walls are proposed along Road 531 to provide the adequate storage provision and embankment stability for the WSUD 09 detention basin.

Other retaining walls are proposed in the following locations:

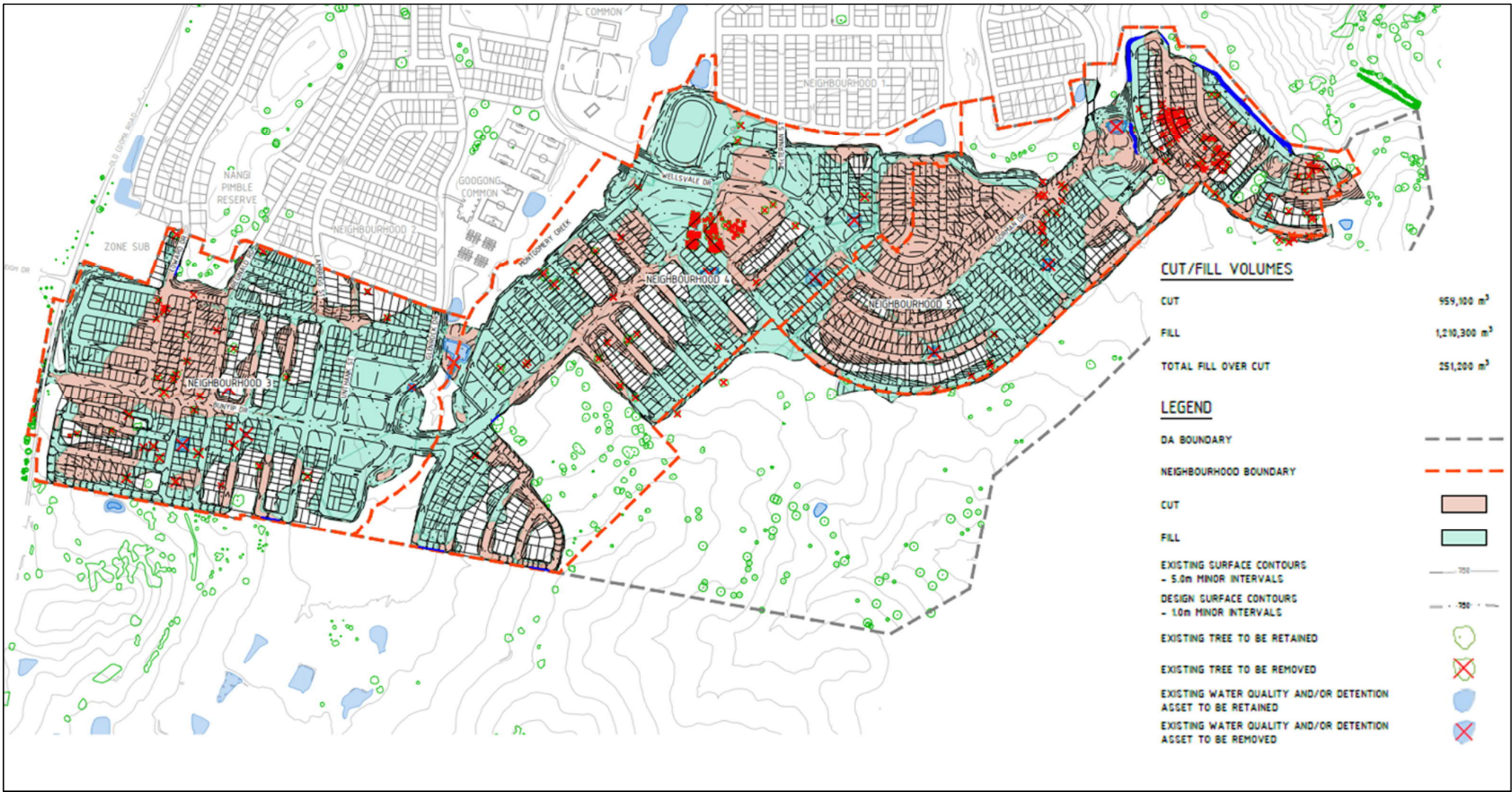
- » On Bunyip Drive adjacent to the NH4 reserve
- » On the southern boundary of the development along Roads 315, 411, 413
- » On Edward Drive adjacent to Nangi Pimble

Figure 20 Slope Analysis



Source: Spiire, 2021

Figure 21 Grading Plan



Source: Spiire, 2021

4.4.5 Tree retention and removal

An assessment of existing trees within the site was undertaken by Spacelab as part of the structure planning process. Within the Structure Plan all exceptional trees and most high-quality trees are retained and incorporated into open space or celebrated at the end of view corridors.

Following this, as part of this submission AECOM in collaboration with GTPL revisited this work and further assessed which existing trees could be retained and those proposed to be removed.

In addition, and as a consequence of the BCAR process, a large number of additional trees are retained in the NH4 Reserve.

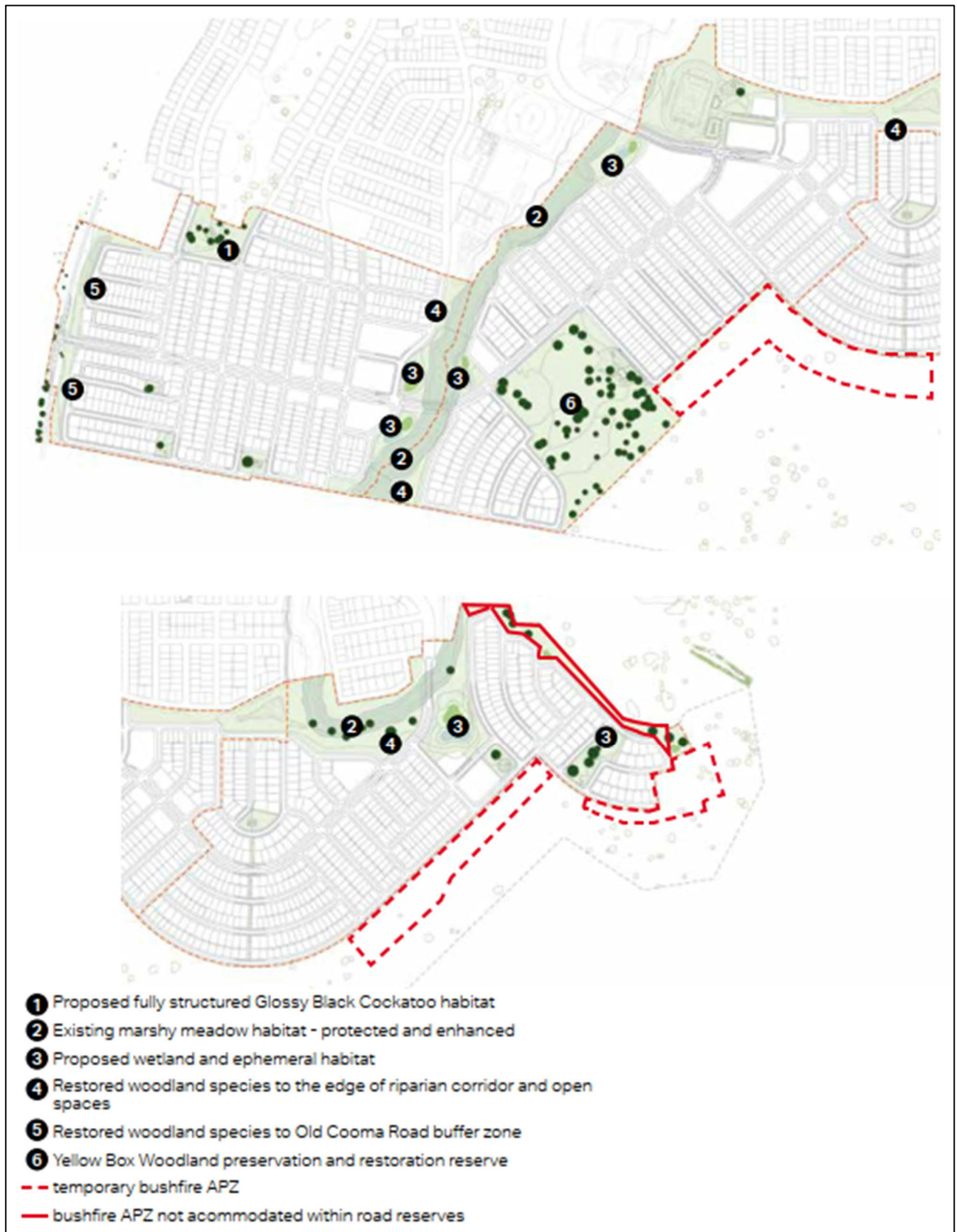
In summary, remnant trees have been retained where practicable, having regard to the habitat values, amenity values, structural integrity of the tree, urban design, service requirements, and the general grading required by the subdivision.

The trees shown for retention are generally of exceptional, high or medium value, and treatment of the surrounding landscape aims to give them best chance of long-term survival. On Nangi Pimble and in Yellow Box Reserve some of the poorer quality trees have also been shown for retention due to their habitat potential.

All trees shown for retention shall be protected and fenced to the full extent on the canopy to avoid compaction of the ground or damage to the trunks.

Key areas suitable for specific habitat creation and existing trees to be protected and retained within the proposed development are shown below on Figure 22 – Note: existing trees to be retained are shown in dark green.

Figure 22 Tree Retention Plan



Source: AECOM, 2021

4.4.6 Stormwater management and drainage

As the design elements for stormwater and water quality are extensive a separate Stormwater Report has been prepared and accompanies this SEE. The report specifically addresses the issues associated with:

- » Stormwater drainage including peak flow attenuation and major and minor overland flows
- » Stormwater quality treatment control measures to reduce post development pollutant loads
- » Improvement using WSUD principles as well as management strategies.

Stormwater management objectives

The proposed stormwater management arrangements are designed to:

- » Meet stormwater targets identified within the Googong DCP for both water quality and quantity
- » Link water infrastructure effectively to minimise the impacts of development upon the receiving infrastructure and natural environment
- » Protect downstream receiving waters (e.g. riparian corridors) from flooding and water quality degradation
- » Protect assets and the subdivision from flooding.

A summary of the Stormwater Quality Improvement Devices (SQIDS) proposed for NH345 is provided in the table below.

Table 11 SQIDs proposed for NH345

| SQIDs | Description |
|-----------------------|---|
| Gross Pollutant Traps | <p>Gross Pollutant Traps (GPTs) are proprietary products which are placed at the start of all NH345 treatment trains, receiving flows prior to discharge to sedimentation basins or bioretention systems.</p> <p>GPTs are underground concrete structures that remove litter and larger coarse sediments from stormwater runoff and store them for manual removal by the managing authority. There are two general forms of GPTs, either of which may be specified in the detailed design process:</p> <ul style="list-style-type: none"> » Vortex-style GPTs: Such as the Rocla CDS unit, which uses an offline cylindrical chamber of water, where water “spins” to settle out litter and coarse sediment » Baffle-style GPTs: Such as the Hume’s Humegard unit, which is box with an internal baffle, dissipating energy of treated flows, capturing settled litter and coarse sediments. <p>GPTs are excluded for the purpose of stormwater quality modelling in the DA phase, which is generally perceived as conservative conceptual model reasoning.</p> |
| Sediment Basins | <p>Sometimes referred to as sediment ponds or sediment basins, sedimentation basins are ponds with a permanent pool of water acting as a sump to settle out suspended sediment particles from stormwater runoff.</p> <p>The basins are typically up to 1.5m deep, and the permanent pool volume considers the bottom 1m to be the volume where sediment can build up over time. The required sediment volume is calculated as a product of catchment area and predicted sediment loading rate.</p> |

| SQIDs | Description |
|----------------------|--|
| | <p>Basins typically receive the full piped network flow, before diverting lower flows, up to the 4EY or 1EY event, to the next stage of treatment (such as a wetland or bioretention asset). Flows larger than 4EY / 1EY events generally overflow from the sedimentation basin and bypass the second stage of treatment.</p> <p>Sedimentation basins are planted around their perimeter with open water in the centre, and typically designed to appear as a natural pond.</p> <p>Sedimentation basins are proposed for all Googong NH345 catchments where the estate catchment area is larger than 5ha, excluding those with existing NH1 water quality treatment assets.</p> <p>They are effective in prolonging the life of a bioretention system, by reducing the risk of clogging filter media, and by dissipating piped flow energy</p> |
| Bioretention Systems | <p>Sometimes referred to as a raingarden or bio-infiltration system, bioretention systems are a bed of filter media with specific properties through which stormwater runoff percolates before being picked up by a slotted pipe and out letting to a receiving water.</p> <p>Bioretention systems remove nutrients from stormwater through a biofilm which develops on soil particles. This film can remove and store the nutrients, making them available for plants which are planted in the filter media.</p> <p>Bioretention systems are proposed for all but one of the NH345 catchments.</p> |

Source: Spiire, 2021

4.5 Landscaping works

This proposal seeks approval for landscape works associated with the creation and embellishment of all open space and the public domain. This includes:

- » Network of landscaped streetscapes
- » Open space areas including signage, public art, lighting, parking and associated structures

The design of landscaped areas to be provided in NH345 is guided by the Landscape and Open Space Strategy for the Googong Township, Voluntary Planning Agreement, NH345 Structure Plan and design principles. This is detailed in the Landscape Design Report.

An overview of each of these areas is summarised below. For more information refer to the Landscape Design Report and accompanying Landscape Drawing Package.

4.5.1 Streetscapes

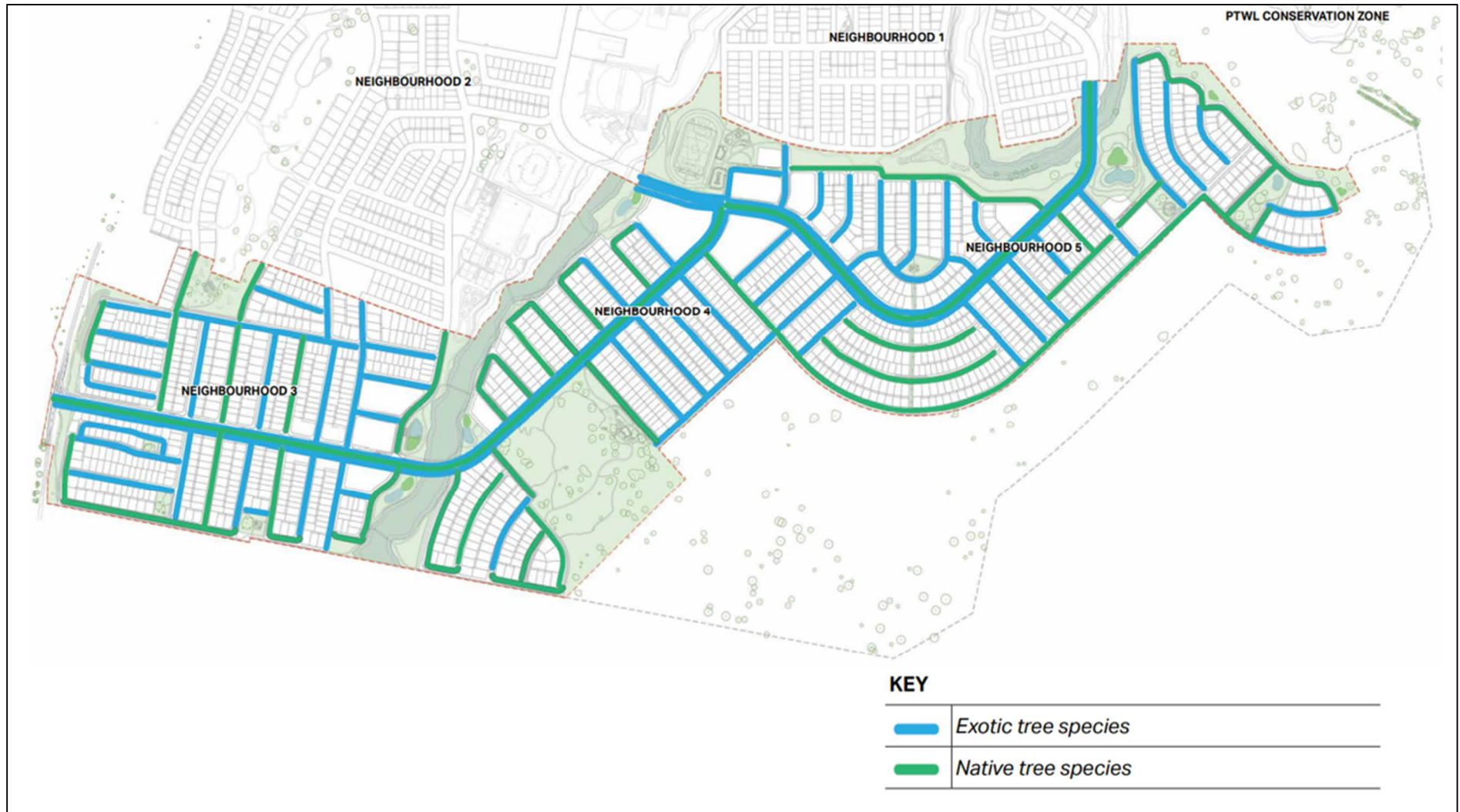
Creating an extensive tree canopy within Googong is very important in the creation a green, connected community. Works already documented within NH1 and NH2 will result in the planting of 22,346 trees, and NH345 will build upon this. The tree species proposed within NH2 are a combination of exotic and native species as shown in Figure 23. Streetscape planting consists of:

Table 12 NH345 Streetscape planting

| | |
|------------------------------------|---|
| Wellsvale Drive | Defined by a single deciduous tree species, (as for NH2) Liquidambar (Liquidambar styraciflua 'Oakville Highlight'), to the verges, with Royal Raindrops Crab-apple (Malus 'Royal Raindrops') to the central median. Understorey planting to the central swale will be exotic groundcovers. |
| Gorman Drive | The existing character established on NH1 will continue through NH345. Gorman Drive is lined with Plane trees (<i>Platanus orientalis</i>) on the verges, with White Gums (<i>Eucalyptus alba</i>) in the central median swale. Gorman Drive terminates at the intersection with Bunyip Drive and Wellsvale Drive, adjacent NH4 Neighbourhood Centre and Civic Space. |
| Bunyip Drive | The main entry from Old Cooma Road into Googong through NH3 and NH4 will be highlighted with Tulip Trees (<i>Liriodendron tulipifera</i>), with White Box (<i>Eucalyptus alba</i>) to the median swale. |
| Nangi Pimble (South) | Streets framing this open space will be defined by Red Spotted Gum (<i>Eucalyptus mannifera</i> ssp. <i>maculosa</i>). |
| Linear Parks and connector streets | Defined by ornamental exotic trees Chanticleer Pear (<i>Pyrus calleryana</i> 'Chanticleer'). The canopy shape and size of these trees allows key view corridors to be remain unobstructed through these connector streets which link linear open spaces. |
| Green Links and streets | These streetscapes connecting Neighbourhood Parks to Googong Common and Googong Dam Foreshore Buffer will be highlighted by Brachychiton 'Jerilderie Red' (Kurrajong), Red Box (<i>Eucalyptus polyanthemos</i>) and Narrow-leaved Black Peppermint (<i>Eucalyptus nicolii</i>) along the 7m street verge adjacent NP04. |

Source: AECOM, 2021

Figure 23 Street Tree Master Plan



Source: Spiire, 2021

4.5.2 Open space

A summary of each of the open space areas within NH345 and location of these is provided below and in the Landscape Master Plan at Figure 24. Detailed concepts for these areas is provided in the accompanying Landscape Package.

Neighbourhood parks

There are three Neighbourhood Parks within NH345. Although each Neighbourhood park will have a distinct character appropriate to its unique location, a consistent approach will be taken to ensure the successful Googonian theming and quality is present in all.

NP03 forms the southern end of the Nangi Pimble open space. As the highest elevation point on the site, Nangi Pimble occupies a dominant position. It is visible from most of the Googong site and 360-degree views extend in all directions from its summit. Neighbourhood Park 03 forms the southern section of the Nangi Pimble open space. This provides a key open space link between NH3 and the NH2 Town Centre, supplementing the primary open space corridor through Googong Common.

NP04 is the largest, which is connected to both Googong Common and the Googong Dam Foreshore managed zone by a 7m streetscape verge Green Link. NP04 includes a Neighbourhood playground and will feature a diverse range of play experiences including nature play, traditional play equipment and gathering spaces. It will be fully fenced and be in close proximity to amenities such as toilets and change facilities.

NP05 sits within the north-east pocket of NH5 and has views across the PTWL Conservation Area to the north east.

Local parks

There are four local parks located across NH345. Small parks can provide valuable amenity if suitably located and designed into the streetscape and provide a moment of respite within the suburban street form. They are critical in developing a sense of place and orientation within the neighbourhoods.

Sportsfield 7

Adjacent to NH4's Neighbourhood Centre is the Sportsfield 7 precinct which includes a single soccer field athletics track, sports pavilion (integrated with the NH Community Facility), carparks, and general open space areas.

Yellow Box Reserve

Yellow Box Reserve will be an open space that is focussed on the retention and regeneration of the existing Yellow Box Woodland plant communities. The majority of this space will remain undisturbed, with existing trees retained and grassland unmown. Key elements within this regeneration area include:

- » A series of low key paths and trails to provide access through the site;
- » Small seating areas to pause and rest;
- » Interpretive signage; and
- » A small number of regenerative Box Gum tree plantings including *Eucalyptus blakelyi* (Blakely's Red Gum), *Eucalyptus dives* (Broad-leaved Peppermint), *Eucalyptus melliodora* (Yellow Box), *Eucalyptus nortonii* (Norton's Box) and *Eucalyptus polyanthemus* (Red Box).

A Regional Playground is proposed to be located on the northeast edge of the reserve. This will be themed around farming and sheep shearing and will contain the relocated Shearing Shed. The regional playground will contain the following elements:

- » Repurposed Shearing Shed;
- » Play features relating to farming and sheep shearing;
- » Shelters with seating, BBQs, bubblers, bins and bike racks;
- » Associated 90 degree on-street parking;
- » Planting that is responsive to the local indigenous ecology; and
- » Wayfinding signage.

Googong Common and drainage reserve

The Common will provide a range of recreational activities, predominantly:

- » A network of footpaths, bridges and cycleways connecting to the rest of the Common and creek line including share paths and bush tracks with lighting at key crossing points
- » Seating shall also be provided at regular locations along the proposed path network to offer rest stops and viewing opportunities
- » Signage elements will be located at neighbourhood entry points and other locations to assist with orientation and interpretation
- » Public art will be a subtle feature of the corridor, with small art pieces throughout Googong Common (South). These may be sculptures in their own right or may also perform other functions such as informal play elements, bridge structures, balustrades or be integrated into paving / street furniture.

The Drainage Reserve within the Common addresses stormwater quality, waterway stability and vegetation irrigation and includes the Montgomery Creek riparian corridor. Montgomery Creek is the major watercourse on the site and flows through a broad floodplain from the southern boundary of Googong to a clearly defined waterway in the north eastern corner. Within the Common the creek has a swampy, chain of ponds character.

Along the northern edge of NH4 and NH5, a tributary of Montgomery Creek wraps around the southern edge of Montgomery Rise. Limiting disturbance to this existing landscape to key crossing points only, with a shared path linking NH4 and NH5 Neighbourhood Centres with Googong Common to the west and NH1 to the north, is important.

Linear parks and green links

The open space elements of linear parks and green links provide transition and connectivity. Often flanked by residential lots to both sides, they are well defined and controlled areas but provide a critical functional and aesthetic role. There are a number of linear parks and green links spaces that help to connect the key open spaces within Googong NH345. Other local parks have been located to ensure preservation of particularly significant trees, such as those along the southern boundary of NH3, and maintain and enhance significant view corridors, such as in NH5 linking the rural residential lots to the Googong Dam Foreshore Buffer.

Figure 24 Landscape Master Plan



Source: AECOM, 2021

4.5.3 Sport and recreational facility parking

Car parking to service the sport and recreation facilities within Googong Common has been provided as a combination of off-street car parks, on street perpendicular parking, and on street indented parallel parking. Car parking will be provided generally in accordance with QPRC DCP Section 2; however, where no guidelines exist the numbers have been based on an assessment of Queanbeyan's current facilities & car parking numbers. GTPL believe the proposed numbers in general exceed the existing available parking numbers and reflect the growing need for parking facilities within future sporting precincts.

4.5.4 Signage and public art

Signage

The principles of signage (location and types) are to be continued as developed in NH1 and NH2:

- » Park Signage - Located at prominent park corners or entry points to identify Local and Neighbourhood parks
- » Orientation Signage - To aid in the legibility of the Googong network of paths and open spaces, located at key decision points or nodes
- » Interpretive Signage - To provide information to help explain points of environmental or historical significance
- » Signage Wall - To provide park naming at key arrival points, in addition to or as an alternative to park signage
- » Googong Common Signage - To combine identification, orientation information and safety signage within Googong Common (concept yet to be developed)
- » Building Signage - Integrated into the building design of key buildings such as schools, sporting pavilions and community facilities.

Figure 25 below illustrates the proposed Signage Strategy for NH345 which has been extracted from the Googong Public Art Strategy. Further details relating to Public Art will be developed as part of detailed designs at the CC stage.

Figure 25 Signage Strategy (based on Public Art Strategy)



Source: Googong Public Arts Strategy, 2021

Public art

A Public Art Strategy has been prepared for Googong, as a high-level visioning document that presents inspiration for the number of ways public art can be integrated to give Googong a unique place identity.

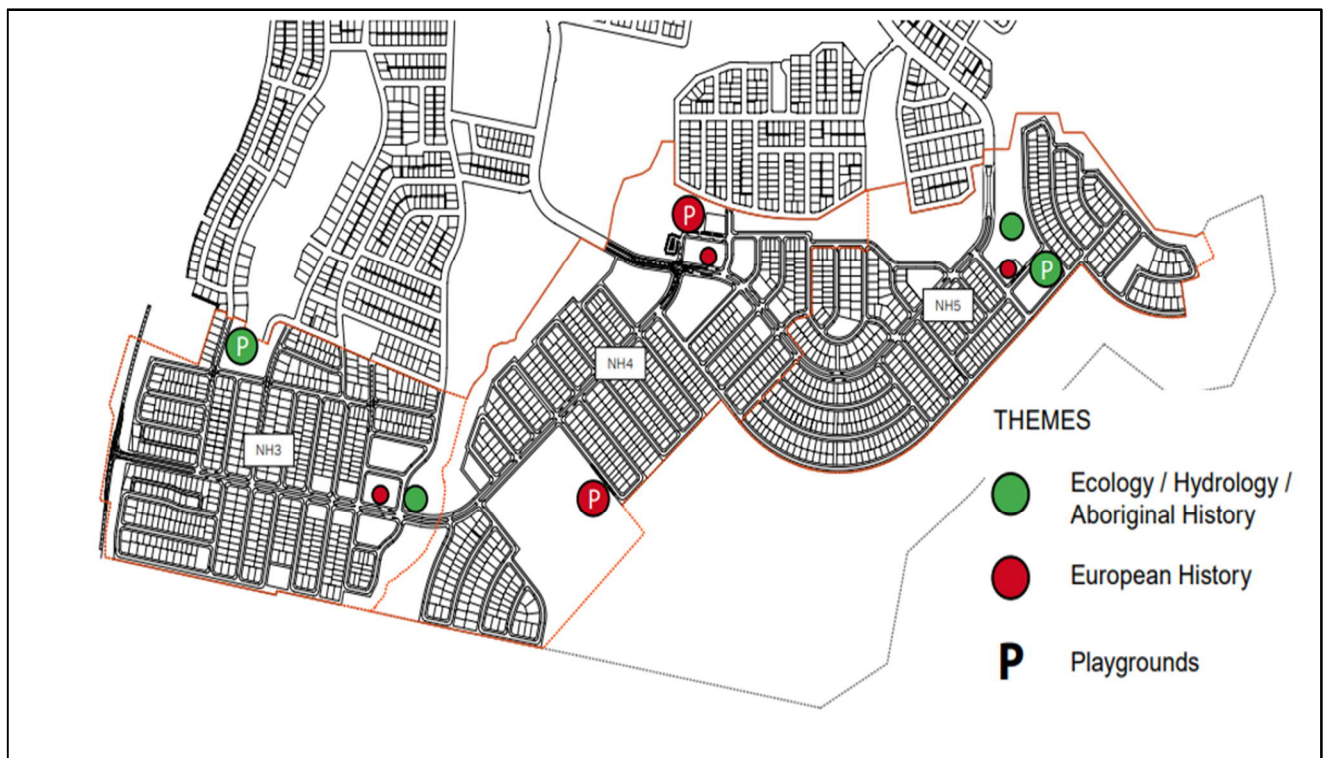
Through the landscape, the story of Googong is to be told; to foster a sense of connection between the land and people, past and present. This may take the form of a standalone object, or as a number of interconnecting elements that move through a space. The artwork in some places may be multifunctional - visually beautiful but also encourage play or be integrated into bespoke street furniture.

Key areas of public art opportunities are shown in Figure 26 below and described as follows:

- » Within neighbourhood centres, integrated into signage, paving and street furniture
- » Within neighbourhood parks as standalone structures or integrated into built form elements/furniture
- » Throughout Googong Common (south). These may be sculptures in their own right or may also perform other functions such as informal play elements or be integrated into paving or street furniture.

Public art will also be provided in open space areas in accordance with the local planning agreement - refer to the accompanying Landscape Design Report. Further details relating to Public Art will be developed as part of detailed designs at the CC stage.

Figure 26 Artwork opportunities (extract from Public Art Strategy)



Source: Googong Public Art Strategy, 2021

5 Statutory assessment

5.1 Environmental Protection and Biodiversity Conservation Act 1999

The rezoning of the wider Googong Township was assessed as being an action that required approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The project was considered by the Department of Sustainability, Water, Population and Communities and approved on 19 May 2011 (subject to amendments). The EPBC Act approval primarily addresses the impacts of Googong Township on the Googong Foreshore and on matters of national environmental significance, namely the Pink Tail Worm Lizard (PTWL) and its habitat. As part of the conditions of consent, two management plans were prepared and endorsed, being:

- » Googong Township - Pink-tailed Worm-lizard (PTWL) Protection and Management Plan, prepared by Biosis Research, 2012
- » Googong Foreshores Interface Management Strategy (GFMIS), prepared by Biosis Research, 2013.

These two management plans are addressed below.

As the proposed development, has been approved under the EPBC Act, specific assessment of communities listed under this Act is not required. In addition, the proposed development is unlikely to have a significant impact on EPBC Act listed flora or ecological communities given the subject land does not:

- » Support any EPBC Act listed flora species; or
- » Support any EPBC Act listed ecological communities.

Nevertheless, it is important to provide context for the assessment of the development under NSW legislation. Two threatened communities, both listed as critically endangered under the EPBC Act have the potential to occur in the area:

- » 'Natural Temperate Grassland of the South-Eastern Highlands'
- » 'White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland'.

The accompanying Biodiversity Certification Assessment Report states that referral of the proposed action under the provisions of the EPBC Act is unwarranted and is not necessary.

Refer to Section 6.2 of this SEE and the accompanying Biodiversity Certification Assessment Report (BCAR) for further consideration of ecological values.

5.1.1 Pink-tailed Worm-lizard Protection and Management Plan

The PTWL Protection and Management Plan provides:

- » Details regarding the establishment, protection and management of the PTWL Conservation Area
- » Details regarding the consultation and review undertaken during the preparation and to be undertaken during implementation of this plan
- » A summary of the management actions to be undertaken and the parties responsible.

The proposed development will not affect this plan all works remain outside of the construction exclusion buffer 10m west of PTWL protected area in NH5.

5.1.2 Googong Foreshores Interface Management Strategy

As detailed in Section 3 of this report, protection of the Googong Foreshore and Reservoir has been paramount in the planning process of Googong township. Consequently, the Googong Foreshore Interface Management Strategy (GFIMS) was developed and is now being implemented. The GFIMS will provide for the effective prevention of impacts associated with the development and occupation of Googong township on water quality within the Googong Reservoir, listed threatened species, ecological communities and the environment within the adjoining Googong Foreshores.

Assessment

As outlined in Section 3.2 those parts of NH345 that are also within the GFIMS area are not within the scope of this DA and will be the subject of a future DA.

The proposed subdivision plan is consistent with GFIMS. In summary:

- » There is no development proposed in the MA 1 – PTWL Conservation Area
- » Land identified as MA4 relates to the land subject of Clause 6.5 and identified as 'Googong Foreshore Buffer Area' overlaying a number of standard residential lots zoned R1. A variety of measures will be implemented as part of a development consent for future dwellings and management in the future to ensure that Googong Dam water supply catchment is not compromised.

5.2 Environmental Planning and Assessment Act 1979

The EP&A Act provides the framework for environmental planning and assessment in New South Wales. The proposal seeks approval under 4.15 of the EP&A Act. The table below provides a summary of the matters for consideration and an assessment of the relevance of the matter to the proposal. A detailed assessment of the proposal against Section 4.15 is provided below. The proposal is also an Integrated Development pursuant to Section 4.46 of the EP&A Act as approval is required under the following Acts:

- > Fisheries Management Act 1994
- > National Parks and Wildlife Act 1974
- > Roads Act 1997
- > Rural Fires Act 1997
- > Water Management Act 2000.

Table 13 Matters for consideration (Section 4.15 requirements)

| EP&A Section and legislative requirement | Comment |
|--|--|
| <p><i>(1) Matters for consideration – general</i></p> <p><i>In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application</i></p> | |
| <i>(a) The provisions of:</i> | |
| <i>(i) Any environmental planning instrument, and</i> | <p>This SEE considers the proposal against: SEPP Infrastructure; SEPP (State and Regional Development) 2011; SEPP 44 Koala Habitat Protection; SEPP 55 (Remediation of Land) and the Queanbeyan LEP 2012.</p> <p>Refer to Section 5.10 and 5.11 of this SEE.</p> |
| <i>(ii) Any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and</i> | <p>There are no draft EPIs or draft DCPs that need to be considered, at the time of preparing this SEE.</p> |
| <i>(iii) Any development control plan, and</i> | <p>The SEE addressed, and has been prepared and assessed against the Googong DCP and Queanbeyan DCP</p> <p>Refer Section 5.12 and Appendix A of this SEE.</p> |
| <i>(iiia) Any planning agreement that has been entered into under section 7.4 or any draft planning agreement that a developer has offered to enter into under section 7.4, and</i> | <p>The Googong Township is subject to VPAs; a State VPA and a Local VPA.</p> <p>Section 5.13 sets out the applicable State and Local VPA requirements and confirms the proposed development is consistent with the conditions of these agreements.</p> |
| <i>(iv) The regulations (to the extent that they prescribe matters for the purposes of this paragraph)</i> | <p>The relevant matters under the EP&A Reg 2000 that relate to the proposed development have been considered.</p> |
| <i>(v) Repealed</i> | N/A |

| EP&A Section and legislative requirement | Comment |
|--|---|
| <i>(b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality</i> | An assessment of the likely impacts of the proposed development have been undertaken in Section 6 of this report. |
| <i>(c) The suitability of the site for development,</i> | The site is suitable for the proposed development as justified in Section 6.14 of this SEE. |
| <i>(d) Any submissions made in accordance with this Act or the regulations</i> | The DA will be notified and place on public exhibition in accordance with the requirements of the EP&A Act 1979 and EP&A Reg 2000. It is understood that Council would consider any submission received on the proposed development. |
| <i>(e) The public interest</i> | The proposed development is in the public interest as: the land uses are permissible with consent and it is consistent with the Master plan for Googong and Structure Plan for NH345. Refer to Section 6.15 in this SEE for more detail. |

5.3 National Parks and Wildlife Act 1974

Overview

The *National Parks and Wildlife Act 1974* (NPW Act) protects Aboriginal heritage (places, sites and objects) within NSW. Protection of Aboriginal heritage is outlined in s86 of the NPW Act.

Under the NPW Act, a person can apply for an Aboriginal Heritage Impact Permit (AHIP) as a defence to a prosecution for harming Aboriginal objects or Aboriginal places. An AHIP is required where a proposed activity would – directly or indirectly – harm an Aboriginal object or a declared Aboriginal place. An Aboriginal Cultural Heritage Assessment Report (ACHAR) is needed to support an AHIP application.

Assessment

The Cultural Heritage Desktop Assessment completed by Navin Officer to support the Structure Plan for NH345 identified that there are 24 Aboriginal sites previously identified in the study area.

An ACHAR has been prepared as part of this application to build on the Cultural Heritage Desktop Assessment and form the basis for an AHIP where works impact items.

Some of the area to be impacted by development for Googong NH345 has previously been approved for impact under development approvals for Googong NH1A and Googong NH1B – Remaining Areas (AHIP no.C0000573, and AHIP no.C0001258) and Googong NH2 (AHIP no. C0003603), see Figure 27. The study boundary for Googong NH345 is concerned with the areas outside of these approval boundaries.

The aims of the study are to:

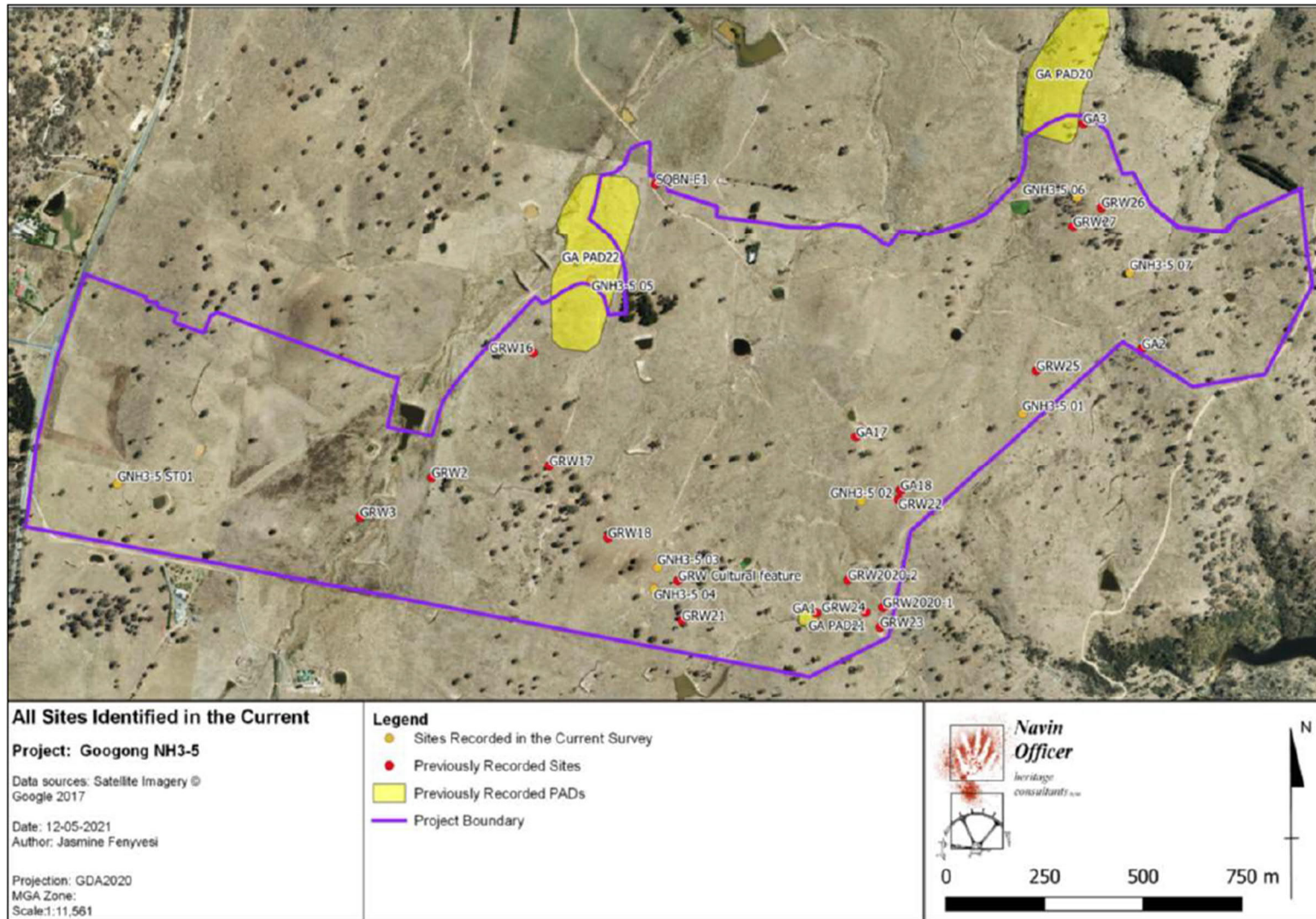
- » Locate and assess any Aboriginal sites/objects not previously recorded in the project areas

- » Continue the research program started by the Googong farming area assessment and approved AHIP No. C0001687.

The assessment found:

- » Eight previously unrecorded Aboriginal sites were located during the survey of the study area (GNH3-5 01, GNH3-5 02, GNH3-5 03, GNH3-5 04, GNH3-5 05, GNH3-5 06, GNH3-5 07, GNH3- 5 ST01).
- » Five previously recorded sites were re-found during the current investigation (GRW2020-1, GRW2020-2, GRW23, GRW24, GRW17).
- » Fifteen previously recorded sites were not relocated (GA1, GA2, GA3, GA17, GA18, GRW2, GRW3, GRW16, GRW18, GRW21, GRW22, GRW25, GRW26, GRW27, SQBN-E1)
 - > GA2, GRW2, GRW3, GRW16 and GRW22 were left in-situ as part of the farming areas collection program (NOHC 2016). These sites were not relocated in 2021;
 - > GA18, GRW16, GRW18, GRW26 and GRW27 were collected during the farming areas collection program (NOHC 2016); these sites were not relocated in 2021;
- » Three previously recorded PADs are either within or partially within Googong NH345. GAPAD22, is partially inside the study area, GAPAD21 is entirely within the study area, and GAPAD20 is partially within the study area. GAPAD20, GAPAD21, and GAPAD22 were excavated in 2014 as part of the Googong New Balance Areas subsurface testing program. No artefacts were recorded in the location of these PADs in 2021;
- » GRW Cultural Feature was recorded in 2014 as part of the Googong New Balance Areas field survey and was not relocated in 2021.

Figure 27 All Aboriginal sites and areas of archaeological potential identified within the subject area



Source: Aboriginal Cultural Heritage Assessment report - Navin Officer

Anticipated impact and mitigation actions

Table 14 below summarises each item's, anticipated impact, type of harm and the mitigation actions.

In summary, all archaeological items and sites are identified within the study area are determined as having low cultural significance as:

- » The archaeological sites identified within site have cultural significance to present-day Aboriginal groups as manifestations of their ancestors' past occupation of the landscape. However, none of the sites have any additional social or cultural value through relating to myths and stories, events of oral history or any intangible cultural values*
- » Individually all the sites and PADs within the study area are assessed as being of low scientific value due to the very low incidence of artefacts encountered at these locations. The sites and PADs have little potential to provide data that would substantially add to our understanding of Aboriginal society and land-use in this region of Australia, beyond the information they have already provided through being discovered and recorded during this study and all previous work within Googong.
- » None of the sites are judged to have substantial aesthetic value, or value as an educational resource.

* Please note: this is based on feedback with local Aboriginal groups. It should be noted that some objects and places might have cultural value that was not communicated to NOHC. This could be the case for objects or places that are associated with information that is culturally restricted.

Five sites (GA18, GRW16, GRW18, GRW26, and GRW27) located within Googong NH345 have been surface collected as part of AHIP No. C0001687. No artefacts were located at these sites during the archaeological survey for the current study. The impacts to these sites will be to the locations only and not to Aboriginal objects. It is recommended that an inspection is conducted at three of these locations (GRW16, GRW26, and GRW27) prior to impacts and surface artefacts are salvaged if required. Sites GA18 and GRW18 are located in the conservation area so no further collection works are required. An AHIP will be required to impact these site locations.

One site, GNH3-5 05, is located outside the current project boundary. Site GNH3-5 05 is located in the area currently approved for impact under AHIP No. C0001687 for Googong NH2. It is determined that these sites are at risk of impact from construction works and it is therefore likely surface artefacts will be impacted. To mitigate the damage of these activities, it is proposed that prior to the commencement of the proposed works, collection of surface artefacts at site GNH3-5 05 will be carried out.

Sites GA3, GRW18, GRW Cultural Feature, GNH3-5 01, and GNH3-5 03 are within 50 metres of the impact area and may also experience inadvertent impacts as a possible result of the construction works, these inadvertent impacts would be avoided by defining a 'no-go zone' around these sites. The borders of this zone would be clearly marked on all maps and plans used by Googong Township Pty Ltd and its contractors at all stages of construction. A physical fence will be placed on the ground to demarcate the boundaries of the no-go zone protecting the site. These two controls (administrative and engineering, respectively) are the most effective measure for ensuring that the impacts of the proposed works are kept physically separated from archaeological sites lying outside the boundary or direct development footprint of the study area.

In the case of the sites within the boundary of the study area, activities that are highly likely to directly and severely impact surface and subsurface artefacts are proposed. To mitigate the likely damage of these activities, it is proposed that prior to the commencement of the proposed works, collection of surface artefacts will be carried out on these sites. The sites that will be directly impacted by the project are:

- » GNH3-5 05
- » GNH3-5 06

- | | |
|-------------|---------|
| » GNH3-5 07 | » GRW17 |
| » SQBN -E1 | » GRW25 |
| » GA17 | » GRW26 |
| » GRW2 | » GRW2 |
| » GRW3 | |
| » GRW16 | |

Salvaged artefacts would be removed from site for the duration of the proposed works, analysed to extract information about prehistoric site use and human behaviour, and returned to country at the completion of the proposed works. Return to country would follow the return to country protocols agreed to by the RAPs for the project.

GNH3-5 ST01 sits within the proposed impact area and has been assessed by a qualified arborist. The tree has been assessed as a culturally modified tree and actions should be taken to preserve the tree. The subdivision pattern for NH345 layout has been reviewed and modified to retain GHN3-5 ST01.

No further excavations are proposed. There were three sites within the footprint of the construction area (GPAD20, GPAD21, GAPAD22) which had been assessed as having the potential for subsurface artefacts to be present. These sites have had test excavations carried out, and the subsurface artefact assemblage was found to be very sparse. It is unlikely that carrying out salvage excavations in any location within the study area would yield a large enough assemblage to be statistically useful for the purposes of studying prehistoric human behaviour. Consequently, it is unlikely that any further excavations would substantially add to the information already provided by the data obtained during this study.

Table 14 Anticipated impact and mitigation actions proposed for each Aboriginal site

| Site name | AHIMS number | Significance assessment | Portion of site | Anticipated impact | Mitigation action | Type of harm | Degree of harm | Consequence of harm |
|-------------|--------------|-------------------------|-----------------|---|--|----------------------------|----------------|---------------------|
| GNH3-5 01 | 57-2-1139 | Low | Whole | In conservation area, 33 m from development impacts. Potential for inadvertent impact | Site to remain in-situ, site to be fenced, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GNH3-5 02 | 57-2-1140 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GNH3-5 03 | 57-2-1141 | Low | Whole | In conservation area, potential for inadvertent impact | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GNH3-5 04 | 57-2-1142 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GNH3-5 05 | 57-2-1143 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GNH3-5 06 | 57-2-1144 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GNH3-5 07 | 567-2-1145 | Low | Whole | Earthworks | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GNH3-5 ST01 | 57-2-1146 | Low | Whole | Residential area and road | Scarred tree should be preserved in place or salvaged and preserved. | Will not be harmed | None | No loss of value |

| | | | | | | | | |
|----------|-----------|-----|-------|--|---|----------------------------|-------|---------------------|
| | | | | | The methodology for this should be developed in consultation with the RAPs. | | | |
| SQBN- E1 | 57-2-0280 | Low | Whole | Earthworks | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GA1 | 57-2-0368 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GA2 | 57-2-0369 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GA3 | 57-2-0370 | Low | Part | In conservation area, potential for inadvertent impact | Site to remain in-situ, site to be fenced, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GA17 | 57-2-0383 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GA18 | 57-2-0384 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW2 | 57-2-0981 | Low | Whole | Major Road | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GRW3 | 57-2-0982 | Low | Whole | Riparian Corridor/Earthworks | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |

| | | | | | | | | |
|-------|-----------|-----|-------|--|--|----------------------------|-------|---------------------|
| GRW16 | 57-2-0995 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GRW17 | 57-2-0383 | Low | Whole | Earthworks | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GRW18 | 57-2-0997 | Low | Whole | In conservation area, potential for inadvertent impact | Site to remain in-situ, site to be fences, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW21 | 57-2-0998 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW22 | 57-2-0979 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW23 | 57-2-0389 | Low | Part | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW24 | 57-2-0390 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW25 | 57-2-1001 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GRW26 | 57-2-1003 | Low | Whole | Residential are | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |
| GRW27 | 57-2-1003 | Low | Whole | Residential area | Salvage of surface artefacts | Movement (collection) only | Total | Total loss of value |

| | | | | | | | | |
|----------------------|-----------|-----|-------|--|---|--------------------|------|------------------|
| GRW2020-1 | 57-2-1126 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW20202-2 | 57-2-1125 | Low | Whole | In conservation area | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |
| GRW Cultural Feature | 57-2-1004 | Low | Whole | In conservation area, potential for inadvertent impact | Site to remain in-situ, mark on all GTPL maps and plans | Will not be harmed | None | No loss of value |

Recommendations

The ACHAR recommends the following management and mitigation strategies:

- » Where possible all sites should be avoided
- » Approval for an AHIP should be sought prior to the commencement of the proposed works
- » No further actions required at GAPAD20 and GAPAD22
- » Where an Aboriginal site is adjacent to the footprint of proposed works, and these works are judged to have the potential to inadvertently impact the site, the boundary of this site should be marked as a 'no-go zone' on all maps used by GTPL and their contractors during construction
- » Where the potential for inadvertent impacts is high, physical fences should be placed on the boundaries of the no-go zones
- » Information in this report relating to the exact location of Aboriginal sites should not be published or promoted in the public domain
- » A program of archaeological salvage (collection) should be conducted for surface Aboriginal sites listed in Table 14 prior to the commencement of the construction of Googong NH345.
- » GNH3-5 ST01 sits within the proposed impact area and actions should be taken to preserve the tree. The subdivision pattern for NH345 layout has been reviewed and modified to retain GHN3-5 ST01.
- » The methodology for site collection provided in Appendix 3 should be implemented for this collection
- » The research program into surface site impacts from farming activities detailed in NOHC 2016a and implemented as part of AHIP No. C0001687 should be continued for the Googong project
- » The protocols for the unanticipated discovery of archaeological material and suspected human remains (refer Appendix 5 of ACHAR) be implemented as necessary during activities involving ground surface disturbance and excavation
- » The ACHAR should be provided to DPIE for its information and records.

5.4 Fisheries Management Act 1994

The objective of the Fisheries Management Act 1994 (FM Act) is to conserve, develop and share the fishery resources of NSW for the benefit of present and future generations. The FM Act provides a list of threatened aquatic species that require consideration when addressing the potential impacts of a proposed development.

The study area contains aquatic habitat or riparian vegetation being Montgomery Creek and land adjacent.

The study area does not, however, support any community, species or potential habitat for any species listed pursuant to this Act, and therefore, the proposed development is unlikely to significantly affect any such species or population thereof. Accordingly, no further consideration of aquatic species and their habitat is required.

Two major vehicular crossings are proposed within NH345 at Bunyip and Gorman Drive.

The proposed Montgomery Creek crossing along Bunyip Drive will maintain the typical Sub-Arterial cross section. A reinforced concrete box culvert and headwalls will be provided in this location to connect NH3 to NH4.

The creek located beneath Gorman Drive connecting NH1 and NH5 is incised and warrants the construction of a bridge crossing. The proposed bridge will span 28m and be constructed utilising 6

1.2m deep Super T units with a cast in-situ deck slab. The cross section at the bridge will consist of 3.5m travel lanes, 1.5m cycle lanes, and 2.5m paths/verge.

Section 219 of the Fisheries Management Act requires a permit to –

- (a) *Set a net, netting or other material, or*
 - (b) *Construct or alter a dam, floodgate, causeway or weir, or*
 - (c) *Otherwise create an obstruction,*
- Across or within a bay, inlet, river or creek, or across or around a flat.*

In accordance with section 4.46 of the EP&A Act approval from the NSW Department of Primary Industries (Fisheries) to construct these crossings within NH345 is required.

The DA will be referred to the DPI (Fisheries). For further details about the proposed creek crossing, refer to the accompanying Civil Infrastructure Design Report.

5.5 Heritage Act 1977

Historical archaeological relics, buildings, structures, archaeological deposits and features with State heritage significance are protected under the Heritage Act 1977 (and subsequent amendments) and may be identified on the State Heritage Register (SHR) or by an active Interim Heritage Order.

As part ACHAR undertaken by Navin Officer for the structure planning, five sites of European heritage significance have been identified within NH345 as detailed in the table below. None of these sites were identified as being high significance or heritage listed, nor do they meet any criteria for heritage listing. Therefore, a Section 139 Excavation Permit is not required from OEH under the *Heritage Act 1977*.

Table 15 European items within NH345

| Site number | Site type | Significance | Management mitigation measures |
|----------------------|--|--|--------------------------------|
| GH6 (Hamson Land) | Fence line | Does not meet the criteria for heritage listing. | No further action required. |
| GH2 | Stone feature | Previously assessed as low. This site does not meet the criteria for heritage listing. | No further action required. |
| GRW3 | Marked tree, likely European/ surveyors mark | Does not meet the criteria for heritage listing. | No further action required. |
| GH3 | European Midden | Does not meet the criteria for heritage listing. | No further action required. |
| GH4 | Fence line | Does not meet the criteria for heritage listing. | No further action required. |

5.6 Roads Act 1993

Under Section 138 of the Roads Act 1993 consent of the appropriate road's authority is required to:

- (a) erect a structure or carry out a work in, on or over a public road, or*
- (b) dig up or disturb the surface of a public road, or*
- (c) remove or interfere with a structure, work or tree on a public road, or*
- (d) pump water into a public road from any land adjoining the road, or*
- (e) connect a road (whether public or private) to a classified road.*

A Section 138 approval is required as the proposed development involves connecting future the site to existing streets approved as part of NH1A and 1B DAs as well as connecting Bunyip Drive in NH3 to Old Cooma Road.

It is understood QPRC will be the approval authority as care and control of the streets and Old Cooma Road is vested in Council. Notwithstanding this, Transport for NSW may be consulted as part of Council's assessment.

5.7 Rural Fires Act 1997

While the subject site does not contain vegetation that has been mapped bushfire prone, surrounding lots are and, from a practical approach, the landscape is capable of carrying fire. Moreover, the proposed subdivision is in proximity to bushfire prone land as declared by QPRC.

Section 4.46 of the EP&A Act and Section 100B of Rural Fires Act 1997 requires authorisation in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes, or development of land for special fire protection purposes.

A Bushfire Constraints Assessment (BCA) prepared as part of the NH345 Structure Plan found that due to its mostly grassland setting and gentle topography the surrounding environment possesses a low bushfire threat to the subject site. This threat can be further moderated given the standard suite of protection measures offered by Planning for Bushfire Protection 2018 and for which the proposed development can comply. The future development provides good space for the establishment and maintenance of the required Asset Protection Zones.

The BCA also concluded that planned access throughout the subdivision is well provided for and given that future roads apply the standards and specifications set out with PBP 2108, will comply with the acceptable solutions. Planned services throughout the subdivisions are additionally to meet the standards and specifications set out with PBP 2019 and will be capable of complying with the acceptable solutions.

A Bushfire Assessment Report was also prepared and accompanies this application. The report assesses the capacity of the proposed residential subdivision to provide minimum bushfire protection necessary to offer life safety to the occupants and achieve the relevant performance criteria provided in PBP 2019. The proposed subdivision has been assessed and found capable of the following:

- » APZs can provide sufficient space and reduced fuel loads to ensure radiant heat levels at the building will not exceed 29 kW/m².
- » Landscaping can be managed to minimise flame contact, reduce radiant heat levels, minimise embers and reduce the effect of smoke on residents and firefighters.
- » With the aid of performance-based design, safe operational access can be provided to structures and water supplies for emergency services, while providing for evacuating residents and suitable access is provided for fire management and APZ management purposes.

-
- » Providing water for the protection of buildings during and after the passage of a bush fire, gas and electricity will be located so as not to contribute to the risk of fire to a building.

5.8 Biodiversity Conservation Act 2016

The BC Act repeals the Threatened Species Conservation Act 1995 (TSC Act), the Nature Conservation Trust Act 2001 and the animal and plant provisions of the National Parks and Wildlife Act 1974. Together with the Biodiversity Conservation Regulation 2017, the BC Act establishes a new regulatory framework for assessing and offsetting biodiversity impacts on proposed developments and clearing.

GTPL has submitted a BCAR to DPIE. DPIE are in the final stages of assessing the BCAR and it is envisaged that GTPL and DPIE will enter into a Biodiversity Certification agreement that formalises the environmental protection and mitigation commitments that underpin the BCAR.

Part of the BC Act establishes an offsets scheme that aims to ensure there is no net loss of biodiversity values. Triggers that require land clearing to enter the Biodiversity Offsets Scheme (BOS) (Biodiversity Conservation Regulation 2017 [BC Reg]) are as follows:

- » State Significant Development (SSD) - if a future development of a site is determined to be SSD, Secretary's Environmental Assessment Requirements ('SEARs') would be issued for the project, requiring that biodiversity impacts related to the proposed development be assessed using the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Application Report, and/or;
- » Clearing thresholds – the amount of native vegetation clearance in relation to the minimum lot size is used to determine whether entry into the BAM is triggered, and/or;
- » Biodiversity Values Land Map - proposed development is said to exceed the biodiversity threshold where it involves the clearing of native vegetation on land included in the Biodiversity Values Map, and/or;
- » Significant impact – A Test of Significance (in accordance with Part 7.3 of the BC Act) is required for development proposals that do not trigger the Biodiversity Offsets Scheme (BOS). If the Test of Significance indicates that there is likely to be a significant impact, the proponent must carry out an assessment in accordance with the BAM.

The proposed development is considered to trigger the Biodiversity Offsets Scheme. As such, the following Biodiversity Offset Credit calculations have been made using the Biodiversity Assessment Method (BAM) Calculator, aligning with the BC Reg.

The proposed development will involve the clearance of vegetation which generates the following ecosystem credits, as determined by the BAM Calculator on 11 March 2021.

- » PCT999 – clearance of 10.12 ha which generates 107 ecosystem credits
- » PCT1334 – clearance of 49.59 ha which generates 661 ecosystem credits

The proposed development will involve the clearance of threatened species habitat which generates the following ecosystem credits, as determined by the BAM Calculator on 11 March 2021.

- » Pink-tailed Legless Lizard *Aprasia parapulchella* – clearance of 2.63 ha which generated 31 species credits.

5.9 Water Management Act 2000

Section 89, 90 and 91 of the *Water Management Act 2000* refers to the requirements to obtain water use approval, water management work approval or a controlled activity approval to carry out particular works in, on, or under waterfront land.

The Office of Water *Guidelines for riparian corridors on waterfront land* (applicable since 1 July 2012) have been used to determine the width of the riparian corridor, objectives and allowable activities.

The riparian corridor consists of:

- » The channel which comprises the bed and banks of the watercourse (to the highest bank). In the case of this section of Montgomery Creek, the watercourse does not have a defined channel, but is a 'chain of ponds' swampy meadow
- » The Vegetated Riparian Zone (VRZ) adjoining the channel.

Montgomery Creek has been classified as a 2nd order watercourse. This requires a VRZ of 20m either side of the channel. This will give a total riparian corridor width of 40m, plus the channel width.

For a 2nd order creek the following works are allowed:

- » Riparian corridor offsetting for non-riparian corridor uses (such as Asset Protection Zones) within the outer 50% of the VRZ
- » Cycleways and pathways within the outer 50% of the VRZ
- » Online detention basins (temporary flood detention only)
- » Detention basins within the outer 50% of the VRZ
- » Stormwater outlet structures and essential services
- » Any road crossings.

Most of the proposed development is located considerably outside of the riparian corridor of Montgomery Creek. However, some proposed works will encroach into the riparian corridor, equating to total area of 2,774m²; as well as creek crossings at Bunyip and Gorman Drive. All encroachments within the riparian corridor will be offset with compensatory areas along Montgomery's Creek, equating to total area of 3,774m². The affected areas and necessary offset areas are provided for as illustrated in the Riparian Corridor Plans.

Spiire has carried out an assessment and concluded the offsets provided will conform to the riparian corridor matrix of the NSW Office of Water's Guidelines for Riparian Corridors on Waterfront Land. An application will be lodged and processed under a streamlined assessment procedure to obtain a controlled activity approval under the *Water Management Act 2000*.

5.10 State Environmental Planning Policies (SEPPs)

The proposal is consistent with all relevant SEPPs. An assessment of the proposal against relevant SEPPs is provided below.

5.10.1 SEPP (Infrastructure) 2007

SEPP (Infrastructure) 2007 aims to facilitate the effective delivery of infrastructure across the State. The following clauses are relevant to the subject application and would need to be considered as part of future DA:

- » Clause 45 contains controls relating to development that is likely to affect an electricity transmission or distribution network
- » Clause 101 provides controls relating to development with frontage to classified road
- » Clause 102 sets out controls relating to the impact of road noise or vibration on non-road development
- » Clause 104 contains controls for traffic-generating development.

Electricity transmission or distribution network

The Googong South zone substation is located at the north west corner of the site along old Cooma Road. An existing 132kV aerial transmission line extends to the south from the Zone Substation passes through the Hamson land. It is proposed this line be relocated to the Old Cooma Road buffer area, in a similar manner to the line to the north of the zone substation. Essential Energy have indicated general endorsement of this proposal.

There are also two 11kV aerial distribution feeders extending south from the Zone Substation through the Hamson land which ultimately supply Michelago and Royalla. It is proposed to relocate these power lines underground as part of the development.

The relocation of these power lines will be managed by GTPL outside of the DA process.

In any case, Council is required to give written notice to the electricity supply authority inviting any feedback about any potential safety risks and consider their feedback in accordance with Clause 45. It is understood that Council will refer this application to Essential Energy.

Frontage to classified road

NH345 is bounded by Old Cooma Road, a classified road, to the west. Old Cooma Road is classified by Transport for New South Wales (TfNSW) as a Regional Road. The proposed road cross section for Old Cooma Road will remain unchanged other than the introduction of a 3.5m auxiliary lane, 2.5m line marked median and 3.5m channelised right turn for the intersection of Bunyip Drive. Intersection details including sight distance checks and vehicle movements (swept path diagrams) are documented on Civil Infrastructure drawings prepared by Spiire and submitted with this application.

In addition, SIDRA modelling has been carried out by SCT consulting to evaluate and ensure the performance of the intersection between Old Cooma Road and Bunyip Drive. This information is available in the Traffic, Transport and Access Assessment report submitted with this DA.

Road Noise or Vibration

SLR Consulting Australia Pty Ltd (SLR) has undertaken a road traffic noise assessment for NH345. The assessment involved predicting noise from vehicles on Old Cooma Road and comparing the traffic noise levels with external noise threshold levels based on internal noise criteria described in Regulation Clause 102 of the State Environment Planning Policy (Infrastructure) 2007.

Predictions of traffic noise were made using traffic volumes for the year 2031.

The assessment found that some allotments next to Old Cooma Road are likely to be “noise affected” due to road traffic noise intrusion.

Noise barriers between Old Cooma Road and the nearest allotments were considered and it was found that barriers would only marginally reduce noise intrusion into the development site and are therefore not considered feasible or reasonable.

In relation to achieving the internal traffic noise criteria, specific acoustic treatments would not be required for any conventionally-constructed dwelling on most allotments, other than closed windows to habitable rooms for a relatively small number of allotments, which subsequently impacts on ventilation requirements to those rooms.

Dwellings on a small number of allotments facing Old Cooma Road may require acoustic facade treatments, such as upgraded glazing, however this should be confirmed when the design, size and location of the proposed dwelling(s) is known through future DAs.

Traffic generating development

The proposal meets the criteria defined in Schedule 3 of the SEPP for traffic generating development.

The subdivision is for over 200 or more allotments and includes the opening of public roads. TfNSW will be consulted in accordance with Clause 104. Consideration is also to be given to the accessibility of the site and potential traffic safety, road congestion or parking implications of the development. This is addressed at Section 6.7 of this SEE.

5.10.2 SEPP 55 Remediation of Land

SEPP 55 requires a planning authority to consider whether land is contaminated, and if so whether it is, or can be made suitable for proposed uses.

Various studies have been carried out across the whole Googong Township to identify Areas of Environmental Concern (AECs). The resultant AECs Map as well as controls are embedded in the Googong DCP (Figure 28). The DCP requires further contamination assessment and remediation of soils within these areas. There are two identified AECs in NH4 as follows (refer Figure 28):

- » AEC 5 – a sheep spray facility associated with sheep yards and shearing shed
- » AEC 6 – consisting of 5 scattered aboveground storage tanks (AST) and farm shed with drums

Geotechnique have been engaged to assess and comment on the suitability of the site for the proposed development from a contamination perspective, and to provide recommendations with regard to future works.

The findings of this assessment are as follows:

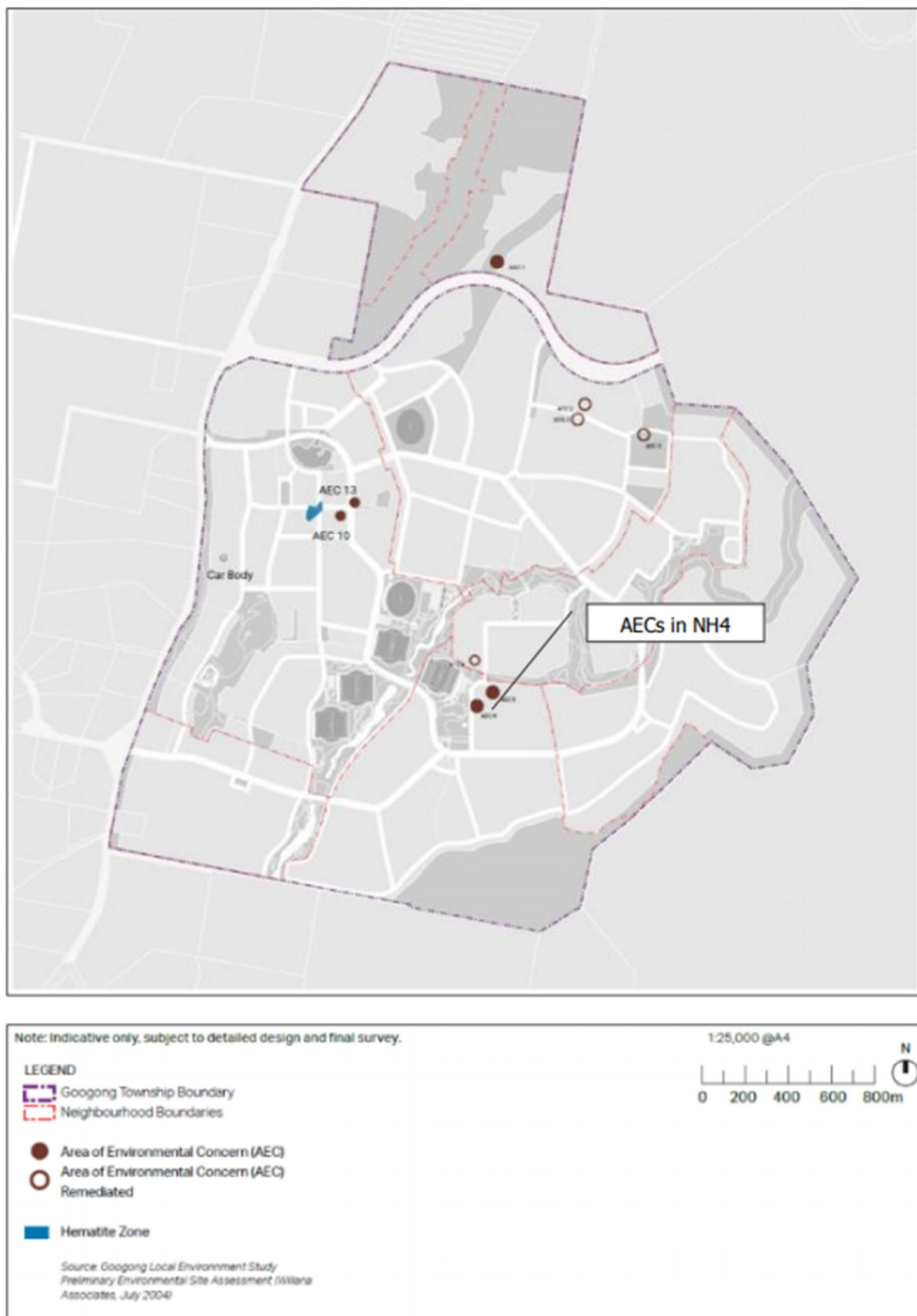
- » Following demolition and removal of 5 ASTs and associated infrastructure, other site features such as the sheds and sheep yards, and any hard stands; contamination assessment of the residual soil is required at the locations and in the vicinity of these items in AEC 5 and 6.
- » Contaminated soil/material were identified in Area 1 to Area 3 (Figure 29). For landfill disposal purposes, the contaminated soil / material to be removed from Area 1, 2, and 3 within the site are classified as “General Solid Waste (Non-putrescible)”, “Restricted Solid Waste”, and “General Solid Waste (Putrescible)” respectively.
- » Potential off-site impacts of contaminants on groundwater and waterbodies are considered to be low.
- » Remediation and validation of the site are required

The Site Contamination Assessment concludes the site is suitable for the proposed development subject to the following recommendations, to be implemented prior to commencement of physical works:

- » Assessment of soil in the footprint of site features such as the shearing shed, sheep and cattle yards, hard stands and ASTs, will be required after complete demolition and removal. In the event of contamination, detailed remediation and validation will be undertaken

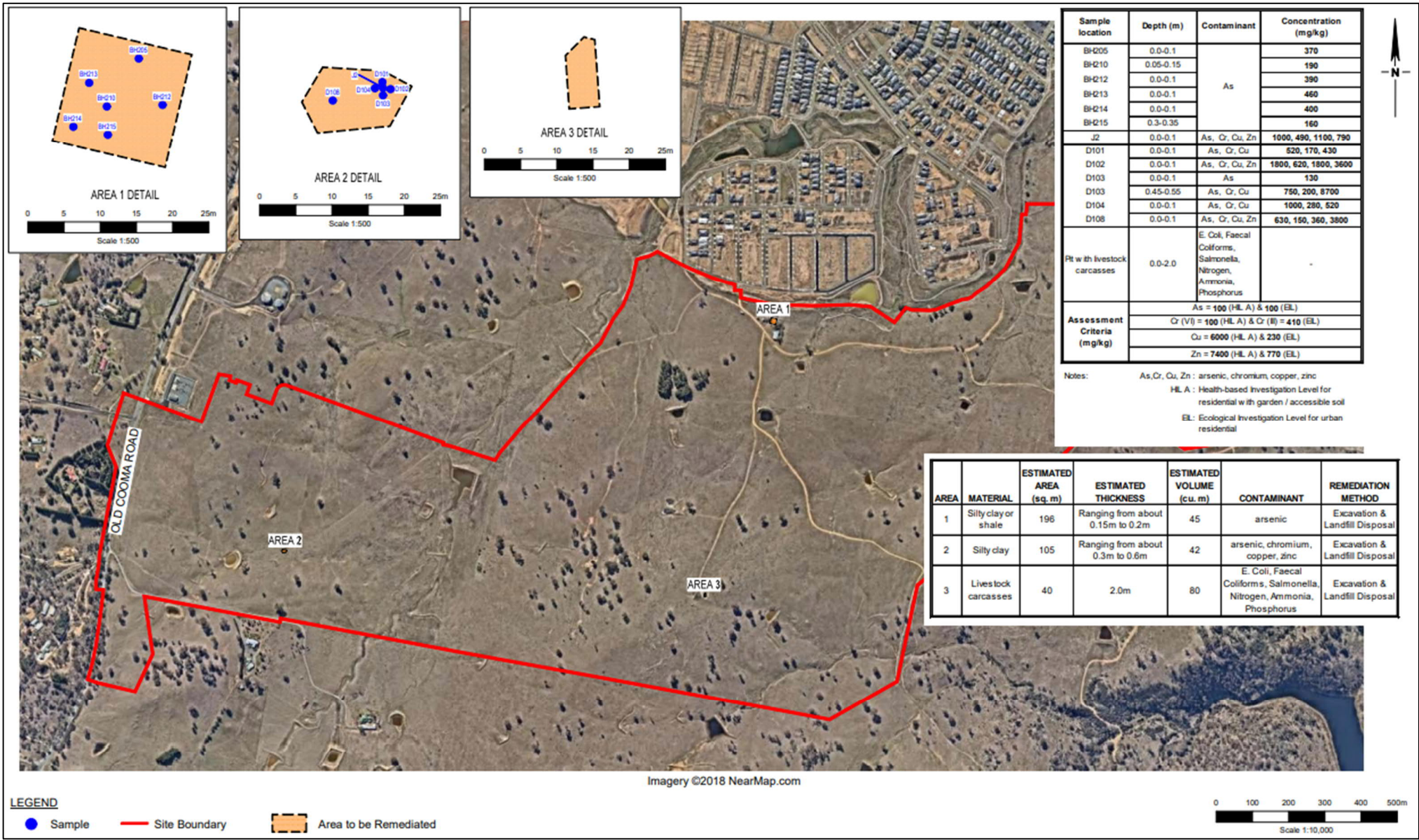
- » A Remedial Action Plan (RAP) is to be prepared to devise strategies for remediation and management of the contaminated soil/material identified in Area 1-3.
- » Site validation is to be carried out following the remediation of the contaminated areas.

Figure 28 AEC Map



Source: GDCP

Figure 29 Location of Contamination



5.10.3 SEPP (State and Regional Development) 2011

SEPP (State and Regional Development) 2011 applies to development with a CIV of over \$30 Million. The proposal is defined for the purposes of this SEPP as “Regional Development”. The EP&A Act states that the consent authority will be the Southern RPP.

The capital investment of the proposed development is estimated to be in the order of \$170 million excluding GST. The Southern RPP will be the consent authority.

5.10.4 SEPP 44 Koala Protection

This policy aims to encourage the conservation and management of koala habitat. A Biodiversity Certification Assessment Report prepared by Capital Ecology notes the following points regarding the proposed development of the subject land.

- » The subject land is located within the QPRC LGA, which is an LGA to which the SEPP 44 Koala Protection applies as listed in Schedule 1.
- » The subject land has an area of greater than 1 ha and there is no approved Koala Plan of Management.
- » The subject land supports a number of tree species listed in Schedule 2 of SEPP 44 Koala Protection. Accordingly, the subject land supports ‘potential koala habitat’.
- » Despite substantial survey effort across Googong Township, no Koala or signs of Koala have ever been detected. In addition, there are no recent records of Koalas in the locality and the species is generally not known to occur in the lowland agricultural lands of the Queanbeyan-Palerang Regional LGA. The closest Koala record, from 1984, is approximately 1.6 km to the north-east of the subject land. Following that, the next closest records are approximately 7.5 km to the north-east of the subject land.

With regard to the above and with respect to SEPP 44 Koala Protection, the subject land is therefore considered unlikely to constitute important or occupied koala habitat now or in the future.

In light of the above, QPRC can be satisfied that the subject land is not koala habitat, and it is therefore not prevented by SEPP 44 Koala Protection from granting consent to a development application within the subject site.

5.11 Queanbeyan Local Environmental Plan 2012




Queanbeyan Local Environmental Plan 2012 (QLEP 2012) is the principal environmental planning instrument applying to the subject site.

An assessment against the relevant provisions of the QLEP 2012 is provided below.

Table 16 Assessment against QLEP 2012

| Assessment against QLEP Controls | Complies |
|--|----------|
| Part 1 Preliminary | |
| 1.2 Aims of the Plan | |
| The proposed development is generally consistent with the aims of the QLEP. The proposal will: | ✓ |
| » Facilitate the orderly growth of the urban release area in Googong in a staged manner that promotes a high level of residential amenity | |
| » Deliver additional range of housing allotments | |
| » Respect and celebrate the Aboriginal and heritage attributes of the site through protection of scar tree and use of signage and public art | |

| Assessment against QLEP Controls | Complies |
|--|----------|
| <ul style="list-style-type: none"> » Protect and enhance the environmental qualities of the site and corridor and surrounding areas including the Queanbeyan River and Jerrabomberra Creek by restricting development within the Montgomery's Creek and the riparian corridor, WSUD and replanting of endemic vegetation » Enhances view corridors through the subdivision layout, location of roads along depression points and open space links. | |
| Part 2 Permitted or prohibited development | |
| Land use zoning and permissibility | |
| <p>Permissibility of uses</p> <p>The majority of NH345 is zoned R1 General Residential except for:</p> <ul style="list-style-type: none"> » Land comprising Montgomery Creek and the adjacent riparian corridor zoned RE1 <i>Public Recreation</i> » Land to the east and north-east partly zoned R5 <i>Large Lot Residential</i> and partly zoned E2 <i>Environmental Conservation</i>. » Land to the south zoned E2 <i>Environmental Conservation</i>. <p>The LEP overlay maps submitted with this DA show the extent of the proposed works, boundaries of NH345 and the area affected by this application in relation to the applicable land use zoning.</p> <p>The proposal, that is mainly concerned with land zoned R1, seeks Council's approval for subdivision works to create mainly residential lots, other amenities such as future neighbourhood centres and open space areas and infrastructure works such as roads and drainage basins. This DA seeks approval to undertake works to prepare land and provide infrastructure for the future building works that will be subject of separate approvals.</p> <p>Development within RE1 zone will comprise of revegetating areas and construction of boardwalks pathways, creek crossings (road works and water pipes) and stormwater management facilities.</p> <p>16 lots of the proposed subdivision are on the boundary of the E2 zoned land. Considering development for the purpose of residential accommodation is not permitted in E2 zoned land, these lots are not proposed for residential use under this DA. Rather, they will need to await the gazettal of the imminent LEP Amendment and seek approval as residential lots at that point.</p> <p>Part lots of residual lot 2 are affected by R5 zoning. The use of this land for open space and residential purposes is subject to future approvals.</p> <p>All proposed development, as explained above, is permitted with consent under the relevant zones.</p> | ✓ |
| Consistency with zone objectives | |
| <p>The proposal is consistent with the objectives of zone R1 in that:</p> <ul style="list-style-type: none"> » Delivers a variety of lot sizes and types, to suit individual household needs, preferences and budgets. » Medium density housing is provided within proximity to town centre to support the proposed retail and community uses and to encourage activity and vibrancy. » The proposed open space, public domain and associated landscaping works, provision of pathways, walking tracks and bicycle paths provide places for social interaction and exercise, promote walkability, active and healthy lifestyles and a sense of community. » Provides a variety of facilities and services such as recreational and community centres to meet the day to day needs of the residents and visitors. » Compatibility of bulk and scale of non-residential uses with the surrounding residential buildings for future DAs will be achieved through compliance with LEP requirements. | |

| Assessment against QLEP Controls | Complies |
|---|---|
| <p>» Existing valuable bushland, in accordance with the advice provided by the relevant technical reports submitted with this application is maintained and used for open space purposes.</p> <p>The proposal is consistent with the objectives of zone RE1 in that:</p> <p>» Montgomery's Creek and its corridor's natural environment will be protected and celebrated as an important environmental resource</p> <p>» The RE1 zoned land and the adjacent area will provide space for both active and passive recreational pursuits.</p> <p>The proposal is consistent with the objectives of zone R5 in that:</p> <p>» Part lots affected by zone R5 will be used for residential and open space purposes subject to future approvals. The whole NH5, where the affected lots are located, provides residential housing in a semi-rural setting with scenic qualities towards east and south where the existing bushland is generally preserved.</p> <p>» The technical studies prepared for this DA show the proposed infrastructure network satisfy the demand that will be generated by future development of NH345 including R5 zone area.</p> <p>» The development of the R5 zone land for residential purposes is compatible with the R1 zone to the north and the R5 and E2 to the south where open space areas are located.</p> <p>The proposal is consistent with the objectives of zone E2 in that:</p> <p>» No residential or building works are proposed to protect ecological, scientific and aesthetic values of land, threatened species and ecosystems, visual qualities of scenic areas and the water quality in the catchment area.</p> | |
| 2.6 Subdivision – consent requirements | |
| This application seeks consent to subdivide the land in accordance with Clause 2.6. |  |
| Part 4 Principal Development Standards | |
| 4.1 Minimum subdivision lot size | |
| <p>The minimum lot size for the subdivision of land under Torrens Title or Community Title under Clause 4.1 is as follows:</p> <p>» Area D: 330m². This area generally co-locates with land zoned R1</p> <p>» Area M: 600m². This area is the linear section along the southern and western boundaries of NH3 that co-locates the land zoned R1.</p> <p>» Area Y: 15,000m². This area is mainly zoned R5 and partly E2 to the east and north east corner of the site</p> <p>» Area AC: 80 hectares. This area is entirely zoned E2.</p> <p>The residential lots proposed within Area D comply with the minimum lot size of 330m².</p> <p>81 lots in Area M, south west corner of the site, are smaller than the 600m² requirement for the area. This non-compliance issue has been addressed in the accompanying Clause 4.6 report.</p> <p>The lots located in Areas Y and AC comply with the minimum lot size requirements. The Boundary Adjustment plans prepared by Lonergan Surveyors show parts in residual lots that comply with the minimum lot size requirements.</p> <p>Refer to accompanying Boundary Adjustment plans, LEP overlay plan and the clause 4.6 variation statement for further details.</p> |  |
| 4.1D Variation to minimum lot size |  |
| <p>Clause 4.1D allows for variation to the minimum lot size within the Additional Development Area (neighbourhood centres) to 130m². Proposed super lots will be subject to future DAs for small lot housing and will be required to comply with this clause.</p> | |

| Assessment against QLEP Controls | Complies |
|--|----------|
| 4.6 Exceptions to development standards | |
| <p>Objective of this clause is to provide an appropriate degree of flexibility in applying certain development standards to particular development in circumstances where that particular development contravenes a development standard but this contravention can be justified in accordance with the requirements established under subclauses 3 and 4 of this clause.</p> <p>The proposed subdivision does not satisfy the minimum lot size requirement of 600m² applicable to the areas along the western and southern boundaries of NH3. This contravention has been justified through the submission of a clause 4.6 variation statement that accompanies this DA (refer above clause 4.1)</p> | ✓ |
| Part 5 Miscellaneous provisions | |
| 5.10 Heritage conservation | |
| <p>Clause 5.10 aims to conserve the environmental heritage of the Queanbeyan LGA.</p> <p>Under Clause 5.10 and Schedule 5, there is a local heritage item Googong Shearing shed complex (Item number 178) located within NH4.</p> <p>The heritage advice from both Council and the heritage conservation plan prepared by GTPL confirm that most of the heritage fabric has been lost and the remainder of the structures on site have no significance.</p> <p>GTPL have requested QPRC to lift the heritage constraint on the lots affected by the Heritage Item. QPRC Heritage Advisory Committee (HAC) agreed, in its meeting on 15 July 2021, to delist the Googong Woolshed as a local heritage item from the Heritage Schedule of QLEP 2012 subject to a number of conditions as follows:</p> <ol style="list-style-type: none"> 01. The design and provision of an appropriate interpretive feature, to be agreed by Council's Heritage Advisor, being located in the proposed Common close to the current position of the existing shearing shed and yards. 02. The woolshed being relocated to the proposed nearby playing fields and adapted as a functional facility for community use such as a picnic shelter or roofed viewing platform. 03. The woodshed machinery being preserved in situ as part of the adaptive reuse of it. 04. The farming machinery scattered around the farm being used as elements in the interpretive feature on the new site. <p>Council in its ordinary meeting of 28 July 2021 noted the minutes of the Heritage Advisory Committee and resolved to adopt the above recommendations.</p> <p>GTPL would not object to the imposition of conditions of consent seeking satisfaction with the GTPL responses to the HAC recommendations (included in Table 21 of section 6.9) as part of the approval for this DA.</p> | ✓ |
| Part 6 Urban release areas | |
| <p>Part 6 contains provisions for infrastructure and other specialist controls for release and development of land Urban Release Areas (URAs). Googong is mapped in the Urban Release Area Map as an URA and has therefore been assessed against the following provisions of Part 6:</p> | |
| 6.1 Arrangements for designated State and Territory public infrastructure | |
| <p>Clause 6.1 ensures arrangements have been made for the provision designated State and Territory Infrastructure. All necessary state infrastructure requirements have been agreed to in an executed State Planning Agreement on 15 September 2011. The State Planning Agreement makes provisions for schools and a fire station at Googong. One school site has been provided in NH1 and the remaining school site and fire station will be provided in NH2.</p> | ✓ |

| Assessment against QLEP Controls | Complies |
|--|----------|
| 6.2 Public utility infrastructure | |
| <p>Clause 6.2 requires the provision of public utility infrastructure, or arrangements to be made to provide public utility infrastructure, prior to development consent being granted in an URA.</p> <p>A Local Planning Agreement has been approved and signed by Council for the provision of public utility infrastructure; refer to Section 5.13.2 of this SEE for further details.</p> <p>Approval for a Water Treatment Plant and associated infrastructure to service Googong township has been granted under (the now repealed) Part 3A of the EP&A Act.</p> | ✓ |
| 6.3 Development control plan | |
| <p>Clause 6.3 outlines the requirements to prepare a DCP for development relating to URAs. In accordance with this clause, Googong DCP has been adopted by Council.</p> <p>The proposed development has been assessed against the provisions of Googong DCP. Refer to Section 5.12 and Appendix A of this SEE.</p> | ✓ |
| 6.5 Development near Googong Dam foreshores | |
| <p>Clause 6.5 seeks to protect Googong Dam water supply catchment from inappropriate development that may compromise water supply and quality. Land along the southern and eastern boundary of NH4 and NH5 identified as "Googong Foreshore Buffer Area" on the Googong Map and is subject of the Googong Foreshores Interface Management Strategy (GFIMS) prepared by Biosis Research (2013). The clause specifies certain requirements that must be satisfied for the erection of any buildings on this land.</p> <p>A variety of measures will be implemented as part of a development consent for future dwellings and management in the future to ensure that Googong Dam water supply catchment is not compromised. These can be enforced through the imposition of conditions that are consistent with the GFIMS.</p> | ✓ |
| Part 7 Additional local provisions | |
| 7.1 Earthworks | |
| <p>Clause 7.1 relates to the carrying out of earthworks. The objective of the clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.</p> <p>A description of the proposed earthworks is provided at Section 4.5.3 of this SEE. A detailed assessment against the provisions of this clause in Section 5.11.1 below.</p> | ✓ |
| 7.3 Terrestrial biodiversity | |
| <p>Clause 7.3 applies to land identified as "Biodiversity" on the QLEP 2012 Terrestrial Biodiversity Map.</p> <p>The objective of this clause is to maintain terrestrial biodiversity by protecting native fauna and flora, protecting the ecological processes necessary for their continued existence, and encouraging the conservation and recovery of native fauna and flora and their habitats.</p> <p>Parts of the subject land are identified on the Queanbeyan LEP Terrestrial Biodiversity Map. These areas correspond to Montgomery Creek and its unnamed tributaries which either pass through or originate in the study area.</p> <p>A detailed assessment against the provisions of this clause is provided in Section 5.11.2 below.</p> | ✓ |
| 7.4 Riparian land and watercourses | |
| <p>Clause 7.4 applies to land identified as "Watercourse" on the QLEP 2012 Riparian Lands and Watercourses Map, as well as all land that is within 40 metres of the top of the bank of each watercourse.</p> | ✓ |

| Assessment against QLEP Controls | Complies |
|--|----------|
| <p>The objective of this clause is to protect and maintain the following:</p> <ul style="list-style-type: none"> » Water quality within watercourses, » The stability of the bed and banks of watercourses, » Aquatic and riparian habitats, » Ecological processes within watercourses and riparian areas. <p>Most of the proposed development is located considerably outside of the riparian corridor of Montgomery Creek. However, some proposed works will encroach into the riparian corridor.</p> <p>The proposed development satisfies the objectives and controls of Clause 7.4 as it has been designed to minimise any adverse impact on the Montgomery's Creek watercourse (including, but not limited to, the water quality, flows, banks and ecosystems). The true path and width of the riparian corridor of Montgomery Creek has been ground-truthed to ensure the proposed works do not have any adverse impacts on the corridor. The Stormwater report submitted with this application provides further details in relation to this assessment and states: <i>Googong NH345 includes works on Waterfront Land, and therefore a Controlled Activity Approval will be required from NRAR prior to commencement of works.</i></p> <p>As noted above, appropriate measures have been made to ensure:</p> <ul style="list-style-type: none"> » Encroachments into the riparian corridor are in accordance with the NSW Office of Water 'Guidelines for riparian corridors on waterfront land' (2012). Riparian areas are to be revegetated in accordance with the guidelines and any offsets required will be provided along Montgomery Creek. » The proposal is identified as Integrated Development and is being referred for approval under the <i>Water Management Act 2000</i>. | |
| 7.6 Airspace operations | |
| <p>Clause 7.6 requires Council to consult with the relevant Commonwealth body about an application if it is satisfied that the proposed development will penetrate the Limitation or Operations Surface for the Canberra Airport.</p> <p>The objectives of this clause are to provide for the effective and ongoing operation of Canberra Airport by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport and to protect the community from undue risk from that operation.</p> <p>An Airspace Submissions Plan has been prepared by Lonergan Surveyors and accompanies this SEE to aid in this consultation.</p> | ✓ |
| 7.9 Essential services | |
| <p>Clause 7.9 states that development consent must not be granted unless the consent authority is satisfied that essential infrastructure services are available, or that adequate arrangement have been made to make them available when required.</p> <p>The provisions of all essential services to the satisfaction of QCC will be provided as part of the DA to create the subject lots. Refer to Section 4.4.3 of this SEE which outlines the essential services required to be provided, and an explanation of how these services have been addressed for the proposed development. Refer to the following reports for more information: Civil Infrastructure Report, Stormwater Report, and Traffic Assessment.</p> | ✓ |
| Schedule 1 Additional permitted uses | |
| <p>Schedule 1 of the LEP identifies additional permitted uses within certain areas of Googong:</p> <ul style="list-style-type: none"> » Clause 4 permits the following uses with consent within the Additional Development Areas (neighbourhood centres): advertising structures, business identification signs, business premises, food and drink premises, hotel or motel accommodation, kiosks, markets, office premises, service stations and shops | ✓ |

| Assessment against QLEP Controls | Complies |
|--|----------|
| <ul style="list-style-type: none"> » Clause 5 permits the following uses with consent within the Googong Common: Cellar door premises, depots, entertainment facilities, function centres, garden centres, horticulture, landscaping material supplies, plant nurseries, resource recovery facilities, viticulture, waste or resource transfer stations and water recreation structures is permitted with development consent » Clause 5a permits the erection of a studio dwelling subject to certain requirements within the Additional Development Areas. | |

5.11.1 Clause 7.1 Earthworks

The extent of the proposed earthworks is summarised in Section 4.5.3 of this SEE and detailed in the accompanying Civil Engineering and Utilities Design Report and Drawings.

The following table provides a detailed assessment against subclause 3 of Clause 7.1 Earthworks in the QLEP 2012.

Table 17 Assessment against Clause 7.1 Earthworks – QLEP 2012

| QLEP 2012 Clause 7.1 | Assessment of compliance |
|---|--|
| <i>(3) Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters—</i> | |
| <i>(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,</i> | Urban Capability Investigations undertaken in support of the Structure Plan for NH345 indicated the subsurface conditions generally comprised of silty/sandy topsoils underlain by shallow rock or else silty and clayey soils with some sand and gravel overlying weathered rock. |
| <i>(b) the effect of the development on the likely future use or redevelopment of the land,</i> | The Investigation indicated that the majority of the site is suitable from a geotechnical perspective for residential development. Further Geotechnical testing and detailed assessment is to be undertaken and submitted to Council in respect of the proposed residential subdivision, subject of this application. |
| <i>(c) the quality of the fill or the soil to be excavated, or both,</i> | There are two AECs located within the site boundaries. These sites will be remediated in stages before development occurs. Refer to Section 6.3 for further information. |
| <i>(d) the effect of the development on the existing and likely amenity of adjoining properties,</i> | The potential effects of the proposed development on the surrounding environment have been considered and assessed as part of the environmental assessment. Refer to Section 6 of this SEE. |
| <i>(e) the source of any fill material and the destination of any excavated material,</i> | If imported material is brought to the site will be compatible with the existing soil characteristics of the site and fit for the intended use being under roads, open space or other use. The destination of excavated surplus material from the site would be within approved earthworks in Googong. |
| <i>(f) the likelihood of disturbing relics,</i> | As outlined in Section 5.3, Aboriginal objects or artefacts have been identified and will be collected as part of the AHIP process. However, if any additional artefacts or objects are identified during excavation, a Construction |

| QLEP 2012 Clause 7.1 | Assessment of compliance |
|--|--|
| | Management Plan will provide guidance on the management of these finds. |
| <i>(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,</i> | Appropriate soil controls measures will be implemented to ensure there are no adverse impacts on the surrounding waterways, catchments or environmental sensitive areas. These will be implemented through the Construction and environmental management plan process (post-development approval). |
| <i>(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development,</i> | |
| <i>(i) the proximity to and potential for adverse impacts on any heritage item, archaeological site, or heritage conservation area.</i> | <p>The ACHAR found that all archaeological items and sites identified within the study area are determined as having low cultural significance. An AHIP will be sought prior to commencement of the proposed development works. Refer Section 5.3 of this SEE.</p> <p>Five European heritage sites of significance were identified in the site; however none have been identified as having high significance, nor do they meet any criteria for heritage listing. Therefore, a Section 139 Excavation Permit is not required from OEH under the <i>Heritage Act 1977</i>.</p> |

5.11.2 Clause 7.3 Terrestrial biodiversity

Clause 7.3 applies to land identified as “Biodiversity” on the QLEP 2012 Terrestrial Biodiversity Map. Parts of the subject land are identified on the Queanbeyan LEP Terrestrial Biodiversity Map. These areas correspond to Montgomery Creek and its unnamed tributaries which either pass through or originate in the study area.

The objective of this clause is to maintain terrestrial biodiversity by protecting native fauna and flora, protecting the ecological processes necessary for their continued existence, and encouraging the conservation and recovery of native fauna and flora and their habitats.

Pursuant to Sub Clause (3) Before determining a development application for development on land to which this clause applies, the consent authority must consider—

- (a) whether the development is likely to have—*
 - (i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and*
 - (ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and*
 - (iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and*
 - (iv) any adverse impact on the habitat elements providing connectivity on the land, and*
- (b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*

The development of Googong Township has been under consideration since the early 2000s. Following site surveys and consideration of the values present in locality, the location of Googong Township was chosen as the native vegetation and threatened species habitat it supported were found to be in a lower condition when compared to the surrounding properties. Within Googong Township itself, the location of the urban development area was chosen to avoid impacts to significant ecological values, in particular the Pink-tailed Worm-lizard. As a result, the PTWL Conservation Area was established in 2013.

The Subject Site is located in an area which has been historically cleared and substantially disturbed by grazing. In addition the design of the proposed residential subdivision has been changed to reduce impacts on high

biodiversity values (e.g. reducing impacts on Pink-tailed Worm-lizard habitat and remnant trees by incorporating 63.75 ha of open space and natural areas and creating a 10.96 ha reserve managed for conservation).

Since the Structure Plan was approved and as a consequence of the BCAR process, the large NH4 Reserve has been incorporated into the layout to protect significant vegetation.

The proposed development therefore largely avoids the parts of the study area which contain high quality vegetation and/or which support potentially important threatened species habitat and is considered to adequately address matters for consideration under Clause 7.3.

Refer to Section 6 of this SEE and the accompanying Landscape Design Report and Flora and Fauna Assessment for further detail.

5.12 Googong and Queanbeyan Development Control Plans

The Googong Development Control Plan (GDCP) contains objectives and planning controls for development within the Googong Township to provide guidance to applicants proposing to undertake development. The Googong DCP is the prevailing DCP applying to Googong and is taken into consideration by Council when assessing applications in Googong.

However, the GDCP is to be read in conjunction with the following sections of the Queanbeyan DCP (QDCP):

- » Part 1
- » Part 2 Sections: 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.9 and 2.10.

The proposed development has been assessed against the relevant provisions of the GDCP and QDCP.

The proposed development generally complies with the overarching vision for Googong Township and the controls within the GDCP and QDCP.

A detailed compliance table indicating the proposal's compliance with the relevant controls in the GDCP and QDCP is provided in Appendix A.

5.13 Planning Agreements

Section 4.15 of the EP&A Act requires a consent authority to take into consideration the provisions of any planning agreement entered into under section 7.4 in determining a development application.

Two planning agreements currently apply to Googong Township:

- » State planning agreement, executed on 15 September 2011 by Minister for Planning and Environment
- » Local planning agreement, executed on 12 January 2012 by Council.

5.13.1 State Planning Agreement

The 'Googong State Development Agreement' (SPA) was executed on 15 September 2011 by Minister for Planning and Environment.

The agreement is between GTPL and NSW Government to deliver facilities and the associated land components. All elements of this agreement will be delivered in NH1 and NH2, this includes land for two school sites and land for a fire station.

5.13.2 Local Planning Agreement

The 'Googong Urban Development – Local Planning Agreement' (LPA), was executed on 12 January 2012 by Council. The agreement has been made with Council for the provision of public infrastructure on behalf of Council to, and at, the development including roads, open space, community facilities and sewer and water services.

In summary, the Structure plan for NH345 made provision for the dedication of land required under the local VPA. Works will be completed as part of a future applications and ongoing management.

This DA will trigger the delivery of a range of infrastructure under the Local Planning Agreement. The items required to be delivered have been provided and are detailed in Appendix B.

This DA will also trigger the payments of monetary contributions per lot registered for infrastructure items in the Local Planning Agreement.

6 Assessment of likely impacts

The following provides an assessment of the likely impacts of the development.

The impacts of proposed development have been investigated during the Local Environmental Study (2004) and preparation of the Googong Master Plan, GDCP and the NH345 Structure Plan.

Further assessment has been carried out to support this SEE with a range of mitigation measures incorporated into the DA drawings/plans for approval.

6.1 Landscape Design report

The broader Googong development site has had a history of disturbance including significant agriculture and grazing that resulted in minimal original vegetation left on site. The existing vegetation is sparse, consisting of some screen planting along Old Cooma Road and scattered low trees on the remainder of the site.

The broader Googong site is very exposed and has little shelter provided by vegetation or landform. Trees in the general locality show evidence of exposure, and wind rows/shelter belts have previously been established to lessen the impact of the prevailing winds on the properties.

There is a corridor of vegetation to the north of the site which is recognised as a significant regional ecological corridor. The indigenous vegetation community has informed the plant community mix for the development.

The unique ecological and geomorphological qualities of the site have informed the design character. Strong themes are drawn from these existing qualities of site and surrounding region. This report provides design principles for NH345. The Googong vision is to *create a high quality, sustainable landscape with a distinctive character and diverse range of open space areas and facilities for the enjoyment and wellbeing of Googong Township's residents*.

Page 7 of the report lists the site's constraints and opportunities that inform and support the key landscape design principles. These principles celebrate the natural assets of the site and facilitate the implementation of the landscape design vision that is *to create a high quality, sustainable landscape with a distinctive character and diverse range of open space areas and facilities for the enjoyment and wellbeing of Googong Township's residents*.

A number of these design principles are:

- » Formation of attractive, safe and sustainable streetscapes that reduce car dependency.
- » Water sensitive urban design principles applied throughout the neighbourhoods.
- » The promotion of active lifestyles and respect for the environment.
- » To integrate the principles of the Googong Public Art Strategy into the design of open space components.

In addition to the above design principles, particular attention has been given to environmentally and socially sustainable outcomes and best practices such as use of recycled water for open space irrigation, onsite water treatment and solar powered lighting and community services such as growers' markets.

The smart cities initiatives integrated into the design and construction of NH 2 will be extended to NH345 open spaces.

The proposed active transport network provides equal and safe access to the public domain for both pedestrians and cyclists and is designed to comply with the relevant Australian Standards and the objectives and controls of the Googong DCP. The existing opportunities to integrate internal circulation with existing external networks, in particular, those walking trails associated with the Googong Dam have been investigated and considered in the proposed landscape design scheme.

The artwork opportunities map marks a few areas within NHs 3,4 and 5 where artwork with Aboriginal and European historical themes can be installed. The proposal aims to tell the story of Googong through public art that will be prepared and installed in accordance with *Googong Public Art Strategy* requirements.

The principles of signage (location and types) are to be continued as developed in NH1 and NH2.

Streetscape design principles are formed based on environmentally sustainable targets such as preserving the natural ecology by nominating locally endemic and low maintenance species, tackling the heat island effect by planting deciduous trees, satisfying WSUD requirements by implementing central swales in the median of major roads and creating a sense of character through suitable planting. A detailed description of the proposed street planting and different open space and playground typologies are provided in the report.

Open Space design principles, as part of the landscape plan, focus on:

- » providing appropriate level of passive surveillance while allowing for a variety of recreational and sporting opportunities,
- » enhancing ecological and hydrological functions (natural systems) within Googong through integrated stormwater system and supporting native flora and fauna habitats,
- » appreciating both indigenous landscape and European heritage through protection and celebration of culture and artefacts.

A detailed analysis of the proposed open space features for this DA and the previous NH1B and NH2 against the LPA requirements is provided in the report. Considering the Googong Common that provides a large variety of open space facilities will be finalised as part of the development of NHs 1B and 2, these shared facilities can service future residents of NHs 3, 4 and 5.

Various entries to NHs 3, 4 and 5 from either Old Cooma Rd or NHs 1B and 2 are treated individually through different landscaping to emphasise the importance of each entry without competing against the others.

The landscape design report and the associated plans provide a solid framework for the delivery of open space within NHs 3, 4 and 5 through preserving and enhancing the existing natural values on site. Key potential environmental issues that are mitigated through different aspects of the proposed landscape design are:

- » Stormwater quality will be enhanced through bioretention systems, onsite detention and stormwater harvesting to limit post-development changes in flow rate and duration to protect the receiving environments (i.e. minimising bank erosion of water courses).
- » The proposed Integrated Water Cycle Management Plan (IWCMP) aims to target greater than 60% saving in potable water use and up to 80% recycling of wastewater.
- » Where significant trees are nominated for retention, the open spaces and site grading have been designed to avoid any change to existing ground levels within the dripline of the existing canopies and to minimise disturbance to tree roots.
- » Key areas suitable for specific habitat creation and existing trees to be protected and retained within the development are investigated and shown on the relevant maps contained in the report.

The report also provides measures for gradual water and vegetation management on site to ensure the development is compliant with the applicable requirements throughout the construction and delivery stages.

6.2 Flora and fauna (Biodiversity Certification Assessment report)

Part 2 of the BCAR provides an assessment of the impacts of the proposed development as a result of the proposed development. Page 88 of the BCAR lists the direct impacts of the proposed development on native and exotic vegetation and habitat. These impacts are detailed below.

Native vegetation and threatened species habitat

The proposed development will result in the clearance of 118.73 ha of BC Act native vegetation, 53.59 ha of which meets the criteria of BC Act Box-Gum Woodland and 2.63 ha of which supports Pink-tailed Worm-lizard habitat. More specifically, the proposed development will result in the clearance of the following.

- » PCT999 – Norton's Box – Broad-leaved Peppermint open forest on foot slopes, central and southern Eastern Highlands Bioregion
 - > 1.26 ha of PCT999 Zone 1 – moderate diversity, native dominant remnant vegetation (BC Act native vegetation)
 - > 7.77 ha of PCT999 Zone 2 – low diversity, native dominant remnant vegetation (BC Act native vegetation)
 - > 0.08 ha of PCT999 Zone 3 – moderate diversity, native dominant derived grassland (BC Act native vegetation)
 - > 55.02 ha of PCT999 Zone 4 – low diversity, native dominant derived grassland (BC Act native vegetation)
 - > 1.01 ha of PCT999 Zone 5 – low diversity, exotic dominant remnant vegetation (BC Act native vegetation)
- » PCT1334 – Yellow Box grassland woodland of the northern Monaro and Upper Shoalhaven area, South Eastern Highlands Bioregion
 - > 5.04 ha of PCT1334 Zone 2 – low diversity, native dominant remnant vegetation (BC Act native vegetation, BC Act Box-Gum Woodland)
 - > 48.55 ha of PCT1334 Zone 4 – low diversity, native dominant derived grassland (BC Act native vegetation, BC Act Box-Gum Woodland)
- » Threatened species habitat
 - > 2.63 ha of Pink-tailed Worm-lizard habitat (BC Act vulnerable, EPBC Act vulnerable), located in PCT999 Zones 1 to 5 and PCT1334 Zones 2 and 4
- » Hollow bearing trees
 - > 208 mature remnant trees, 49 of which contain at least one functional hollow

The subject supports PCT1334, an ecological community which is listed as a serious and irreversible impacts (SAII) entity. The proposed removal of 53.59ha could result in a SAII on BC Act listed entity due to an assessment of:

- » The action and measures taken to avoid the impact on the potential entity for an SAII;
- » The area and condition of the TEC to be impacted by the proposed development;
- » A description of the extent to which the impact exceeds the threshold for the potential entity that is specified in the Guidance to assist a decision maker to determine impact;
- » The extent and overall condition of the potential TEC within an area of 1000ha and then 10,000ha surrounding the proposed development footprint;
- » An estimate of the extent area and overall condition of the potential TEC remaining in the IBRA subregion before and after the impact of the proposed development has been taken into consideration;
- » An estimate of the area of the potential TEC that is in the reserve system within the IBRA region and the IBRA subregion
- » The development's impact on:
 - > Abiotic factors critical to the long-term survival of the potential TEC;
 - > Characteristic and functionally important species;

- > the quality and integrity of an occurrence of the potential TEC through threats and indirect impacts;
- » fragmentation and isolation of an important area of the potential TEC;
- » the measures proposed to contribute to the recovery of the potential TEC in the IBRA.

These matters for consideration are discussed in the accompanying BCAR.

The proposed development will not result in any other direct impacts on native vegetation or threatened species habitat and is unlikely to result in biodiversity impacts that are unforeseen or uncertain.

Exotic vegetation

The proposed development will also result in the clearance of the following.

- » OCT999 – Norton’s Box – Broad-leaved Peppermint open forest on foot slopes, central and southern South Eastern Highlands Bioregion
 - > 10.25 ha of PCT999 Zone 6 – low diversity, exotic dominant derived grassland
- » PCT1110 – River Tussock – Tall Sedge – Kangaroo Grass moist grasslands of the South Eastern Highland Bioregion
 - > 9.53 ha of PCT1110 Zone 1 – low diversity, exotic dominant grassland
- » PCT1334 – Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern Highlands Bioregion
 - > 11.54 ha of PCT1334 Zone 6 – low diversity, exotic dominant derived grassland

Avoidance and Minimisation

The location of the future Googong Township was identified by the Johnston Centre (2004) as supporting substantial expanses of moderately to highly disturbed agricultural land considered unlikely to be of value to threatened flora and fauna. Within Googong Township itself, the location of the proposed development area was chosen to avoid impacts to significant ecological values, in particular the PTWL. The location of the proposed development contained in this SEE was informed by previous ecological investigations of the study area and surrounding land, and as a result are located in parts of the site which have been historically cleared and substantially disturbed by intensive grazing. In addition, the design of the proposed development has been modified to reduce impacts on high biodiversity values. The proposed development therefore has been located to avoid parts of the study area which contain high quality vegetation and/or which supports potentially important threatened species habitat.

As a result of the historic clearing of the study area to promote the pastoral productivity of the land, the mature remnant trees in the subject land are unlikely to constitute or comprise part of an important biodiversity corridor or other notable habitat connectivity feature. In addition, by avoiding and protecting PTWL habitat, the proposed development ensures that the habitat connectivity of the local population is not compromised. As the proposed development is located adjacent to the existing and approved neighbourhoods of Googong Township, the potential impact on habitat and landscape connectivity is further reduced in comparison to a site surrounded entirely by farmland. The proposed development therefore has been located to ensure that connectivity enabling movement of species and genetic material between areas of adjacent or nearby habitat is unlikely to be impacted.

Amendments to the proposed development footprint, informed by previous ecological investigations, have minimised impacts to the significant ecological values of the study area and retained 2.21 ha of PTWL habitat and 24 remnant trees. A s.88B covenant will be placed over each large lot to ensure that the retained vegetation and habitat is managed in accordance with the *Googong Foreshore Interface Management Strategy*. The proposed development includes 63.75 ha of open space and natural areas and 10.96 ha reserve, which will retain and protect the PTWL habitat, 216 remnant trees and provide a buffer and managed interface to the Googong foreshore. The proposed development therefore has been designed to avoid impact to 80.09 ha that support 6.53 ha of PTWL habitat and 240 remnant trees.

As the proposed development is located adjacent to existing and approved neighbourhoods of the Googong Township, biodiversity impacts will be reduced as many of the associated activities (e.g. floor planning, infrastructure, etc.) will be existing. The proposed development will be coordinated and managed with that of the existing and approved neighbourhoods of the Googong Township, which is likely to lead to the appropriate management and protection of the retained biodiversity values of the area.

The PTWL Conservation Area was established to compensate for impacts to the PTWL habitat as a result of the Googong Township development. The PTWL Conservation Area is managed according to the *Googong Township Pink-tailed Worm-lizard Protection and Management Plan* (PTWL P&MP) to protect in perpetuity and management to improve habitat condition and ensure the ongoing viability of this threatened species in the locality. 80.09 ha of trained land will support 6.53 ha of PTWL habitat and 240 remnant trees, will be managed with the *Googong Foreshore Interface Management Strategy* (GFIMS) for conservation and formal protection in perpetuity via a Conservation Agreement established under the BC Act. A reserve management plan endorsed by QPRC and the Biodiversity Conservation Trust will therefore be development for the area. The PTWL P&MP, GRIMS and reserve management plan outline in detail the actions required to protect, maintain and manage the majority of retained native vegetation and habitat in the site.

Since the Structure Plan was approved and as a consequence of the BCAR process, the large NH4 Reserve has been incorporated into the layout to protect significant vegetation.

6.3 Contamination

As outlined in Section 5.10.2 of this SEE, the following AECs are located within the site boundaries:

- » AEC 5 – a sheep spray facility associated with sheep yards and shearing shed
- » AEC 6 – consisting of 5 scattered aboveground storage tanks (AST) and farm shed with drums

Geotechnique have been engaged to assess and comment on the suitability of the site for the proposed development from a contamination perspective, and to provide recommendations with regard to future works.

The findings of this assessment are as follows:

- » Following demolition and removal of 5 ASTs and associated infrastructure, other site features such as the sheds and sheep yards, and any hard stands; contamination assessment of the residual soil is required at the locations and in the vicinity of these items in AEC 5 and 6.
- » Contaminated soil / material were identified in Area 1 to Area 3 (refer Section 5.10.2). For landfill disposal purposes, the contaminated soil / material to be removed from Area 1, 2, and 3 within the site are classified as “General Solid Waste (Non-putrescible)”, “Restricted Solid Waste”, and “General Solid Waste (Putrescible)” respectively.
- » Potential off-site impacts of contaminants on groundwater and waterbodies are considered to be low.
- » Remediation and validation of the site are required

Recommendations

Based on the assessment, the site is considered suitable for the proposed redevelopment into residential land use, subject to the following recommendations to be implemented prior to commencement of physical works:

- » Assessment of soil in the footprint of site features such as the shearing shed, sheep and cattle yards, hard stands and ASTs, will be required after complete demolition and removal. In the event of contamination, detailed remediation and validation will be undertaken
- » A Remedial Action Plan (RAP) is to be prepared to devise strategies for remediation and management of the contaminated soil /material identified in Area 1-3 (refer Section 5.10.2)
- » Site validation is to be carried out following the remediation of the contaminated areas.

6.4 Bushfire

The development proposal is located on land declared bushfire prone by Queanbeyan Palerang Council and as a result is subject to Division 4.8 of the EP&A Act and Section 100B of the Rural Fires Act (1997). Under the Rural Fires Act (1997) the development proposal must be shown to conform with the broad aim and objectives of the NSW Rural Fire Service (NSW RFS) document Planning for Bushfire Protection (2019) (PBP 2019).

While vegetation across the site presents as open grassland, with scattered paddock trees and small pockets of remnant woodland, a highly conservative approach has been taken for hazard analysis where the vegetation classification is aligned with Plant Community Type Vegetation Zones identified in the biodiversity study. This takes into account potential future hazard vegetation state. This threat can be moderated given the standard suite of protection measures offered by PBP 2019 and for which the proposed development can largely comply.

The future development provides good space for the establishment and maintenance of the required APZs. Planned access throughout the subdivision is well provided for and given that future roads will apply the standards and specifications set out with PBP (2019) will largely comply with the acceptable solutions provided. Planned services throughout the subdivision are to meet the standards and specifications set out with PBP (2019) and will be capable of complying with the acceptable solutions.

In particular, the proposed subdivision has been assessed and found capable of the following:

- » APZs can provide sufficient space and reduced fuel loads to ensure radiant heat levels at the building will not exceed 29 kW/m².
- » Landscaping can be managed to minimise flame contact, reduce radiant heat levels, minimise embers and reduce the effect of smoke on residents and firefighters.
- » With the aid of performance-based design, safe operational access can be provided to structures and water supplies for emergency services, while providing for evacuating residents and suitable access is provided for fire management and APZ management purposes.
- » Providing water for the protection of buildings during and after the passage of a bush fire, gas and electricity will be located so as not to contribute to the risk of fire to a building.

Based on the assessment and the recommendations contained in this report the proposed development is deemed capable of complying with the specific and broad objectives of PBP (2019), the requirements of the Rural Fire regulations (2013) and therefore suitable for submission to the NSW RFS for the issuing of a bush fire safety authority.

6.5 Stormwater management and Flooding

The Stormwater Report prepared by Spiire provides supporting information regarding stormwater in the proposed NH345 DA area. A summary of the relevant content from this report is provided below.

Hydrological and Hydraulic Analysis

Hydrological analysis was conducted to calculate the required detention volume of Montgomery's Creek in the developed area in order to maintain peak 20% and 1% AEP event flows from the proposed development to existing conditions, as required by QPRC's Development Design Specification – Part D5. In order to meet QPRC D5 developed peak flow requirements, stormwater runoff is required to be detained so that the overall peak flows from the Googong Township catchment are not greater than peak flows in existing conditions. To achieve this, one retardation asset is proposed in NH5 which is co-located with WSUD 09. The system will be designed to maintain the QPRC required 500 mm freeboard to adjacent lots in the 1% AEP event. Outflows from the basin will be controlled via an outlet structure.

Peak 1% AEP flow events in Montgomery Creek in proposed conditions are modelled to be:

- » 17.7m³/s at the upstream border of NH345

- » 36.4m³/s at the downstream border of Googong Township

Hydraulic analysis was conducted to ensure that freeboard complied with QPRC's D5.11 (2019) requiring 500 mm freeboard to lot floor levels and QPRC's D5.13 (2019) requiring 600 mm freeboard to the road crowns of any culvert crossing. There are two road crossing proposed as part of the DA: Bunyip Drive culvert crossing, connecting NH3 and NH4, and Gorman Drive bridge crossing, connecting NH1 and NH5. Both crossings will be in accordance with "Guidelines for watercourse crossing on waterfront lands" (NSW Office of Water, 2012). Results mapping shows that freeboard requirements are met throughout the length of the Googong NH345 corridor. In addition, sheer stress is generally low between NH2, NH3 and NH4, with very little area above 125 Pa and measures will be taken to protect the most critical area. Sheer stress between NH1 and NH5 is acceptable and measures will be taken to protect structural integrity.

Stormwater Drainage Network

Flood modelling was conducted to ensure compliance with QPRC's D5 (2019) requirements for the minor and major drainage networks, including:

- » Minor piped drainage network will convey at least the 20% AEP event
- » Major drainage network, which includes overland conveyance in road reserves, will:
 - > Convey up to the 1% AEP event
 - > Comply with velocity/depth criteria for overland flow safety
 - > Comply with freeboard requirements

As a minimum, 20% of AEP flows are conveyed via pipe network however several roadways will have upsized pipes to reduce overland flows for the purpose of meeting the freeboard criteria. Drainage Concept Masterplan drawings showing the expected pipe sizes and directions of overland flow are shown in accompanying drawings. The proposed minor and major drainage networks will be refined in the next phase of design.

The stormwater pipe network for NH345 follows the strategy adopted through NH1 and NH2 of utilising central road swales to convey the large catchment flows and pipes. A majority of the NH3 catchment will flow towards the central swale of Bunyip Drive with trunk pipe work collecting and discharging this flow to Montgomery Creek. Upstream catchment on the interface of NH3 will be captured in cut off drain along the boundary and conveyed to Montgomery Creek. A trunk stormwater line in BH4 is located parallel to Montgomery Creek conveying flows to WSUD 8A with high flows diverting to Montgomery Creek at a diversion structure. An additional trunk stormwater line is located along Bunyip Drive's central swale and discharges into the existing WSUD 8B. A third trunk main connected to the existing NH1B WSUD Asset, with a diversion structure to redirect high flows away from the treatment asset. Management of the upstream catchment in NH5 is controlled via a trunk stormwater line along Road 003, located down the centre of the road with no proposed lot connection, enabling the main to be hydraulically efficient and reduce the number of special structures required under the kerb.

Stormwater Quality

Stormwater treatment asset selection was conducted to align with the Water Quality Objectives set out in QPRC's Development Design Specification, Part D7.21/10. NH345 proposes treatment trains at the end of estate catchments which use three WSUD elements:

- » Gross Pollutant Traps (GPT)
- » Sediment Basins (SB)
- » Bioretention Systems (BS)

There are four types of treatment trains proposed:

- » Estate catchments to existing NH1 water quality treatment assets: already designed to treat NH345 stormwater flows.
- » GPT and SB and BS: proposed treatment trains for estate catchments larger than 5 ha.

- » GPT and BS: proposed treatment trains for two estate catchments, both with developed estate areas of approximately 5 ha.
- » GPT and SB: proposed treatment train for one estate catchment, where terrain geometry is restrictive, and a BS is not practicable to implement.

Table 18 Stormwater Quality Asset Name

| Asset Name | Catchment Description | GPT | SB Area (sqm) | BS Area (sqm) |
|------------|---|------------------------|---------------|---------------|
| WSUD 01 | NH3, 21.0 ha | Yes | 700 | 600 |
| WSUD 02 | NH4, 20.5 ha. Includes large portion of green space | Yes | 560 | 300 |
| WSUD 04 | NH3, with some area of NH2, 24.4 ha | Yes | 730 | 550 |
| WSUD 8A | NH4, 14.4 ha | Yes | 570 | 350 |
| WSUD 8B | Existing NH1 asset, taking flows from NH4, 19.9 ha | TBC in Detailed Design | N/A | 1,600 |
| WSUD NH1B | Existing NH1B asset. Includes bioswales, grassed swales and a pond, 26.6 ha | TBC in Detailed Design | 2,900 | 2,340 |
| WSUD 09 | NH4-5, asset is also a detention basin, 46.6 ha | Yes | 980 | 950 |
| WSUD 11 | NH5, 12.5 ha | Yes | 480 | N/A |
| WSUD 11A | NH5, 5.2 ha | Yes | N/A | 270 |
| WSUD 11B | NH5, 5.1 ha. Includes large portion of green space | Yes | N/A | 180 |

Riparian Corridors

The Montgomery Creek corridor widths and stream orders along the length of NH345 were identified. Montgomery Creek is classified as a 2nd order stream for the length of NH345, however several unnamed 1st order streams in NH345 were identified.

Riparian Corridors adopted for NH345 Waterfront Lands have been categorised into three sections:

- » Section 1: between NH3 and NH4.
- » Section 2: between the existing NH2 and proposed NH4.
- » Section 3: between the existing NH1 and proposed NH5.

The overall RC width for Montgomery Creek for works for NH345 is 40 m, and additional channel width. The definition of channel width for each section varies. Riparian corridor definition remains consistent with previous Googong Township documentation.

6.6 Soil and Water Management Plan

The Stormwater Report prepared by Spiire provides supporting information regarding erosion and sediment control in the proposed NH345 DA area. A summary of the relevant content from this report is provided below.

A Soil and Water Management Plan (SWMP) was prepared to protect Montgomery Creek from heightened sediment loads during earthworks, in accord with QPRC's D7.04. The final SWMP will be prepared by the

contractor as part of the Construction Management Plan (CMP) and be subject to detailed design and construction staging. The typical process of erosion and sediment control for the multiple catchments of Googong HN3-5 will include the following:

- » Preparing for construction works
 - > Installation of site fencing, including demarcation of no-go zones.
 - > Installation of silt fences, often in conjunction with site fencing.
 - > Stabilise vehicle access points to the site.
 - > Construct clean water diversion drains from the top of each catchment and around the perimeter to the receiving water. Clean water drains may be constructed through works site where necessary.
 - > Construct sediment control basins, most often in approximate location of final WSUD assets to enable easier connection to ultimate drainage networks.
 - > Construct dirty water drains (otherwise known as construction swales) and any required slope breaks through the catchment to convey construction runoff to the construction sedimentation basin.
- » During construction works
 - > Aim to restrict or phase disturbed areas, in order to reduce mobilised sediment.
 - > Protect stockpiles, with appropriate cover, silt fences, and maintained to correct height.
 - > Maintain sediment control basin after every rainfall event, as per Blue Book requirements.
 - > Conduct inspections of all erosion and sediment control measures weekly and before every rainfall event. Maintain any control that needs attention within 24hrs.
 - > Take regular dissolved solids testing in Montgomery Creek, to ensure sediment compliance.
 - > Make use of other erosion and sediment control measures where appropriate, such as inlet pit protection, pumping of clean water flows past works, silt socks, check dams, etc.
- » Post construction works completion
 - > Achieve Blue Book required ground cover for all finished earthen surfaces, whether by polymer binders or grassing.
 - > Leave all lots with appropriate silt fencing and any required slope breaks, to prepare for building phase to begin.
 - > Leave construction sediment control basin in place during the building phase, until sufficient lot works are complete. This may require an operations agreement between Council and GTPL

6.6.1 Sediment Control Basins

A significant part of NH345 construction sediment control measures is the implementation of sediment control basins. The basins are located at the downstream end of each construction catchment and dewatered by Montgomery Creek.

Table 19 Basins storage volumes

| Catchment Asset | Storage Zone Volume (m ³ /3 months) | Required Basin Volume (m ³) | Available Basin Volume (m ³) |
|-----------------------|--|---|--|
| SB 1 (NH3) | 328 | 2,495 | 3,500 |
| SB 4 (NH3) | 716 | 3,461 | 3,500 |
| Existing WSUD J (NH4) | 24 | 313 | 1,882 |

| | | | |
|-------------------------|-------|-------|-------|
| SB 12 (NH3) | 230 | 1,458 | 1,600 |
| SB 2 (NH4) | 406 | 1,530 | 2,600 |
| SB 8A (NH4) | 568 | 2,157 | 6,000 |
| Existing WSUD 8B (NH1B) | 135 | 857 | 2,900 |
| SB 09 | 1,053 | 6,688 | 7,000 |
| SB11 | 401 | 1,254 | 1,400 |
| SB 11A | 116 | 361 | 400 |

6.7 Traffic, transport and Parking capacity

The Civil Infrastructure Design report by Spiire provides technical details that support and justify the proposed design specifications for the road network in NH345. The report complements the civil drawings prepared by Spiire. A summary of the relevant content from this report is provided below.

From the initial stages of structure plan development, legibility and wayfinding have been the most important principals that guided the design for NH345. Combining the above with the aim to maximise permeability to encourage walkability has resulted in a grid configuration with clear sightlines towards Googong Common as the main pedestrian destination.

Traffic calming has been proposed in select locations to reduce the possibility of cars accelerating unnecessarily. The proposed locations and treatments are:

- » Road 003: Raised pedestrian crossing to link the open space corridor to the proposed 2.5m shared path
- » Glenrock Drive: Raised pedestrian crossing treatment is to be located adjacent NH3's Centre to draw drivers' attention to the change in character of the precinct; promoting pedestrian connectivity to the open space from the Neighbourhood Centre. The proportion of Glenrock Drive adjacent Neighbourhood Centre 3 will be also be finished with a tactile treatment to distinguish the precinct area.

Two creek crossings along Bunyip Drive and Gorman Drive are proposed connecting the neighbourhoods across Montgomery Creek.

The NH345 development includes a combination of on-street and off-street parking arrangements.

6.7.1 On street parking considerations

A summary of where provision for on street parking has been provided based on the proposed road hierarchy is provided below:

Table 20 On-street Parking provision

| Street typology | Parking provided |
|---|----------------------------|
| Local Sub Arterial | Yes – Parallel |
| Collector | Yes – Parallel |
| Local Street - Deviation 2 | Yes – Parallel |
| Local Street – Deviation with 90 Degree Parking | Yes – Parallel & 90 degree |
| Local Street Deviation | Yes |

| Street typology | Parking provided |
|-----------------|----------------------------|
| Local Street | Informal on-street parking |
| Access Street | Informal on-street parking |
| Lane Way | No |

On-street parking has been carefully considered with specific road cross sections adopted around proposed Neighbourhood centres and multi-unit lots to cater for expected increased on-street parking demands.

Off street parking

Provision for parking has been included in NH345 for the NH4 Reserve and Sportsfield 7. The total number of spaces provided off-street are:

- » NH4 Reserve: 26 standard 90 degree parks and 2 disabled parks
- » Sportsfield 7: 60 standard 90 degree parks and 2 disabled parks

Public Transport

Consultation with QCity was conducted to confirm that the ultimate bus route for the Township aligns with their servicing strategy. The proposed route and stops were endorsed by QCity on 29th April 2021. The proposed bus stop dimensions align with Austroads Guide to Road Design Part 3: Geometric Design with an approach length of 26m and exit length of 10m for the kerbside stops.

Residential lots

A typical dwelling will have a driveway subtending 5 metres along the kerb. The balance of kerb length is available for car parking. For any front-loaded lot with frontage wider than about 12 metres there will be an opportunity for at least one car to be parked at the frontage.

Small lot housing and medium density housing will be subject of future DAs.

6.8 Noise

An Acoustic Assessment of Road Traffic Noise was prepared by SLR for the proposed Googong Township NH345. The road traffic noise modelling produced three outcomes:

- » Dwellings built on allotments do not require acoustic considerations (i.e. internal criteria are predicted to be achieved even with windows open).
- » Dwellings built on allotments do not require specific acoustic constructions (e.g. glazing thicker than 4mm) but required windows closed to meet internal criteria. Such dwellings would require ventilation by means other than open windows. "Category 1" construction would be appropriate for dwellings on these allotments.
- » Dwellings built on allotments would also require windows to be closed (and assisted ventilation) in order to meet the internal criteria and may require specific acoustic constructions (e.g. thicker glazing). "Category 1" construction would be appropriate for dwellings on these allotments.

The majority of the affected allotments will fall into the second outcome, which would not be considered onerous given the propensity for the provisions of mechanical ventilation in modern dwellings. The assessment found that allotments which are adjacent to Old Cooma Road are likely to be 'noise affected' due to road traffic noise impacts, however the need for acoustic treatments would be dependent on the location and size of any dwelling on these allotments.

Noise barriers between Old Cooma Road and the nearest receivers have been considered and the investigation indicated that they would only marginally reduce noise intrusion into the development site and are therefore not considered feasible.

In relation to achieving the internal traffic noise criteria, specific acoustic treatments would not be required for any conventionally-constructed dwelling on most allotments, other than closed windows to habitable rooms for a relatively small number of allotments, which subsequently impacts on ventilation requirements to those rooms. Dwellings on a small number of allotments facing Old Cooma Road may require acoustic facade treatments, such as upgraded glazing, however this should be confirmed when the design, size and location of the proposed dwelling(s) is known. There are several factors that influence the extend of the acoustic treatments, including:

- » The road traffic noise level adjacent to the façade. This may be affected by:
 - > Screening from other dwellings or other significant structures.
 - > The distance between the façade and the noise source.
 - > The orientation of the dwelling relative to the noise source.
- » The internal layout of the dwelling (i.e. noise sensitive occupancies may be located away from the side of the dwelling most exposed to the noise source).
- » The construction of the dwelling.
- » The size/area of glazed elements relative to the acoustically 'stronger' elements

Based on the predicted noise levels at the site, up to approximately 60 dBA LAeq(15hour), a dwelling facade on any allotment would need a maximum noise reduction of up to 20 dBA to achieve compliance with the internal criteria. That level of reduction would not be considered onerous and, assuming a typical residential dwelling design, would be achieved using standard constructions with proprietary glazing including those described as Category 1 "deemed-to-satisfy" constructions within the DoP Guideline.

For further information refer to the accompanying Road Traffic Noise Report.

6.9 Social and cultural value

6.9.1 Aboriginal Heritage

All archaeological objects and sites have cultural value for present-day Aboriginal people, as they were created by prehistoric, ancestral Aboriginal people and provide tangible evidence of past occupation of the landscape.

Based on feedback received through the process of consultation with local Aboriginal groups, the archaeological sites identified within the study area have cultural significance to present-day Aboriginal groups as manifestations of their ancestors' past occupation of the landscape. However, none of the sites have any additional social or cultural value through relating to myths and stories, events of oral history or any intangible cultural values.

It should be noted that some objects and places might have cultural value that was not communicated to Navin Officer Heritage Consultants (Refer to the Aboriginal Cultural Heritage Assessment report). This could be the case for objects or places that are associated with information that is culturally restricted.

To mitigate against the impacts from the current project an archaeological survey and collection program (AHIP process) will occur prior to development impacts. This will aim to record and collect any surface artefacts at the following sites:

- | | |
|-------------|---------|
| » GNH3-5 05 | » GRW3 |
| » GNH3-5 06 | » GRW16 |
| » GNH3-5 07 | » GRW17 |
| » SQBN -E1 | » GRW25 |
| » GA17 | » GRW26 |
| » GRW2 | » GRW27 |

Salvaged artefacts would be removed from site for the duration of the proposed works, analysed to extract information about prehistoric site use and human behaviour, and returned to country at the completion of the proposed works.

Sites GA3, GRW18, GRW Cultural Feature, GNH3-5 01, and GNH3-5 03 are within 50 metres of the impact area and may also experience inadvertent impacts as a possible result of the construction works, these inadvertent impacts would be avoided by defining a 'no-go zone' around these sites. The borders of this zone would be clearly marked on all maps and plans used by Googong Township and its contractors at all stages of construction.

GNH3-5 ST01 sits within the proposed impact area and has been assessed by a qualified arborist. The tree has been assessed as a culturally modified tree and will be retained within the proposed development.

Where sites exist within open spaces care will be taken during the design process to ensure that they are undisturbed. It is also proposed to highlight and celebrate the importance of Aboriginal artefacts through the use of interpretive art and signage elements.

For further information refer to Section 5.3 of this SEE and the accompanying Aboriginal Cultural Heritage Archaeological Assessment and Landscape Design Report.

6.9.2 European Heritage

As detailed in Section 5.5 of this SEE, the Cultural Heritage Desktop Assessment undertaken by Navin Officer for the structure planning, identified five sites of European heritage significance within NH345. None of these sites are heritage listed, nor were they identified as being of high significance, or able to meet any criteria for heritage listing.

However, under Clause 5.10 and Schedule 5 of the QLEP 2012 there is a local heritage item, the Googong shearing shed complex (Item number 178), that is located within NH4.

Both the heritage advice from Council and the heritage conservation plan prepared by GTPL confirm that most of the heritage fabric has been lost and the remainder of the structures on site have no significance. GTPL have requested QPRC to lift the heritage constraint on the lots affected by the Heritage Item. QPRC Heritage Advisory Committee agreed, in its meeting on 15 July 2021, to delist the Googong Woolshed as a local heritage item from the Heritage Schedule of QLEP 2012 subject to a number of conditions as provided in Table 21 below.

Council in its ordinary meeting of 28 July 2021 notes the minutes of the Heritage Advisory Committee and resolved the above recommendations.

Council also agreed to recommend the item for removal from the heritage schedule as part of the anticipated housekeeping amendment when made. GTPL is therefore required to demonstrate to Council how the following recommendation can be addressed as part of any future DA.

GTPL would not object to the imposition of conditions of consent seeking satisfaction with the GTPL responses to the HAC recommendations, provided in Table 20 below, as part of the approval for this DA.

Table 21 QPRC Heritage Advisory Committee recommendations

| Item number | HAC Recommendations | GTPL Response |
|-------------|--|--|
| 1 | The design and provision of an appropriate interpretive feature, to be agreed by Council's Heritage Advisor, being located in the proposed Common close to the current position of the existing shearing shed and yards. | GTPL to provide an appropriate interpretive element in agreement with Council's Heritage Advisor at the proposed Common close to the current position of the existing shearing shed and yards. This interpretation is shown on Landscape and open Space Plans and the Landscape Design Report prepared by AECOM that are submitted with this DA. Further details of the proposed works will be available at the CC stage when GTPL will seek council's approval. |

| | | |
|---|--|---|
| 2 | The woolshed being relocated to the proposed nearby playing fields and adapted as a functional facility for community use such as a picnic shelter or roofed viewing platform. | GTPL to relocate the shearing shed to NH4 reserve and regional playground as shown on drawings L-23 to L-26 of the Landscape and open Space Plans prepared by AECOM. Refer to these drawings and the accompanying Landscape Design Report for further information. GTPL suggest relocation of the shed to this location due to its ideal location given the theme of the reserve and the environmental/farm like setting. |
| 3 | The wool shed machinery being preserved in situ as part of the adaptive reuse of it. | GTPL to preserve the overhead gear and wool press in place as part of the adaptive reuse of the shed. Refer to L-25 note B3 and B4. |
| 4 | The farming machinery scattered around the farm being used as elements in the interpretive feature on the new site. | The farming machinery does not belong to GTPL. The current land manager purchased the equipment from the previous landowner and it is understood it will be removed from site when development of the adjacent lands commence. As a result, it is not possible for the additional scattered machinery to be used as part of the interpretive feature on the new site. |

6.10 Economic and community benefits

At completion, Googong Township will accommodate around 6,600 households. The township will provide access to jobs, services and facilities in the town and Neighbourhood centres, active and passive recreational areas, walkable streets and areas of environmental conservation.

NH345 is a logical extension of the approved NH1A, NH1B and NH2.

The economic and community benefits of the proposed development include:

- » Providing a variety of residential lots, in a mix of sizes and dwelling typologies, to meet the growing demands of the population as well as lifestyle and budget preferences
- » Providing a range of high quality walking and cycling facilities that address the cultural, health and recreational needs of the community
- » Encouraging healthy lifestyles and physical activity, by providing walkable neighbourhoods, accessible local facilities, and safe pedestrian and cyclist pathways within the street network
- » Celebrates and preserves European and aboriginal culture of the area
- » Provides good access to public open space, community and recreational facilities, retail, and commercial to meet future residents social cultural and economic needs
- » Provides public transport network that connects nodes of activity within the township and provides access to Queanbeyan and Canberra.

6.11 Assessment of site suitability

Extensive investigations into the environmental features and suitability of the site were carried out in the preparation of the Structure Plan for NH345. Specific investigations that have been conducted in relation to the site confirm the site's suitability for the uses proposed in this application. These studies have been summarised and considered in this SEE. These studies have concluded that the site is suitable for the proposed uses.

The site is predominantly zoned R1 General Residential, which aims to provide housing diversity in terms of dwelling types, promotion of walkable neighbourhoods and a sense of community; and embodiment of the principles of sustainable development.

Further the site is suitable to accommodate this type of development as it is located within an urban release area, the largest in the region that will be serviced by existing and proposed infrastructure in the Wider Googong Township. This includes physical: water, recycled water, sewer, and electricity and telecommunication services as well as social: schools, recreational and community.

6.12 Public interest

Once submitted, the development application will be exhibited by Council to obtain public comment on the application. It is understood that the application will also be referred to relevant departments within Council. Comments obtained during these processes will be duly considered in the assessment and determination of the application.

Council has advised that the subdivision application will be:

- » Notified to adjacent owners
- » Referred to DPIE regarding satisfactory arrangements letters
- » Referred to Airport and Commonwealth regarding obstacle height limits.

The application will also be referred to the following public agencies as it is integrated development as detailed in Section 5 of this report:

- » NSW Office of Water
- » NSW Department of Primary Industries (Fisheries)
- » Transport for NSW
- » Rural Fire Services.

Registered Aboriginal representative groups as well as any other key stakeholder groups should also be notified.

It is noted that the planning of Googong Township has involved extensive and rigorous investigations and thorough considerations of environmental factors, land use planning, infrastructure, stormwater management, traffic, community planning, urban design and landscaping. This assessment has involved extensive consultation with Government agencies, Department of Planning and Environment and other stakeholders. This assessment culminated in:

- » Gazettal of the Googong LEP Amendment to Queanbeyan LEP 1998 (which has been carried forward to the current Queanbeyan LEP 2012);
- » Entering into a voluntary planning agreement with the State Government and Council for local and State infrastructure respectively
- » Preparation and adoption by Council of the Googong DCP which embeds the Googong Master Plan, Structure Plan and associated development guidelines.

It is in the public interest to approve development that is consistent with the planning framework that has been established through extensive investigation and consultation.

Approval of this application will create the opportunity to deliver additional range of housing which assists in alleviating housing affordability issues by increasing supply. Further housing will be delivered in a high-quality environment, which is evident by the urban design and landscape elements of the proposal.

7 Conclusion

The proposed development will allow for the staged delivery of NH345 providing approximately 1476 additional residential lots as well as residue lots for future subdivision and development of additional housing, higher density housing and other uses including neighbourhood centres, public reserves and recreational facilities.

NH345 is the next logical extension of residential development within Googong Township. The mix of lot sizes proposed will provide an opportunity for further housing diversity within the Googong Township, to suit individual household needs, preferences and budgets.

This SEE has addressed all the heads of consideration established under section 4.15 of the EP&A Act and related Acts. It has demonstrated that the proposal complies with all relevant provisions of the QLEP 2012 except for minimum lot sizes that is justified through the submission of a clause 4.6 that accompanies this application. All potential environmental impacts of the proposed development have been identified and addressed. Issues relating to infrastructure provision, biodiversity, stormwater management, landscaping, design and traffic generation have also been addressed.

The proposal is suited to the site and it is in the public interest to continue the development of Googong Township as envisaged in the Googong Master Plan and Structure Plan. The proposal is also consistent with the planning framework which has been based on years of thorough investigations.

On merit, the proposal is considered worthy of approval, and as such, it is considered appropriate for the Council to approve the proposed development subject to Council's standard conditions of consent.

Appendix A - DCP Compliance Table

7.1 Googong Development Control Plan 2010

Table 21 Parts 1-2 Preliminary and Context

| GDCP 2012 Control | Assessment of Control |
|--|---|
| Part 1 – Preliminary and Context | |
| 1.1 - 1.6 | Noted |
| <p>1.7. Variation to this DCP</p> <p>Any applicant wishing to vary a standard in this DCP must request a variation in writing, providing a detailed justification for the request and evidence that a better design outcome will result from the variation. Council will not approve any variation unless it is fully satisfied with the argument for non-compliance.</p> | <p>COMPLIES</p> <p>Variations are considered minor and have been justified in this compliance table.</p> |
| 1.8. Relationship to Other Planning Instruments and Policies | <p>NOTED</p> <p>An assessment of the relevant controls of the QDCP 2012 and QLEP 2012 are provided in this table and the accompanying DCP.</p> |
| 1.9 How to use this DCP | NOTED |
| 1.10. Pre DA Process | <p>NOTED</p> <p>Meetings with Council are listed in the SEE.</p> |
| 1.14. Checklist for Subdivision Applications | <p>COMPLIES</p> <p>All reports and plans required by Council are submitted with this application – Refer to accompanying documentation.</p> |
| 1.16. General Design | <p>COMPLIES</p> <p>The subdivision and density are generally in accordance with the Structure Plan for the site that reflects the site constraints and opportunities.</p> |
| <p>Controls:</p> <p>a. Consent must not be granted to a subdivision of land unless Council is satisfied that the density of the allotments to be created reflects the land capability, natural constraints and hazard of the land and is consistent with and enhances the character of the surrounding residential development.</p> <p>Land should not be divided:</p> <p>i. In a manner which would prevent the satisfactory future division of land, or any part thereof;</p> <p>ii. If the proposed use is likely to lead to undue erosion of the land and land in the vicinity thereof;</p> <p>iii. Unless wastes produced by the proposed use of the land can be managed so as to prevent pollution</p> | <p>COMPLIES</p> <p>The subdivision reflects the land capability and topography of the ground. It responds to the site constraints and is consistent with the desired enhanced future character of the area as described in the master plan.</p> <p>All measures have been put in place to ensure that subdivision:</p> <ul style="list-style-type: none"> » Does not lead to undue erosion of the land. » Prevents and mitigates pollutants from entering the creek system. » Provides for all utilities and infrastructure to service the land and all the proposed residential lots. |

| GDGP 2012 Control | Assessment of Control |
|--|---|
| <p>of a public water supply or any surface or underground water resources;</p> <p>iv. Unless the development achieves the most efficient use of existing utility services (such as water supply and sewerage services), roads and streets. Where connection to sewer is not possible, the allotment shall be suitable for on-site effluent disposal without adverse effect on ground or surface water quality.</p> <p>v. If the size, shape and location of, and the slope and nature of the land contained in each allotment resulting from the division is unsuitable for the purpose for which the allotment is to be used;</p> <p>vi. Where the land is likely to be inundated by floodwaters;</p> <p>vii. where the proposed use of the land is the same as the proposed use of other existing allotments in the vicinity, and a substantial number of allotments have not been used for that purpose; and</p> <p>viii. If the division and subsequent use is likely to lead to the clearance of one or more significant trees.</p> <p>ix. Where any lot being created in a subdivision is of mixed title, the land held under Old System Title within that lot shall be brought under the Real Property Act.</p> | <p>» Provides for cut and fill in appropriate places to ensure lots created for development are suitable for purpose and avoid areas of significant slope.</p> <p>» Is and will not be, impacted by stormwater surges or floodwaters in the future.</p> <p>» Retains remnant trees where practicable, having regard to the habitat values, amenity values, structural integrity of the tree, urban design, service requirements, and the general grading required by the subdivision.</p> <p>The technical reports and plans accompanying the DA support the above assessment by providing evidence showing how potential environmental impacts of the proposed subdivision are removed, minimised and/or managed to ensure the proposed development does not adversely affect the surrounding context.</p> |
| 1.17. Lot Size and Design | <p>COMPLIES</p> <p>As explained above and previously shown on the structure plan for neighbourhoods 3, 4 and 5, the proposed lot subdivision is compatible with the land where the proposal is to be carried out. The new lots enable development that is compatible with the existing urban and scenic character of the Googong township that has been mainly established by earlier development of neighbourhoods 1 and 2. The proposed subdivision for neighbourhoods 3, 4 and 5 consider a mix of uses and encourage the use of public transport by future users as it is shown by the supporting documentation.</p> |
| Controls: | |
| a. The density of allotments should maintain and promote the residential character of the area for infill subdivisions. | NOT APPLICABLE |
| b. Lot sizes should be compatible with the character of the surrounding area and are to comply with Clauses 2.6, 4.1, 4.1B, 4.2 and 4.2A in the QLEP 2012 and the minimum area requirement as specified on the Lot Size Map. | <p>DOES NOT COMPLY</p> <p>Refer to Table 16 of Section 5.11 of this SEE.</p> <p>The proposal generally complies with the minimum lot size requirements, except for a strip of land along the south western boundary of the site. Justification for this deviation is provided in the clause 4.6 variation statement submitted with this application.</p> |
| c. Lot sizes and lot layouts in urban release areas should take account of the environmental | COMPLIES |

| GDCP 2012 Control | Assessment of Control |
|---|---|
| constraints of the area and be designed to conserve agricultural productive land (where applicable) and the retention of any significant natural features of the site. | The lot sizes and layout respond to the environmental constraints and natural features of the land as discussed in the sections above and supported by the accompanying documents. This has been done so to reflect the natural features of the site in Neighbourhoods 3, 4 and 5. |
| d. Lot sizes and lot layouts in urban release areas which increase potential resident density shall be sited in close proximity to public transport nodes and to commercial/community facilities. | COMPLIES Smaller lots that provide medium density housing are located within proximity to the neighbourhood centres and roads serviced by the bus network. See Section 4 of this SEE. |
| e. Lot size and lot layouts should reflect the servicing capacity of the area. | COMPLIES All lots will be adequately serviced. Refer to Section 4 of this SEE. |
| 1.18. Flora and Fauna | COMPLIES A Biodiversity Certification Assessment Report (BCAR) has been prepared for the site to identify and assess the significance of the potential impacts that the proposed development may have upon the biodiversity values of Neighbourhoods 3,4, 5 and the surrounding context. Refer to Section 6.2 of this SEE and accompanying BCAR report. |
| Controls: | |
| a. Submission to Council of a biodiversity development assessment report which complies with the NSW Biodiversity Conservation Act 2016. | COMPLIES A Biodiversity Certification Assessment Report (BCAR) – prepared by Capital Ecology accompanies this report and shows how the proposal complies with the NSW BC Act 2016. |
| b. Application of any measures or amelioration measures identified in the NSW Biodiversity Conservation Act 2016. | COMPLIES The assessment concludes that with the implementation of the proposed measures to avoid, minimise and mitigate impacts upon biodiversity values, the proposed development is unlikely to significantly affect any threatened species, population or ecological community listed pursuant to the NSW BC Act. |
| c. Implementation of design and construction measures to achieve the relevant provisions of the QLEP 2012. | COMPLIES Refer to QLEP compliance & Biodiversity Certification Assessment Report – prepared by Capital Ecology – that accompanies this application. |
| d. Native vegetation which adds to the visual amenity of the locality and /or which is environmentally significant should be preserved in the design of the subdivision proposal. | COMPLIES Refer to the Landscape Design Report prepared by AECOM. |
| 1.19. Natural Hazards | |
| Controls: | |

| GDCP 2012 Control | Assessment of Control |
|--|---|
| a. Application of measures which minimises risks to future development and users from slip, bushfire, flood and other natural hazards. | <p>COMPLIES</p> <p>Issues such as bushfire risk (and egress in case of emergency), flood risk, contamination and landform issues have been addressed in the SEE and technical supporting studies. Refer Section 6 of SEE for an assessment of likely impacts of the proposed development.</p> |
| b. Implementation of design and construction measures designed to achieve and comply with the relevant provisions of the QLEP 2012. | <p>COMPLIES</p> <p>The design and construction of the proposed subdivision will satisfy the relevant applicable controls and guidelines including the QLEP 2012 provisions.</p> |
| 1.20. Contamination | |
| Controls: | |
| a. Where required Implementation of measures designed to remediate land to a standard suitable for occupation. | <p>COMPLIES</p> <p>Refer to Section 6.3 of this SEE and the detailed contamination assessment (DCA) prepared by Geotechnique, that accompanies the SEE for further details. The contamination assessment report concludes the site can be made suitable for the purpose of the intended future development subject to the implementation of the recommendations made in the report.</p> |
| b. Implementation of measures designed to achieve and comply with the relevant provisions of the applicable local environmental plan. | <p>COMPLIES</p> <p>Based on the assessment prepared by Geotechnique, it is believed that the site can be made suitable for the proposed development, subject to the implementation of the recommendations contained in the report, prior to earth works / site preparation.</p> |
| 1.21. Stormwater Management and Drainage Controls: | COMPLIES |
| a. Stormwater and drainage systems shall be designed and engineered to meet the Objectives. | <p>All appropriate measures have been implemented in the design of NH 3, 4, and 5 to ensure stormwater treatment is carried out such that water re-entering the creek system has been treated appropriately.</p> <p>Refer to Section 6.5 and 6.6 of this SEE and the Stormwater Management and Drainage Report for further details.</p> |
| 1.22. Aboriginal and European Heritage | |
| Control: | |
| a. Subdivision layouts which respect the heritage significance or heritage items or sites within heritage conservation areas. | <p>COMPLIES</p> <p>A Cultural Heritage Desktop Assessment report prepared as part of the NH345 Structure Plan identified 24 Aboriginal Sites and 6 European Heritage Items within the boundaries of NH345.</p> <p>Further consideration of the heritage values of the site is provided in Section 6.9 of the SEE</p> |
| b. Subdivisions which are designed to preserve archaeological sites or potential archaeological | <p>COMPLIES</p> <p>Where heritage sites or potential archaeological deposits where located on site, they are located within</p> |

| GDCP 2012 Control | Assessment of Control |
|--|--|
| deposits by siting them in future public areas away from works likely to adversely affect them. | public areas or open space to minimise adverse impacts on them. Further consideration of the heritage values of the site is provided in Section 6.9 of the SEE. |
| c. Measures undertaken as part of the subdivision to ensure compliance with any applicable statutory requirements. | COMPLIES For a complete assessment refer to the heritage assessment report that accompanies this application and to Section 6.9 of the SEE for a summary. |
| 1.23. Roads, Traffic (vehicles, cyclists, pedestrians) and Access | |
| Controls: | |
| a. Subdivisions designed so that allotments along a main and arterial road have access from a local or secondary road. | COMPLIES The subdivision pattern seeks to maximise access for vehicles, cyclists and pedestrians. Refer Section 4.4.1 and accompanying drawing provided by Spiire. |
| b. Subdivisions designed to maximise the safety of pedestrians using the road reserve. | COMPLIES The subdivision pattern seeks to maximise the safety of pedestrians by using the road reserve. Refer Section 4.4.2 of the SEE and accompanying drawing provided by Spiire. |
| c. Subdivisions which are designed to comply with any applicable legislative requirements. | COMPLIES The subdivision pattern has been designed to comply with the applicable legislative requirements. Refer Section 5 of the SEE. |
| d. Provision of footpaths in accordance with the Queanbeyan Section 94 Contribution Plan 2012. | COMPLIES Refer Section 5.13 of this SEE for further details. |
| e. Provision of an off road cycleway where required in accordance with the Queanbeyan Section 94 Contribution Plan 2012. | COMPLIES Refer Section 4.3.1 of this SEE and accompanying Landscape Design Report. |
| f. Compliance with the design and engineering requirements applicable to roads, crossings, footpaths, cycleways, bus shelters and the like. | COMPLIES Refer Section 4 and accompanying drawings provided by Spiire. |
| g. Provision shall be made for coinciding physical and legal access to all proposed lots. | COMPLIES Refer Section 4 and accompanying drawing provided by Spiire. |
| 1.24. Solar Access and Lot Orientation | |
| Controls: | COMPLIES |
| a. Subdivision blocks and allotments which are orientated and have lengths and widths which provide opportunities for maximum solar efficiency when developed. | Taking into account all of the site's attributes such as topography, natural features and zoning, view and vistas the proposed layout seeks to maximise solar access. |
| 1.25. Service Provision | |
| Controls: | |
| a. Provision of all essential services including facilities for stormwater and sewerage disposal. | COMPLIES |

| GDCP 2012 Control | Assessment of Control |
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| | All necessary infrastructure and utilities have been considered in the proposed design – Refer Section 4.4.3 of this SEE for further detail. |
| b. Use of shared trenches. | COMPLIES Shared trenches have been provided – Refer to drawings provided by Spiire. |
| c. Use of infrastructure which reduces greenhouse gas emissions. | COMPLIES Standard infrastructure which reduces greenhouse gas emissions have been considered in the proposed design – Refer to drawings provided by Spiire. |
| d. Use of infrastructure which reduces water consumption. | COMPLIES Use of infrastructure which reduces water consumption has been considered in the design – Refer to Section 4.4.3 of this SEE and the drawings prepared by Spiire. |

Table 22 GDCP 2010 Part 3 Master Plan

| Control | Assessment of Control |
|--|---|
| 3.1 Vision | NOTED |
| 3.2 Elements of the Vision | NOTED |
| 3.3 Master Planning for Googong Township | NOTED |
| <p>3.4 Master Plan Objectives</p> <p>The Googong Master Plan is the expression of the following objectives:</p> <ul style="list-style-type: none"> » Establish high quality liveable neighbourhoods within a sustainable township. » Create a transition from lower density residential fringes to urban mixed use centres. » Promote interconnectivity within and between neighbourhoods through safe and legible pedestrian paths, cycle ways and streets. » Focus each neighbourhood around a 'neighbourhood centre' which is to be a hub of community, commercial and retail activity. » Create a connected open space network catering for all ages with a range of civic, active, passive and civic spaces. » Provide opportunities for future residents and visitors to meet their social, cultural and economic needs. | <p>COMPLIES</p> <p>The proposal accords with the objectives in the following manner:</p> <ul style="list-style-type: none"> » The design and layout of the proposed subdivision will enable Neighbourhood 3, 4 and 5 to be developed consistent with the structure plan for the township area. » A variety of lot sizes is proposed which will permit a variety of dwelling types and densities to cater for different budgets and preferences. » The street network will promote accessibility and connectivity across the site, to open space, recreational facilities and community facilities as well as surrounding the neighbourhoods. » The proposal creates new open space areas for passive and active recreation. |
| <p>3.5 Controls</p> <p>Development is to be generally in accordance with the Master Plan and other controls in this DCP.</p> <p>A variation to the Master Plan must demonstrate that it is consistent with the vision and the applicable</p> | <p>COMPLIES</p> <p>The proposed subdivision is generally consistent with Master Plan, Structure Plan and other controls in this DCP.</p> |

| Control | Assessment of Control |
|---|---|
| objectives of this DCP and can only be amended as part of a neighbourhood structure plan. | |
| <p>3.6 Staging of Development in Googong</p> <p>The land rezoned for Googong Township provides a land supply for the next 25 years. The orderly and efficient development of this land relies on the effective staging of subdivision and development for each Googong neighbourhood over the next 25 years.</p> <p>The Master Plan also shows the staging and sequence in which Googong is to be developed to ensure orderly and efficient development and infrastructure provision is achieved.</p> | <p>COMPLIES</p> <p>See Staging plans and lot numbers prepared by Spiire.</p> |
| <p>3.7 Staged Release of Land</p> <p>It is recommended that the land be generally developed in accordance with the following sequence:</p> <ol style="list-style-type: none"> 1. Neighbourhood area No.1 being the first stage (comprising Stages 1A and 1B) with Neighbourhoods 2, 3, 4 and 5 following in logical sequence. | <p>COMPLIES</p> <p>Neighbourhoods 3,4 and 5 are the third stage of the development and follow the logical order shown on the structure plan.</p> |
| <p>3.8 Controls for Releasing Land for Development in Googong</p> <p>The following factors are to be addressed in releasing land for the next stage of development.</p> <p>Orderly Expansion of Googong:</p> <p>The release of land shall:</p> <ul style="list-style-type: none"> » Progress sequentially as outlined on the Googong Master Plan. » Not occur until a Neighbourhood Structure Plan has been approved for the area by Queanbeyan City Council. <p>Population Forecasts:</p> <p>...Release of land shall support achieving the forecasts:</p> <ul style="list-style-type: none"> » To provide a mix of dwelling types including affordable housing, commercial centres, community facilities, open space and infrastructure including roads and a sewerage treatment plant. » That by 2035 a total of 5,550 dwellings will be provided. » That by 2035 the population of Googong will be approximately 16,000 people. <p>Timing of Infrastructure Provision:</p> <p>The site is currently 'greenfield' un-serviced land and requires the infrastructure of roads, water, sewer, energy (gas, electricity and or solar) and information technology cabling.</p> | <p>COMPLIES</p> <p>The proposed subdivision is generally consistent with the adopted Structure Plan.</p> <p>Future development within the Neighbourhood Centre and future development areas to the south will satisfy the expected population demand and will be subject to future development applications.</p> <p>The indicative yield for NH3,4 and 5 is approximately 1,800 dwellings. These lots will be serviced by infrastructure planned for the neighbourhoods.</p> <p>All the necessary community services, open spaces and other amenities to service the forecasted population for the area will be provided on site.</p> |

| Control | Assessment of Control |
|---|-----------------------|
| 3.9 – 3.25 Neighbourhood Structure Plan | NOT RELEVANT |

Table 23 Parts 4 and 5 Subdivision and Design

| Control | Assessment of Control |
|---|---|
| PART 4 - SUBDIVISION CONTROLS | |
| <p>4.1 Introduction</p> <p>This section sets out the objectives and controls for the subdivision design at Googong. This is supplemented by the Queanbeyan Council Engineering Design Specification – and development standards contained in the QLEP 2012:</p> <p>Subdivision design should be based upon:</p> <ul style="list-style-type: none"> » Community building » Neighbourhood creation » Safety » Accessibility » Solar orientation » Maximising views and amenity <p>It is important to ensure that the road network creates legibility and contributes to a sense of place.</p> | NOTED |
| 4.2 General Objectives | <p>COMPLIES</p> <p>The subdivision pattern seeks to provide a variety of lot sizes. The residential lots are within proximity to community facilities, open space and the neighbourhood centres with pedestrian and cycle links to encourage walking and cycling.</p> |
| 4.3 General Controls | |
| a. Subdivision design shall be generally in accordance with the Neighbourhood Structure Plan. | <p>COMPLIES</p> <p>The subdivision (proposed residential lots, road network, stormwater management, street tree planting) is generally consistent with the Neighbourhood Structure Plan.</p> |
| b. Subdivision lot sizes shall comply with the minimum lot sizes as specified in the <i>QLEP 2012</i> (refer to <i>QLEP 2012</i> Lot Size Map). | <p>DOES NOT COMPLY</p> <p>Refer to Section 5.11 of the SEE.</p> <p>The proposal generally complies with the minimum lot size requirements, except for a strip of land along the south western boundary of the site. Justification for this deviation is provided in the clause 4.6 variation statement accompanying this application.</p> |
| c. Neighbourhoods are to be centred on a focal point of a town or neighbourhood centre with retail, commercial or community facilities that are generally within a 5 – 10 minute walk from all dwellings. 'Walkable communities' are ... | <p>COMPLIES</p> <p>Refer Section 4.4 of the SEE and accompanying Spiire drawings.</p> |
| d. Neighbourhood pattern is to create a legible and permeable street hierarchy that responds to the | COMPLIES |

| Control | Assessment of Control |
|--|--|
| natural site topography, the location of existing significant trees and solar design principles. | Refer Section 4.4 of the SEE and accompanying Spiire drawings. |
| e. Pedestrian and bicycle connectivity within each residential neighbourhood is to be provided between the residential areas and public open space areas, public transport nodes, education and community / recreation facilities. | COMPLIES Refer Section 4.4.1 and Section 4.4.2 of the SEE. |
| f. Street blocks are to be generally a maximum of 250m long by 70m wide. Block lengths and widths in excess of 250m may be considered by council where connectivity objectives are achieved. | COMPLIES Proposed street blocks are generally in accordance with the Structure Plan. |
| g. Each new allotment has sufficient building area on it, being land with a slope of less than 20%. Where the land in the opinion of the Council is unstable, a geophysical report on the stability of land is to be prepared by consultants acceptable to the Council and the report is to indicate which part of the land is suitable for development or appropriate measures that need to be taken to stabilize the area proposed for development. | COMPLIES Cut and fill is proposed to make all developable lands appropriate for dwelling construction Refer to Section 4.4.4 for a description of the proposed earthworks and accompanying Site Grading Plans. The geotechnical investigation report that accompanies the SEE, supports the proposal. |
| 4.4 Lot Orientation | |
| Lot Orientation Controls: | |
| a. Consideration should be given to different lot dimensions depending on the lot orientation. In this regard, upfront detailed tailoring of a layout at the early stages of a project can deliver sustainable outcomes. | COMPLIES Taking into account all of the site's attributes such as topography, natural features and zoning, view and vistas the proposed layout seeks to maximise solar access. It should be noted that the proposed lot orientation under this DA generally follows with the lot arrangement in the structure plan. |
| b. Lot orientation, size and dimensions should enable dwellings to be generally sited either on a N-S or E-W orientation. Where other amenities such as views over open space are available or the topography prevents efficient design then alternative lot orientations can be considered. Refer above. | |
| c. Allowances are to be made for different lot depths and widths, depending on orientation, which may also result in increased variety to the streetscape frontage pattern. | |
| d. Where E-W oriented lots are proposed lots should be wider to support solar access. | |
| e. Design for deeper N-S lots on the southern side of roads, particularly if two storey dwellings are envisaged, to allow for solar access to private open space at the rear. | |
| f. N-S oriented lots on the northern side of an E-W road can be less deep than N-S lots on the southern side of the same road. Narrower lots can be accommodated, particularly for the northern lots as they are particularly suitable for two storey | |

| Control | Assessment of Control |
|--|--|
| <p>dwellings with a lesser footprint. A wider southern lot allows for a central courtyard, which may gain greater solar penetration.</p> | |
| Lot Size and Layout Controls: | |
| <p>a. Minimum lot size is to be in accordance with the <i>QLEP 2012</i> Lot Size Map and the lot dimensions are to be in accordance with the Table 1 below.</p> | <p>DOES NOT COMPLY</p> <p>Refer to Section 5.11 of this SEE.</p> <p>The proposal generally complies with the minimum lot size requirements, except for a strip of land along the south western boundary of the site. Justification for this deviation is provided in the clause 4.6 variation statement accompanying this application.</p> |
| <p>b. Residential lot size must be capable of accommodating a dwelling, private open space and at least one under cover car parking space.</p> | <p>COMPLIES</p> <p>Residential lots are capable of accommodating a dwelling, private open space and at least one under cover car parking space. Dwelling construction will be subject of future DAs.</p> |
| <p>c. Lot size and layout are to take into account the slope of the land, any environmental constraints and any significant natural features to create a legible and permeable neighbourhood pattern.</p> | <p>COMPLIES</p> <p>Lot sizes and layouts respond to the topography and constraints to create a legible and permeable neighbourhood pattern consistent with the neighbourhood structure plan.</p> |
| <p>d. Lots should be generally rectangular in shape and orientated to allow future dwellings to gain access off streets and where possible, public open spaces.</p> | <p>COMPLIES</p> <p>All lots are almost rectangular in shape and are orientated to ensure access to streets and pathways.</p> |
| <p>e. No more than two battle axe shaped allotments should adjoin each other...</p> | <p>COMPLIES</p> <p>There are 2 battle axe allotments proposed as part of this application, which adjoin each other.</p> |
| <p>4.5 Land North Googong Dam Road and East of Old Cooma Road</p> <p>This area is zoned for General Residential R1, Large Lot Residential R5 and Environmental Protection E2. The E2 area comprises environmental sensitive land with a steep gorge draining into the Queanbeyan River. Subdivision of this land may only occur in conjunction with subdivision of adjacent residential zones R1 and R5. Subdivided lots in E2 zone are to be adjoined with a residential dwelling site, no structures will be permitted within the E2 zone other than environmental facilities.</p> <p>Subdivision Controls:</p> <p>a. The minimum lot size and dimensions are to be in accordance with the <i>QLEP 2012</i> Lot Size Map and Table 24 below:</p> | <p>NOT RELEVANT</p> <p>Googong Road is located north of NH1A. Land north of Googong Dam Road is not relevant to this application.</p> |

| Control | Assessment of Control |
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Table 24 Minimum Frontage Dimensions for Large Lots

| Zone | Lot Size | Minimum Frontage Dimension |
|------|----------------------------------|---|
| R1 | 1,000m ² | 18m |
| R5 | 15,000m ² (1.5ha) | 50m to internal road. Reduced frontage dimension permitted at the end of a cul-de-sac or right of carriageway. |
| E2 | 100,000m ² (10ha)* | |

*satisfactory ratio of width to depth of allotment having regard to the physical and environmental constraints and its functionality with the adjoining dwelling house site in zone R1 or R5.

- b. The subdivision of the land requires preparation of a Neighbourhood Structure Plan and its approval by Council prior to submission of a development application for subdivision of this locality.
- c. Subdivision of R5 land is permitted to have only one public road access off Old Cooma Road.
- d. No direct access to allotments will be permitted to Old Cooma Road or Googong Dam Road.
- e. The R5 land may be subdivided as a cluster housing subdivision under a Community Title Scheme. Each lot created is to have an area of not less than 1000m² and not more than one dwelling house is to be erected for each 1.5ha of the land on which the development is to be carried out. Only one private road access will be permitted to Old Cooma Road servicing the cluster housing subdivision.
- f. An application for development involving E2 zoned land is to demonstrate to Council that an appropriate management regime will be put in place relating to bushfire control, vegetation clearing, access provision, fencing controls, recreational uses, feral animal and weed control, management of grazing, keeping of animals and landscaping with indigenous species.

4.6 Residential Interface with Googong Dam Foreshores

Land adjoining the Googong Dam foreshores and within the Googong Dam catchment is zoned for Environmental Protection E2 and adjoined by R5 Large Lot Residential. Subdivision of E2 land may only occur in conjunction with subdivision of adjacent residential zone R5. No structures will be permitted

COMPLIES

The proposed lot subdivision within the E2 zoned land is permitted under the current LEP considering the proposed subdivision is not nominated for any prohibited uses including residential. The residential use of these 16 lots and further works including the construction of any structures are subject to future approvals.

| Control | Assessment of Control |
|---|---|
| <p>within the E2 zone other than environmental facilities.</p> <p>Subdivision Controls:</p> <ol style="list-style-type: none"> The minimum lot size to be in accordance with the QLEP 2012 Lot Size Map i.e. 1.5ha. The configuration of the E2 zone in this locality may preclude subdivisions into satisfactory lot sizes to adjoin with adjacent R5 subdivided land. Strategies for the management and control of this land will need to be submitted as part of Plan of Management. An application for development involving E2 zoned land is to demonstrate to Council that an appropriate management regime will be put in place relating to bushfire control, vegetation clearing, access provision, fencing controls, recreational uses, feral animal and weed control, management of grazing, keeping of animals and landscaping with indigenous species. Building envelopes in zone R5 must be setback a minimum 10m from an internal road and 10m from adjoining side and rear boundaries. | <p>Land along the southern and eastern boundary of NH4 and NH5 identified as "Googong Foreshore Buffer Area" on the Googong Map and is subject of the Googong Foreshores Interface Management Strategy (GFIMS) prepared by Biosis Research (2013). The clause specifies certain requirements that must be satisfied for the erection of any buildings on this land.</p> <p>A variety of measures will be implemented as part of a development consent for future dwellings and management in the future to ensure that Googong Dam water supply catchment is not compromised. For a detailed assessment refer to the SEE.</p> |
| Part 5 - Design Guidelines and Controls for Public Domain | |
| Controls: | |
| <ol style="list-style-type: none"> Streets are to be designed in accordance with the Master Plan and Council's adopted QPRC Engineering Design and Construction Specifications. | <p>EFFECTIVELY COMPLIES</p> <p>The majority of the proposed streets under this DA are designed in accordance with the Master Plan and Council's adopted QPRC Engineering Design and Construction Specifications except for a few deviations that are explained and justified in the civil infrastructure design report prepared by Spiire and submitted with this DA. Refer to this report for further information.</p> |
| <ol style="list-style-type: none"> A development application must demonstrate that the proposed streets are appropriate for their role in the street network. | <p>COMPLIES</p> <p>Refer to the civil drawings prepared by Spiire and the transport report accompanying this application.</p> |
| <ol style="list-style-type: none"> All new streets are to comply with the design and engineering requirements applicable to roads and streets, crossings, footpaths, cycle ways, bus shelters and the like in the QPRC Engineering Design and Construction Specifications. | <p>COMPLIES</p> <p>As above.</p> |
| <ol style="list-style-type: none"> Streets are to include a stormwater drainage facilities as required. WSUD controls should be provided where possible in central medians. | <p>COMPLIES</p> <p>All proposed streets include a stormwater drainage facility as required. WSUD controls should be provided where possible in central medians. See Section 6.5 of the SEE and the civil drawings by Spiire.</p> |

| Control | Assessment of Control |
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| e. Subdivisions are to be designed to provide adequate safety for pedestrians using the street verge. | <p>COMPLIES</p> <p>Proposed subdivisions designed to provide adequate safety for pedestrians using the street verge. See Sections 4.4.1 and 4.4.2 of the SEE and relevant civil drawings.</p> |
| f. Applications for subdivision shall be accompanied by a traffic engineering assessment that includes traffic volumes and movements, cross-sections through typical street types demonstrating that road reserve widths can adequately accommodate electricity, gas, telecommunications, water and waste water infrastructure, street trees, footpaths, shared paths, on-street parking, road pavement widths and where appropriate on-street cycling. | <p>COMPLIES</p> <p>Refer to the transport report and civil drawings submitted with this application. Also, see Section 6.7 of the SEE.</p> |
| <p>5.3. Road Hierarchy</p> <p>There are four distinct levels of roads identified for residential neighbourhoods.</p> <ol style="list-style-type: none"> 1. Access Street 2. Local Street 3. Collector Street 4. Local Sub-Arterial <p>Any other road type is at the discretion of the road authority to approve. Other road types not listed in the QPRC Engineering Design and Construction Specifications must be able to ensure functional access (through appropriate width of the pavement and road reserve) and manoeuvrability (appropriate intersection radius) for all road users as a basic rule. All technical information for the design and delivery of street networks in any development shall be sourced from the QPRC Engineering Design and Construction Specifications.</p> | <p>EFFECTIVELY COMPLIES</p> <p>The proposed road hierarchy map, contained in the Civil Infrastructure Drawings prepared by Spiire, shows more details for the variety of road types proposed. See the street hierarchy plan for more information.</p> |
| 5.4. Public Open Spaces and Landscaping | |
| Relevant Controls: | |
| <p>a. Googong Common - Googong Common shall:</p> <ol style="list-style-type: none"> i. Combine recreation, ancillary commercial, functional, environmental and cultural roles. ii. Provide an extensive open space resource for Googong. iii. Embody the character and environmental attributes of the Monaro landscape. iv. Include a feature entry which suitably announces the entry and incorporates signage, shelters and a major water feature. v. Provide cycle and pedestrian paths, amenities, playgrounds, passive recreation, active sports facilities and shelters, art and heritage interpretation, a pedestrian bridge over Montgomery Creek and water bodies. | <p>COMPLIES</p> <p>The proposal seeks to deliver open space in accordance with the Structure Plan, Landscape and Open Space Strategy and Local Planning Agreement that satisfy the requirements and standards listed in this control.</p> <p>Refer to Section 4.5 of this SEE and accompanying Landscape Report.</p> |

| Control | Assessment of Control |
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| <p>b. Hill 800 - Hill 800 shall:</p> <ul style="list-style-type: none"> i. Include a lookout or series of lookouts with provision of sun and rain shelter. ii. A series of pathways and direct stairway. iii. Provide interpretive signage to reflect upon cultural and ecological landscape and include minor art work(s). iv. Include establishment of plant species responsive to the character and exposed nature of the area. v. Result in minimal removal of existing rock formations to hill top to preserve the geological heritage of the site. vi. Provide adequate level of parking to base of Hill 800 for visitors to the lookout. | <p>COMPLIES</p> <p>Refer to Section 4.5 of this SEE and accompanying Landscape Design Report.</p> |
| <p>c. Neighbourhood Parks - Neighbourhood Parks shall:</p> <ul style="list-style-type: none"> i. Be identified in each Neighbourhood Structure Plan. ii. Be located so that a park is generally within 800m from dwellings. iii. Have a minimum area of 3000m². iv. Be located with drainage lines or ridgelines to accommodate stormwater management and views respectively. v. Provide areas and facilities for both active and passive recreation. vi. Provide detail grading and retaining systems to allow for levels associated with existing trees to be retained and to achieve a satisfactory and practical park grade. vii. Provide one large play area with adequate shade facility and fencing/planting to define the play zone. viii. Provide elements (can be play orientated) that contribute to the 'celebration of water' across the Township. ix. Provide a large shelter facility with BBQ facility with seating and tables x. Provide entry and signage (park name) elements. xi. Ensure heritage overlay where appropriate through interpretive signage, artwork installations or retention of existing shelter belt and cultural plantings. xii. Include water sensitive urban design elements such as vegetated swales, minor creeklines, passive irrigation and detention ponds or treatment basins. | <p>COMPLIES</p> <p>Refer to Section 4.5 of this SEE and accompanying Landscape Design Report.</p> |

| Control | Assessment of Control |
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| <p>d. Local Parks - Local Parks shall:</p> <ul style="list-style-type: none"> i. Have a minimum area of 1000m² and be linked to a larger open space network. ii. Be generally within 200m of most residents (unless that resident is within 400m of a neighbourhood park). iii. Allow for passive and / or active recreation. iv. Provide seating and pathways for circulation. v. Incorporate small children's play facilities as set out in Schedule 1 of the voluntary planning agreement. vi. Provide entry and signage elements. vii. Integrate open space with stormwater management and environmental strategies viii. Optimise ecological functionality through planting of endemic species. | <p>COMPLIES</p> <p>There are four local parks located across NH345. Refer to Section 4.5.2 of this SEE and accompanying Landscape Design Report and Subdivision Plans.</p> |
| <p>e. Civic spaces in the neighbourhood centres and town centre - Civic spaces in the neighbourhood centres and town centre shall:</p> <ul style="list-style-type: none"> i. Provide one space central to each centre. ii. Provide vegetation or other buffering elements from NW to SE winds to provide protected enjoyable spaces. iii. Provide areas and facilities for both active and passive recreation and café/spill out zone from adjoining retail or community facility. iv. Provide entry and signage (park name) elements. v. Provide interpretive signage to reflect upon cultural and ecological landscape. vi. Provide and integrate artwork. vii. Provide and integrate cycle parking. viii. Provide for and integrate water sensitive urban design elements. ix. Be predominantly planted with a single identifier species. x. Be generally oriented to optimise solar access. | <p>NOT RELEVANT</p> <p>Design and development of civic spaces within neighbourhood centres are subject of future DAs.</p> |
| <p>f. Linear Parks and drainage reserves - Linear Parks and drainage reserves shall:</p> <ul style="list-style-type: none"> i. Maximise ecological function through the planting of endemic species. ii. Link neighbourhood and local parks and other key community focal points into the continuous open space network. iii. Facilitate overland flow requirements. iv. Integrate non-vehicular circulation within footpaths and cycleways to increase safety and connectivity. | <p>COMPLIES</p> <p>Refer to Section 4.5 of this SEE and accompanying Landscape Design Report.</p> |

| Control | Assessment of Control |
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| <p>v. Include water sensitive urban design elements such as weir structures to control water flow around drainage lines and create pooling where required, urban creek lines along streets and existing creeks.</p> <p>vi. Include bushland regeneration where appropriate.</p> | |
| <p>5.5. Landscaping in the Public Domain</p> <p>Main access roads and boulevards are to incorporate WSUD bio retention elements where appropriate. Gateways to the site along Old Cooma Road and Googong Dam Road are to include feature planning to establish a visual identity and include exotic species.</p> <p>Any subdivision application shall be accompanied by a planting schedule detailing proposed planting for local streets. Such proposed planting shall include a mix of exotic and local native species. Other plants may be used where it can be demonstrated that they meet the objectives and controls in this DCP.</p> <p>Construction:</p> <p>Construction of Landscaping is to be in accordance with the site analysis plan and landscape plan and is not to commence until it has been approved by Council and a construction certificate has been issued for the subdivision or for that part of the subdivision where landscaping in accordance with the approved plan is to occur. A landscape plan must be submitted with a DA application for subdivision.</p> <p>The Landscape Plan is to demonstrate the full understanding of:</p> <ul style="list-style-type: none"> » The existing site and its landscape features including landform, soil, climate, ecology and vegetation. » The existing surrounding land use and neighbourhood character. » The influence the existing and any proposed development may have on the amenity of the area. » The potential bushfire threat to the property/land and whether a bush fire hazard exists on or is adjacent to the land. » The implications of vegetation and wildlife corridors. <p>The Landscape Plan is to provide details on:</p> <ul style="list-style-type: none"> » Earthworks » Plant species and sizes » Hard and soft landscape treatments » Utilities and services » Entry statements, street furniture, signage, public lighting, play equipment | <p>COMPLIES</p> <p>Refer to Section 4.5 of this SEE and accompanying Landscape Report.</p> |

| Control | Assessment of Control |
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| <ul style="list-style-type: none"> » Waste management » Rehabilitation/remediation work to any degraded land » Treatment and protection measures of gullies, creeks and river corridors and significant tree and other vegetation. | |
| 5.6. Community Facilities | |
| <p>Controls:</p> <p>Community facilities provided at Googong shall:</p> <ol style="list-style-type: none"> a. Generally confirm to the scope as outlined in the Googong Voluntary Planning Agreement. b. Adopt the objectives and controls in the Part 2.9 of the Queanbeyan Development Control Plan 2012 Safe Guidelines for the City of Queanbeyan and be located above the 1 in 100 year flood level. | <p>COMPLIES</p> <p>The approval of the Community Facilities is subject to future DAs.</p> |
| 5.7. Educational Facilities | |
| <p>Sites for public schools must equate to at least one 3 hectare site for a primary school and one 9 hectare site for an integrated pre-school/child care, primary and high school, unless otherwise agreed by the NSW Department of Education and Training.</p> <p>The potential sites for public schools are shown on the master plan and key community facilities plan (Appendix 2). Alternate sites may be permitted subject to agreement with the NSW Department of Education and Training.</p> <p>Shall the NSW Department of Education and Training advise that the potential public schools sites are no longer required, these sites may be developed for permissible residential uses or if there is a justifiable need, other community uses</p> <p>The potential sites for private schools are shown on the master plans in Appendix 2 and may be proposed where they meet the Objectives and Controls in this Section.</p> <p>Where it can be demonstrated that potential private schools sites are no longer required or are not required on sites as large as shown on in the master plans within Appendix 2, these sites may be developed for permissible residential uses or if there is a justifiable need, other community uses.</p> | <p>COMPLIES</p> <p>The State Planning Agreement makes provisions for a school and a fire station at Googong which will be provided in accordance with the NH2 DA</p> |
| <p>Educational establishments, community facilities and places of worship are to:</p> <ol style="list-style-type: none"> 1. Be located above the 1 in 100 year flood level. 2. Co-locate with appropriate facilities. 3. Locate in or near activity centres to enhance community identity and create focal points in the development. | <p>COMPLIES</p> <p>As above.</p> |

| Control | Assessment of Control |
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| <p>4. Achieve high quality design that complements the existing and desired character of the surrounding area.</p> <p>5. Be designed so that the layout and built form minimises impacts on the surrounding residential area, in relation to parking, views, overshadowing and noise.</p> <p>6. Parking provisions for community uses are to meet the standard set out in DCP 1.</p> <p>Notwithstanding above, the overall parking rate may be considered by Council to be satisfied with a combination of On Site Parking, Communal Car Parks and On Street Parking where it can be demonstrated by a suitably qualified traffic Consultant that there is sufficient public parking in the locality (as demonstrated by an empirical assessment).</p> | |
| 5.8. Public Art | COMPLIES |
| <p>Controls:</p> <p>a. As part of the precinct planning/neighbourhood level subdivision layout, identify spaces suitable for public art.</p> <p>b. Where appropriate work with stakeholder's community, and Council to create a piece of work that enhances the public domain.</p> <p>c. Integrate the provision of public art into the staging program for the neighbourhood.</p> | <p>A Public Art Strategy has been prepared for Googong, as a high- level visioning document that presents inspiration for the number of ways public art can be integrated to give Googong a unique place identity.</p> <p>Refer to the accompanying Landscape Design Report.</p> <p>Further details relating to Public Art will be developed as part of detailed designs at the relevant Construction Certificate and Development Applications stages. See section 4.5.4 of the SEE.</p> |
| 5.9. Signage in the Public Domain | COMPLIES |
| <p>Controls:</p> <p>a. That all signage be subject to a development application to Council, with the exception of those listed in Exempt and Complying State Environmental Planning provisions.</p> <p>b. Any application for signage must state that the proposal complies with <i>State Environmental Planning Policy No. 64 – Advertising and Signage (SEPP 64)</i> under the <i>Environmental Planning and Assessment Act 1979</i>.</p> <p>c. Public domain signage is to be shown in applications for Construction Certificates and is to be consistent with the guidelines for public domain signage outlined in the Googong Landscape and Open Space Strategy (LOSS).</p> <p>d. Public signage is to clearly identify the local neighbourhoods.</p> <p>e. In respect of temporary banner signage, Council will consider applications for this type of signage in the following circumstances:</p> | <p>The principles of signage location and types are to be continued as developed in Neighbourhood 2.</p> <p>Refer to Section 4.5.4 of this SEE and accompanying Landscape Design Report.</p> <p>Further details relating to signage will be developed as part of detailed designs at the relevant Construction Certificate and Development Application stage.</p> |

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| <ul style="list-style-type: none"> i. All banners on poles are to be erected 'on Council's behalf' and subsequently gifted to the Council upon installation. ii. All banner signage advertising any land release or development is to be wholly located on land to which that land release or development relates. iii. No banner signage will be allowed along Old Cooma Road or Googong Dam Road. iv. The maximum size of any banners is to be 1500mm (h) x 300mm (w). v. All signage will be limited to 2 years from date of installation, or any other timeframe the Council considers appropriate in the circumstances. Banners are to be removed on Council's behalf by the respective developer when requested and at the developer's cost. | |

Table 25 Part 8 Environmental Management

| Control: | Assessment of Control |
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| 8.1. Introduction | NOTED |
| 8.2. Soils and Salinity | |
| Controls: | |
| <ul style="list-style-type: none"> a. All development must incorporate soil conservation measures to minimise soil erosion and siltation during construction and following completion of development. Soil and Water Management Plans, prepared in accordance with <i>Managing Urban Stormwater – Soils and Construction (NSW Department of Housing 3rd Edition March 2004 ('The Blue Book'))</i> are to be submitted with each subdivision development application. | <p>COMPLIES</p> <p>A range of erosion and sediment control measures are proposed, including staged construction and reinstatement where practical and a suite of preventative measures to control the generation of eroded material from the site and mitigation measures designed at controlling, diverting and trapping sediments and suspended solids that would be mobilised.</p> |
| <ul style="list-style-type: none"> b. All sediment and erosion controls are to be installed prior to the commencement of any construction works and maintained throughout the course of construction until disturbed areas have been revegetated/established. | <p>Refer to Section 6.3 of the SEE and the accompanying Stormwater Management and Drainage Report and Drawings for further details on sediment and erosion control measures proposed.</p> <p>The accompanying geotechnical report which included field work to determine site suitability did not identify any salinity issues. Refer to Section 6.6 of this SEE and accompanying Geotechnical Investigation Report.</p> |
| <ul style="list-style-type: none"> c. Unless provided at the neighbourhood structure plan stage each subdivision application is to be accompanied by a salinity report prepared by a suitably qualified consultant, reporting on the conditions of the site, the impact of the proposed subdivision on the saline land, the mitigation measures that will be required during the course of construction and a requirement that the consultant signs off the project upon completion of works. Investigations and sampling for salinity are to be conducted in accordance with the requirements of Site Investigations for Urban Salinity (DNR). | |

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| 8.3. Cut and Fill | |
| <p>Controls:</p> <ul style="list-style-type: none"> a. Excavation and fill on building sites shall be limited to a max of 1.5m. Greater depth may be considered by Council, if within the building envelope, suitably retained and/or stabilised and not visible from the street. b. Development applications are to identify the extent of proposed cut and/or fill land and provide justification for the proposed changes to the land levels. c. The maximum height of retaining walls is to be 1.0m. d. Where terraced walls are proposed the minimum distance between each step is 0.5m. e. A variation to the retaining wall heights can be considered with supporting justification and concurrence of the adjoining neighbours. Walls over 1m in height are to be designed/certified by a structural engineer f. Batters are to be limited to a maximum gradient of 1 vertical: 4 horizontal. g. Proposed cut or fill in the vicinity of sewer and stormwater mains must comply with Council's Development Adjacent to Water, Sewer and Stormwater Mains Policy. | <p>COMPLIES</p> <p>The extent of the proposed earthworks is described in Section 4.4.4 of the SEE.</p> <p>Measures have been taken to minimise the extent of excavation and fill on site, whilst providing the optimum lot types with appropriate grading outcomes given the existing typography. Grading designs will be further developed for the Construction Certificate Drawings.</p> <p>Refer Section 6.6 of this SEE and accompanying Civil Engineering and Utilities Design Report and associated drawings for details on the extent of cut and fill site grading and Geotechnical Investigation for recommended site preparation and earthworks measures.</p> |
| 8.4. Stormwater Management and Flooding | |
| <p>Controls:</p> <ul style="list-style-type: none"> a. All Development Applications shall include a Stormwater Drainage Analysis, addressing the management of water quality and quantity (having regard to all contributing catchments and downstream water bodies), for the range of storm events from the 1 Year ARI to the 100 Year ARI storm event and addressing the objectives of WSUD. b. Existing natural drainage lines shall form part of a stormwater and runoff drainage management system utilising soil conservation measures (including detention basins and or wetlands) to alleviate stormwater peaks and retain sediments and pollutants. c. Stormwater management strategies shall be adopted to maximize the efficient use of land and facilitate adequate allocation of land for these purposes. d. Stormwater management strategies shall be developed and implemented in a manner which addresses potential salinity hazards. | <p>COMPLIES</p> <p>All appropriate measures have been implemented in the design to ensure stormwater treatment is carried out such that water re-entering the creek system has been treated appropriately and impacts mitigated.</p> <p>Full details of the stormwater management measures incorporated into Neighbourhood 3, 4 and 5 are provided in the accompanying Stormwater Management and Drainage Report and associated drawings.</p> <p>Refer to Section 4.4.6 and 6.5 of this SEE and the Stormwater Management and Drainage Report for further details.</p> |

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| e. Stormwater treatments are to be designed to meet the minimum level of performance which is a reduction in the stormwater peak run off flows to predevelopment levels for the range of storms from the 1 year ARI to the 100 year ARI event. | |
| f. Stormwater management design is to maintain the existing hydrological regime for stream forming flows, with respect to peak flows and duration of flow. | |
| g. WSUD elements shall be incorporated into the design of all development | |
| h. A Development Application shall include a WSUD assessment that addresses: <ul style="list-style-type: none"> i. The relevant site characteristics and constraints. ii. Stormwater management strategies, including treatment measures, reuse and maintenance requirements. iii. A rationale for the proposed strategies. iv. Evidence of stormwater modelling is to accompany all development applications for all proposed development except those for less than 10 dwellings. | |
| 8.5. Bushfire Management | |
| Controls: | |
| a. A Bushfire Threat Assessment report must form part of all development applications for lands identified as 'bush fire prone' on the Bush Fire Prone Lands Maps. This assessment is to be prepared in accordance with " <i>Planning for Bushfire Protection</i> ", by the Rural Fire Service and Planning NSW, and specify the mitigation and other measures required to comply with those Guidelines. | COMPLIES A Bushfire Assessment Report as part of the Structure Planning process has been prepared to assess the possibility of fires occurring within the surrounding grassland areas. The assessment accompanies this report and has been prepared in accordance with provisions of Section 100B of the <i>Rural Fires Act 1997</i> , Clause 44 of the <i>Rural Fires Regulation 2008</i> , and ' <i>Planning for Bush Fire Protection 2006</i> ' (RFS 2006) (PBP). |
| b. Assessment of bushfire threat must examine impacts on the proposed development from fire both on and approaching the site. It must also include an evaluation of the capacity of the existing road network serving the site to accommodate traffic in emergency situations, and consider emergency vehicle access to those parts of the site fronting a potential bushfire source. | Refer to Section 6.4 of this report and the accompanying Bushfire Assessment Report. |
| c. Preparation of an assessment of threat from bushfire should include reference to: <ul style="list-style-type: none"> i. NSW Rural Fire Service (RFS) – Planning for Bushfire Protection 2006. ii. AS 3959, Construction of buildings in bushfire-prone areas. iii. Consultation with Council. | |

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| d. The recommendations of the Assessment report must be incorporated into the design of the proposed development. That design may require further amendment based on additional conditions which may be imposed by the approving authority (normally Council or the RFS). | |
| e. Subject to detailed design at development application stage, the location and widths of APZs are to be provided generally as follows: <ul style="list-style-type: none"> i. Are to be located wholly within the development site. ii. May incorporate roads. iii. Are to be maintained in accordance with the <i>Planning for Bushfire Protection 2006</i> (RFS). iv. Are to be generally bounded by a perimeter fire trail/road that is linked to the public road system at regular intervals in accordance with <i>Planning for Bushfire Protection</i>. | |
| f. Reticulated water is to meet the standards contained within <i>Planning for Bushfire Protection 2006</i> . Water supply is to be via a ring main system, engineered to the requirements of Australian Standard 2419.1-1994 Fire Hydrant Installations. | |
| g. Dwellings adjacent to APZs are to be constructed in accordance with the requirements of Appendix 3 of <i>Planning for Bushfire Protection 2006</i> and <i>Australian Standard 3959 - Construction of Building in Bushfire Prone Areas</i> . | |
| Aboriginal Heritage | |
| Controls: | |
| a. Areas containing potential indigenous sites are identified at the Archaeological (Indigenous & European) Map contained within Appendix 2. Development shall not proceed within these areas without appropriate investigation and consultation with the relevant local Aboriginal groups. | <p>COMPLIES</p> <p>A Cultural Heritage Desktop Assessment report prepared as part of the NH345 Structure Plan identified 24 Aboriginal Sites and 6 European Heritage Items within the boundaries of NH345.</p> <p>Further consideration of the heritage values of the site is provided in Sections 5.11 and 6.9 of the SEE.</p> |
| b. The investigations are to identify, where required, conservation zones for the protection and management of archaeological deposits. A Plan of Management is to be prepared to address the ongoing protection and management of the archaeological deposits. | |
| c. Any development application for development within these sites is to be accompanied by an Aboriginal Archaeological Report that is supported by the comments of the local Aboriginal groups. | |
| d. Where development impacts upon an identified Aboriginal site, Consent to Destroy Permits will | |

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| need to be sought under <i>Section 90 of the NSW Parks and Wildlife Act 1974</i> . | |
| 8.7. European Archaeological Heritage | |
| Controls: | |
| a. Elements of European archaeological heritage significance are shown on Archaeological (Indigenous & European) map in Appendix 2. Prior to any development that affects these elements a detailed assessment of heritage significance (Heritage Impact Statement) is to be undertaken which addresses the significance assessment criteria contained in the NSW Heritage Manual. | COMPLIES As above. |
| b. An applicant is to demonstrate to Council how any proposed development that affects the identified elements responds to any identified archaeological constraints. If any relics are to be retained in situ, an applicant is to outline with the development application all management measures to ensure ongoing protection of the relics. | |
| 8.8. Tree Retention and Biodiversity | |
| Controls: | COMPLIES Refer to the following sections in this SEE: |
| a. Development must provide filter and protection strips to natural drainage lines, watercourses, streams, foreshores of constructed drainage corridors, riparian habitat strips and exclusion zones for preserving vulnerable and/or significant remnant vegetation and species. | » Section 4.4.6 of the SEE for measures to be implemented to minimise potential impacts on hydrology and water quality » Refer to Section 6.4 of the SEE for measures relating to bushfire hazard reduction » Section 4.4.5 of the SEE provides details relating to tree retention » Section 6.2 of this SEE for consideration of biodiversity impacts Section |
| b. All high recovery potential vegetation is to be retained within open space. The moderate recovery potential vegetation is to be retained, where possible, within open space but may be retained within private lots. | |
| c. Existing significant trees, in particular large hollow bearing trees, are to be retained wherever possible within development sites, public and community parks, streetscapes and riparian corridors. | |
| d. Native vegetation (canopy level) shall be provided, where possible within pocket parks, riparian corridors and street verges. Details of any planting shall be provided within a detailed Landscape Plan submitted at development application stage. | |
| e. Where development is located within or close to a known biodiversity corridor fencing shall be sympathetic to the passage of native fauna. | |

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| f. Development must provide temporary tree/vegetation protection measures prior to any clearing works. | |
| g. Erosion and sediment controls during and after construction should have minimal impact on watercourses and remnant bushland. | |
| h. Where required by Council, subdivision development applications are to be accompanied by a Weed Management Plan that identifies weed control measures during and after development. | |
| 8.9. Land Contamination Management | |
| Controls: | COMPLIES |
| a. Development applications for development in Areas of Environmental Concern (AEC) as identified within Appendix 2 shall be accompanied by a Stage 2 Detailed Site Investigation prepared in accordance with Council's Policy – <i>Management of Contaminated Lands</i> . A Remediation Action Plan (RAP) will be required for areas identified as contaminated land in the Stage 2 Site Investigation. | Refer to Section 6.3 of this SEE. |
| b. When redevelopment is proposed on a site where Council suspects that contamination may be present or for applications proposing a change of use to a more sensitive land use (e.g. residential, education, public recreation facility etc), Council may request a Stage 1 Preliminary Site Contamination Investigation. | |
| c. All investigation, reporting and identified remediation works must be in accordance with the protocols of Council's Policy – <i>Management of Contaminated Lands</i> , the NSW Office of Environment and Heritage (OEH) Guidelines for <i>Consultants Reporting on Contaminated Sites</i> and <i>SEPP 55 – Contaminated Land</i> . | |
| d. Prior to granting development consent, Council must be satisfied that the site is suitable, or can be made suitable for the proposed use. Remediation works identified in any RAP will require Council consent prior to the works commencing. | |
| e. Council may require a Site Audit Statement (SAS) (issued by an OEH Accredited Site Auditor) where remediation works have been undertaken to confirm that a site is suitable for the proposed use. | |
| 8.10. Odour | NOT RELEVANT The proposed residential development is not within 400m of the proposed or operating sewerage treatment plant. |

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| 8.11. Construction Waste | COMPLIES |
| Controls: | Management of traffic during the construction period and construction waste is to be confirmed at Construction Certificate stage. The builder/contractor will prepare a Construction Management Plan prior to construction commencing. The Construction Management Plan is to provide information relating to: |
| <ul style="list-style-type: none"> a. A Waste Management Plan must be provided for all development requiring construction works on site. The level of detail in the plan will reflect the scale of development being undertaken but will generally include details of: <ul style="list-style-type: none"> i. The volume and type of waste to be generated. ii. How waste is to be stored and treated on site. iii. How and where residual material is to be disposed. | <ul style="list-style-type: none"> » the volume and type of waste to be generated » how waste is to be treated and stored on site » how and where residual material is to be disposed of. <p>The plan will also be accompanied by drawings with specific details regarding (but not limited to) on site sorting, storage and access for collection.</p> <p>The submission of the Construction Management Plan can be a condition of consent and required prior to the issue of a CC or prior to works commencing.</p> |
| <ul style="list-style-type: none"> b. The Waste Management Plan must be accompanied by drawings with specific details showing: <ul style="list-style-type: none"> i. On site sorting and storage areas. ii. Access for collection vehicles. iii. Vegetation to be removed or retained. | |
| <ul style="list-style-type: none"> c. The Waste Management Plan must optimise recycling to reduce waste to landfill. | |
| 8.12. Landfill/Earthworks | COMPLIES |
| Controls: | A full analysis of the proposed site works has been undertaken in the Geotechnical Report submitted with this application. The proposed grading will be undertaken within the development footprint of the site. Refer to the Site Grading Plans. |
| <ul style="list-style-type: none"> a. Adequate justification of the need for landfill to be deposited on a site must be provided. | |
| <ul style="list-style-type: none"> b. The type and origin of landfill material being used must be detailed. Landfill activity must only be undertaken using VENM such as clay, gravel, sand, soil and rock only must be used for land filling activities. | |
| <ul style="list-style-type: none"> c. Material that is mixed with any other type of waste which has been excavated from areas of land contaminated with human made chemicals as a result of industrial, commercial, mining or agricultural activities or which contains sulphidic ores or soils must not be used for landfill. | |
| <ul style="list-style-type: none"> d. Council may approve the addition of selected crushed inert materials to VENM for specific landfill activities. | |
| <ul style="list-style-type: none"> e. A scaled plan must be provided demonstrating the location of any existing features on the property such as drainage lines and infrastructure, vegetation, roads etc. | |
| <ul style="list-style-type: none"> f. A site plan prepared by a registered surveyor must be submitted demonstrating the existing levels of the property and proposed levels of the landfill. | |

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| g. The extent of the fill including location, depth, direction and gradient slope of the surface and batter slopes must be clearly demonstrated on a plan. | |
| h. Landfill must not adversely affect the natural flow of drainage or runoff. | |
| 8.13. Development near Googong Dam Foreshores | COMPLIES As addressed above. |
| Controls: | |
| An applicant is to demonstrate to Council that: | |
| a) The building and associated infrastructure envelope identified for each existing or proposed lot are appropriate having regard to the land capability and the objective of this clause. | |
| b) The development incorporates an appropriate management regime relating to stormwater run-off, bushfire control, vegetation clearing, access provision, fencing controls, recreational uses, feral animal and weed control, management of grazing, keeping of animals and landscaping with indigenous species. | |

7.2 Queanbeyan Development Control Plan 2012

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| Part 1 Introduction | NOTED See below. |
| Part 2 Car Parking | |
| 2.2.1. Introduction This part of the development control plan outlines requirements for the provision of car parking and service delivery facilities. The controls apply to all development in the Queanbeyan Local Government Area previously regulated through DCP 1: Car Parking Policy, with the exception of the area covered by the Queanbeyan Local Environmental Plan (Googong) 2009. | COMPLIES Refer Section 2.2.1. – 2.2.17 of the QDCP 2012 assessment table. |
| 2.2.2. Objectives for Car Parking | COMPLIES |
| 1) Car parking is to be provided on-site which will cater for the increased demand brought about by the development of the site. | Adequate on street and off-street parking for recreational and residential arrangements will be provided. |
| 2) Adequate car parking for people with disabilities. | Refer Section 4.4.1. and 6.7 of the SEE and accompanying Traffic Report and Landscape Design Report. |

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| <p>3) The provision of car parking which is functional, safe and attractive.</p> <p>4) Functional loading and unloading facilities are provided to cater for the development of the site.</p> <p>5) The construction of car parking areas, service areas and associated areas to be in accordance with good engineering practice.</p> | |
| 2.2.3. General Principles | |
| <p>Controls</p> <p>In determining the car parking requirements for a development proposal the following principles shall be followed:</p> <p>a) The minimum standards as set out in this plan.</p> <p>b) The likely demand for on site parking to be generated by the development.</p> <p>c) The availability of public transport in the vicinity to service the likely demands to be generated by the development.</p> <p>d) Traffic volumes on the surrounding street network, including, where relevant, likely future traffic volumes.</p> <p>e) The probable mode of transport of the users of the development.</p> <p>f) The likely peak usage times of the development.</p> <p>g) The provision of alternative private transport arrangements (e.g. courtesy buses to licensed premises at no charge to users).</p> | <p>COMPLIES</p> <p>As above.</p> |

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| <p>2.2.4. Variations and Compliance Controls</p> <p>a) Onsite parking will be required in accordance with the standards of this plan except where good cause can be shown as to why strict compliance is unnecessary.</p> <p>b) Compliance with the provisions of this plan will not necessarily constitute sufficient reason for consenting to a development application. Each application must be treated on its individual merits in relation to the general principles and the Heads of Consideration under Section 79C of the <i>Environmental Planning and Assessment Act 1979</i>.</p> <p>c) For developments incorporating different categories of uses, a separate calculation will be made for each component. Parking needs will be calculated on peak time. However where peak demands for each land use component of the development are staggered, and this can be demonstrated to the satisfaction of Council, a reduction in the total number of spaces required may be accepted.</p> <p>d) Requests for variation must be supported by information and data to substantiate that an alternative standard is appropriate. Except for minor variations, this information should take the form of a Traffic Impact Statement and/or Parking Needs Survey carried out by suitably qualified consultants.</p> | <p>NOTED</p> <p>Where variance to QDCP 2012 controls are being sought, sufficient justification has been provided in the technical reports supporting the proposal.</p> |
| 2.2.5. Existing Premises (Replaced or Remodelled) | NOT RELEVANT |
| <p>2.2.6. Controls for Car Parking Controls</p> <p>a) Car parking is to be provided for all development in accordance with Table 1. An assessment will be undertaken of development types that are not explicitly listed</p> <p>b) In finalising the parking numbers required the total number is to be rounded up to the next whole number.</p> <p>c) In addition to providing the number of required car parking spaces as detailed in Table 1, all car parking shall be designed in accordance with the Australian Standard AS 2890 Parking Facilities.</p> <p>d) All car parking shall include the provision of car parking for delivery and service vehicles in accordance with Australian Standard AS 2890.2 - 2002 and car parking for persons with disabilities in accordance with the Australian Standard AS 2890.</p> | <p>COMPLIES</p> <p>Adequate parking in accordance with the relevant applicable controls will be provided for the proposed uses.</p> <p>Refer Section 4.4.1. and 6.7. of this SEE and accompanying Traffic Report and Landscape Design Report.</p> |
| 2.2.7. Basement Parking | Not relevant |

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| <p>a) Where Basement parking is provided the access ramp to the car parking area shall provide for either two way access or separate access ramps shall be provided for:</p> <ul style="list-style-type: none"> » Access into the basement car park and » Exit from the basement car park <p>b)...</p> | <p>No basement parking is proposed as part of this application.</p> |
| <p>2.2.8. Design of Service Vehicle Areas</p> <p>Controls</p> <p>a) Service vehicle areas are to be designed in accordance with the principles and requirements of the Australian Standards - Parking Facilities (AS2890 Series).</p> <p>b) In relation to service vehicle dimensions, these are to be designed to cater for the largest vehicle servicing the site in accordance with AS/NZS 2890.2:2002 Off-street commercial vehicles facilities. Service vehicle areas for commercial and industrial type development are to be designed so that vehicles using them can enter and leave the site in a forward direction. Service vehicle areas are to be generally provided on-site. Only in exceptional cases will Council consider alternative arrangements.</p> <p>c) Additional delivery and service vehicle parking is required at the rate of 1 per 700m² of GFA or part thereof</p> | <p>COMPLIES</p> <p>Designs for all intersections are based on a minimum 8.8 metres long rigid truck with 2.5 metres width and turning circle of 21.6 metres. The design allows for rubbish collections and fire service access.</p> <p>Roads with bus services have been designed to allow access for a 12.5 metres long rigid truck.</p> <p>Several intersections around and within the commercial centres are designed to allow access for a 19 metres length semi-trailer.</p> <p>Refer to accompanying Traffic Report for further information.</p> |
| <p>2.2.9. Accessways Associated with Car Parking Areas</p> | <p>COMPLIES.</p> <p>Refer Section 2.2.9.1. – 2.2.9.5. of the QDCP 2012 assessment table.</p> |
| <p>2.2.9.1. Access Requirements</p> <p>Controls</p> <p>a) All developments require access from the frontage road to car parking and service facilities. While in some instances access driveways may be sufficient some developments will require a higher standard of traffic control, such as a controlled intersection via a dedicated public roadway, auxiliary lanes and/or right turn bays to maintain efficiency and safety. Refer to Section 6 of the RMS Guide to Traffic Generating Developments</p> | <p>COMPLIES</p> <p>The street and associated traffic management facilities will ensure adequate, safe and convenient access to residential lots and parking facilities in recreation areas.</p> |
| <p>2.2.9.2. Safety Considerations</p> <p>Objectives</p> <p>1) Public safety is the main consideration when planning the location of access to a development. The location of access depends on the type of frontage road, sight distance, intersections, and potential conflicts</p> | <p>VARIATION</p> <p>Direct access to Neighbourhoods 3-5 is to be provided via Old Cooma Road and is consistent with the Structure Plan.</p> <p>Refer to accompanying Traffic Report for further information.</p> |

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| <p>Controls</p> <p>a) Direct access across the boundary with a major road is to be avoided wherever possible. For the purpose of this DCP major roads include:</p> <ul style="list-style-type: none"> i) Bungendore Road ii) Canberra Avenue iii) Cooma Street iv) Crawford Street (Monaro Street to Uriarra Road only) v) Edwin Land Parkway vi) Ellerton Drive vii) Farrer Place viii) Monaro Street ix) Tharwa Road x) Uriarra Road xi) Yass Road xii) Old Cooma Road xiii) Captains Flat Road xiv) Kings Highway xv) Burra Road xvi) Lanyon Drive xvii) Lowe Street (Monaro Street to Cooma Street only) xviii) Tompsitt Drive xix) Southbar Road (Donald Road to Lanyon Drive only) <p>All other roads are minor.</p> <p>b) Auxiliary lanes, (deceleration and acceleration lanes) in certain circumstances, may need to be provided to minimise conflicts between entering/leaving traffic and fast moving through traffic. In many cases, right turn movements into a site may need to be banned, unless an exclusive right turn bay is provided.</p> | |
| <p>2.2.9.3. Sight Distance</p> <p>Controls</p> <p>a) Ideally, the sight distance required is that which enables the driver of a vehicle waiting to leave a driveway to select a gap in the through traffic and to join the street without causing a major disruption. This is the desirable sight distance (Entering Sight Distance).</p> <p>b) Driveways are to comply with AS/NZS 2890.1 - 2004: Off-street car parking</p> | <p>COMPLIES</p> <p>Appropriate sight distance is provided for the driver of a vehicle waiting to leave a driveway.</p> <p>Detailed design of driveways will be provided in future DAs for the construction of dwellings and other development.</p> <p>Refer to accompanying Traffic Report and Driveway Location Plan.</p> |

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| <p>2.2.9.4. Proximity to Intersections Controls</p> <p>a) Refer to AS/NZS 2890.1: Off-street car parking for requirements on the positioning of driveways near intersections.</p> | <p>COMPLIES</p> <p>A safe distance from intersections is provided to all off-street parking.</p> <p>Refer to accompanying Driveway Location Plan.</p> |
| <p>2.2.9.5. Addressing Potential Conflicts Controls</p> <p>a) Where possible, avoid positioning driveways with high traffic volumes in the following locations:</p> <p>i) on major roads</p> <p>ii) close to intersections</p> <p>iii) opposite other developments generating a large amount of traffic (unless separated by a median)</p> <p>iv) where there is a heavy and constant pedestrian movement along the footpath</p> <p>v) where right turning traffic entering the facility may obstruct through traffic</p> <p>b) where traffic using the driveways interferes with or blocks the operations of bus stops, taxi ranks, loading zones or pedestrian crossings.</p> | <p>COMPLIES</p> <p>Driveways to residential lots and recreational parking facilities are positioned in safe and accessible locations.</p> <p>Refer to accompanying Driveway Location Plan.</p> |
| <p>2.2.10. Design of Access Driveways</p> | <p>COMPLIES</p> <p>Refer Section 2.2.10.1. – 2.2.10.6. of the QDCP 2012 assessment table.</p> |
| <p>2.2.10.1. General Design Principles Controls</p> <p>a) position the entrance at the first vehicular driveway from the adjacent kerbside lane</p> <p>b) avoid reversing movements into or out of public streets (except in the case of individual dwelling houses)</p> <p>c) avoid arrangements which may result in on-street queuing</p> <p>d) promote the use of physical pedestrian barriers to discourage motorists from parking on the opposite side of the development and crossing the road to get to the site</p> <p>e) position each driveway so that it is clear of all obstructions, eg. poles, trees, which may prevent drivers from having a timely view of pedestrians</p> <p>f) design each driveway so that it is relatively level within 6 metres of the site boundary or any pedestrian way; the recommended maximum grade is 5%</p> <p>g) signpost each driveway with appropriate entry, exit and keep left signs.</p> | <p>COMPLIES</p> <p>Driveways to residential lots and recreational parking facilities are positioned in safe and accessible locations.</p> <p>Detailed design of driveways will be provided as part of future DAs for the construction of dwellings.</p> <p>Refer to accompanying Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |

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| <p>2.2.10.2. Selection of Driveway Types Controls</p> <p>a) Applicants are referred to Section 6 of the RMS Guide to Traffic Generating Developments Version 2.2 for the design requirements for access driveways.</p> <p>b) Refer to Table 6.1 of the RMS guide for entry and exit driveway widths, and separation between the two where applicable.</p> <p>c) Refer to Table 6.2 for type of driveways to serve certain numbers of parking spaces.</p> <p>d) Council will specify the difference in level across the footway area for the development.</p> | <p>COMPLIES</p> <p>Detailed design of driveways will be provided as part of future DAs for the construction of dwellings.</p> <p>Refer to accompanying Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |
| <p>2.2.10.3. Splays and Kerb Returns Controls</p> <p>a) The use of kerb returns rather than splays is not supported and will only be considered in exceptional circumstances.</p> <p>b) Consider the following points when choosing splays for driveways:</p> <p>i) type of frontage road</p> <p>ii) volume of traffic</p> <p>iii) nature of the adjacent land use</p> <p>iv) volume of pedestrians crossing the driveway</p> <p>c) It is necessary in the instances where vehicles turn into the kerbside lane that all vehicles are able to complete turning manoeuvres without crossing the road centre line.</p> <p>d) For further information in regard to the use of splays and kerb returns refer to Section 6.2.2 of the RMS1995 Guide to Traffic Generating Developments Version 2.2.</p> | <p>COMPLIES</p> <p>Streets are proposed to be in predominately kerb and gutter arrangements to promote orderly and efficient movement of vehicles including on street parking where suitable. Where the design warrants, some streets adjacent to open space are proposed with flush kerb to promote WSUD principles.</p> <p>Refer to accompanying Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |
| <p>2.2.10.4. Acceleration and Deceleration Lanes Controls</p> <p>a) The construction of auxiliary speed-change lanes is an appropriate method to control slowing and merging manoeuvres.</p> <p>b) Deceleration and acceleration lanes are often provided as respective entry and exit points to high traffic generators. These measures are often implemented in areas where developments adjoin isolated sections of high speed rural roads.</p> <p>c) If pedestrian volumes on the footpath adjacent to the driveway are heavy, the design must minimise vehicle speeds at the point of conflict with pedestrians and ensure that adequate visibility is provided.</p> | <p>COMPLIES</p> <p>The street network design provides for an interconnected network that can cater for the movement needs of all street users.</p> <p>Refer to accompanying Traffic Report and Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |

| QDCP 2012 Control | Assessment of Compliance |
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| <p>2.2.10.5. Right Turn Bays</p> <p>Controls</p> <p>a) Right turn bays for vehicle movement into proposed developments should be provided on major roads where the conflict between the right turn volume and any opposing major road traffic, may cause a substantial traffic delay or present danger. Refer to the Austroads publication Guide to Traffic Engineering Practice, Part 5 - Intersections at Grade (1988) for further design details.</p> | <p>COMPLIES</p> <p>Refer to Traffic Report for the proposed design for intersection with Old Cooma Road.</p> |
| <p>2.2.10.6 Design of Internal Roads associated with Car Parking Areas</p> <p>Controls</p> <p>a) All internal roads (or access roadways) should be designed for low speed environments. Generally vehicular speeds should be less than 30km/h, but where heavy pedestrian use is expected, design speeds should be 10km/h.</p> <p>b) For internal roads (or circulation roadways as defined in AS/NZS 2890.1 - 2004) between the driveway and parking area, the recommended minimum carriageway width is 5.5 metres for two way traffic. However where the circumstances of a development justifies it a greater minimum width is likely to be required.</p> <p>With complex developments, particularly where shared use of the side roads by cars and service vehicles is anticipated, the design should be determined from a study of the site traffic generation and vehicle characteristics.</p> | <p>COMPLIES</p> <p>The street network is generally consistent with the Structure Plan and will provide for safe and efficient movement of vehicle, pedestrians and cyclists.</p> <p>Refer to accompanying Traffic Report and Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |
| <p>2.2.11. Traffic Control Within Developments</p> <p>Controls</p> <p>a) Internal roads etc within developments function as public streets and normal road traffic rules apply. Hence these roads are to be managed to minimise conflicts and maximise safety. For more details on this aspect refer to the Australian Standard AS 1742.11 – 1999 Manual of Uniform Traffic Control Devices, Part 1 Parking Controls.</p> | <p>COMPLIES</p> <p>The street network is generally consistent with the Structure Plan and will provide for safe and efficient movement of vehicle, pedestrians and cyclists.</p> <p>Refer to accompanying Traffic Report and Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |

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| <p>2.2.12. Parking Area Design</p> <p>Controls</p> <p>a) Cars and service vehicles, as well as other vehicles (eg. Buses and bicycles) should be accommodated by on-site or off-street parking provision in close proximity to the development. On-street parking or loading/truck zones do not meet these requirements.</p> <p>b) The design of these areas and tenant/customer parking areas is to conform to the relevant Australian Standards - Parking Facilities (AS/NZ 2890 series).</p> <p>For more detailed design guidelines applicants are referred to the RMS 1995 Guide to Traffic Generating Developments Version 2.2</p> | <p>NOTED</p> <p>Detailed parking design will be provided as part of future Construction Certificate documentation.</p> |
| <p>2.2.13. Construction of Car Parking Areas</p> <p>Controls</p> <p>a) All car parking areas are to be:</p> <p>i) Suitably paved with concrete, hotmix, bitumen or paving blocks and shall be retained between suitable permanent concrete kerbing. The selected pavement should be constructed to engineering specifications for the particular materials to be used.</p> <p>ii) Line marked into bays and sign posted as such in a reasonable permanent manner.</p> <p>iii) Suitably drained. Where driveways or car parking areas fall towards the street alignment, stormwater runoff is to be trapped at the property boundary by means of a grated drain and pipe to Council's street gutter or stormwater system.</p> <p>iv) Landscaping shall be provided in all car parking areas.</p> | <p>COMPLIES</p> <p>As above.</p> |
| <p>2.2.14. Service Vehicle Areas</p> | |

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| <p>2.2.14.1. General Design Principles</p> <p>Controls</p> <p>a) The following design principles, however, are generally applicable to all service vehicle areas:</p> <p>i) the layout of the service area should be designed to facilitate operations relevant to the development and to thus discourage on-street loading and unloading</p> <p>ii) service area should be a physically defined location which is not used for other purposes, such as the storage of goods and equipment</p> <p>iii) separation of service vehicle and car movements should be a design objective, although such an arrangement may not always be feasible</p> <p>iv) all vehicles are to enter and leave a site in a forward direction</p> <p>v) internal circulation roadways should be adequate for the largest vehicle anticipated to use the site.</p> <p>b) In the case of existing buildings being redeveloped, it may not be possible for all the design principles to be met. However, every effort must be made to ensure that public safety is not compromised in any way.</p> | <p>NOTED</p> <p>Compliance with design principles for service areas will be assessed as part of future DAs.</p> |
| <p>2.2.14.3. Service Vehicle Manoeuvring Areas</p> <p>Controls</p> <p>a) Manoeuvring areas must comply with the Australian Standard 2890.2 -2002 Off-street Commercial Vehicle Facilities should be used for the design of manoeuvring of service vehicles appropriate to particular developments. This standard also provides design templates for typical commercial and industrial situations.</p> | <p>NOTED</p> <p>As above.</p> |
| <p>2.2.15. Bus and Coach Parking</p> <p>Controls</p> <p>a) Table 6.7 of the RMS 1995 Guide to Traffic Generating Developments Version 2.2. must be complied with when providing parking for buses and coaches</p> | <p>NOTED</p> <p>Compliance with design principles for Bus and Coach Parking areas will be assessed as part of future DAs.</p> |

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| <p>2.2.16. Pedestrians and Cyclists</p> <p>Controls</p> <p>a) Land uses in the Central Business District often generate heavy pedestrian traffic, including general pedestrian traffic across car parking areas. Where driveways are located for entry into underground parking areas, consideration should be given to diverting pedestrians around the entry and exit driveways. Often the organisation of appropriate landscaping at the conflict point of pedestrians and vehicles eradicates this problem.</p> <p>b) Consideration should also be given to diverting cyclists around the entry and exit driveways.</p> <p>c) Consideration of the use within developments of shared traffic zones, low speed limit signs and traffic calming devices that cater for pedestrians should be given to improve safety of pedestrians</p> | <p>COMPLIES</p> <p>The network of pedestrian and cyclist pathways has been designed to integrate with the street network in Neighbourhoods 1, 2 and potential future Neighbourhoods. The pathways will allow safe and efficient pedestrian and bicycle movement throughout NH345. The paths have been designed in accordance with GDCP 2010.</p> <p>Refer to accompanying Traffic Report and Civil Engineering and Utilities Design Report and accompanying drawings for further detail.</p> |
| <p>2.2.17. Bicycle Parking</p> <p>Controls</p> <p>a) Each development is to provide appropriate bicycle parking facilities either on-site or close to the development.</p> <p>b) The Australian Standards AS 2890.3 - 1993 - Bicycle Parking Facilities must be complied with. This standard also provides information on the design of bicycle parking facilities.</p> | <p>COMPLIES</p> <p>Standard bicycle facilities will be provided as part of future DAs.</p> |
| 2.3 Environmental Management | |
| 2.3.1 Introduction | <p>NOTED</p> <p>Refer Section 2.3.2. – 2.3.6. of the QDCP 2012 assessment table.</p> |
| <p>2.3.2 Objectives</p> <p>To satisfy the aims and zoning objectives of the Queanbeyan Local Environmental Plan 2012 controls in this section aim to:</p> <ol style="list-style-type: none"> 1) Facilitate the development of building design excellence appropriate to a regional city. 2) Ensure environmental impacts of new development are managed in a sustainable and economical way. 3) Ensure a healthy environment. 4) Provide an adequate and renewable supply of resources. 5) Ensure application, where appropriate, of the BASIX or Building Code of Australia energy efficiency provisions. | <p>COMPLIES</p> <p>The proposed subdivision has considered the environmental impact of the development. All steps have been taken to ensure minimal adverse impacts and sustainable economic and environmental management of the proposed works.</p> <p>Detailed building design will be provided as part of future DAs.</p> <p>Refer Section 2.2.3. – 2.3.6. of the QDCP 2012 assessment table.</p> |

| QDCP 2012 Control | Assessment of Compliance |
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| <p>2.3.3 Energy Efficiency and Conservation Controls</p> <p>Residential</p> <p>a) New dwellings, alterations and additions to dwellings, and change of uses to create a dwelling, are to demonstrate compliance with State Environmental Planning Policy Building Sustainability Index: BASIX) 2004.</p> <p>Non-Residential</p> <p>b) Compliance with Section J of the National Construction Code</p> | <p>COMPLIES</p> <p>This will be addressed as part of future DAs for the construction of buildings.</p> <p>The proposed subdivision continues to provide high quality liveable neighbourhoods by making provision for the following:</p> <ul style="list-style-type: none"> » Walkable neighbourhood, with pedestrian and cycle pathways enhancing connectivity between nodes of activity. » Subdivision layout that allows for diversity in housing typology, potentially including low density dwellings, terraces, shop top housing and apartments. » Access to public open space, community facilities and recreational facilities. » Public transport network that connects nodes of activity within the township and also provides access to Canberra. |
| <p>2.3.4 Water Conservation Controls</p> <p>a) New dwellings, or developments which contain a residential component within a mixed use building or serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.</p> <p>b) Each dwelling shall be provided with an individual water meter.</p> | <p>COMPLIES</p> <p>The water cycle management system for Neighbourhood 3, 4 and 5 will provide the following benefits:</p> <ul style="list-style-type: none"> » Reduce the volume of potable water use through a series of water conservation, recycling and rainwater use initiatives; » Improve the quality of runoff into the adjacent Queanbeyan River through the retention of stormwater on site through rainwater use and a series of Water Sensitive Urban Design (WSUD) measures; » Minimise the discharges of wastewater through the use of recycled water for toilet flushing and irrigation. |

2.3.6 Noise and Vibration

Controls

- a) Development should be designed to minimise the potential for offensive noise.
- b) Where a proposed development includes an activity which may generate unreasonable noise or which may be affected by an existing noise source, an acoustic study is to be undertaken to establish noise levels and provide a mitigation strategy demonstrating the measures to be taken to effectively mitigate noise.
- c) Noise sensitive developments such as dwellings should be designed to reasonably protect the proposed development from noise sources such as arterial roads, entertainment venues and the like.
- d) Noise buffering should not be provided by high fences, garages or blank walls to public streets. Where screening by these or similar methods is the only practical solution, the screen should be no greater than 50% of the street frontage. Such screening should have visual interest and retain some surveillance from the building behind the screen's entries, windows or balconies when practical.
- e) Where proposed noise sensitive development may be affected by existing noise generators the development should be designed to incorporate adequate shielding from those noise sources.
- f) Entertainment venues, hotels, clubs, cinemas and the like, either licensed or unlicensed, should prepare a plan of management including provisions to:
 - i) Ensure patrons enter and leave the premises in a quiet and orderly manner whenever the premises are open to the public.
 - ii) Manage noise levels within the premises to prevent an unreasonable effect on the amenity of the locality.

Commercial

- a) Commercial and retail developments, or mixed use developments, should have suitably located and designed goods delivery and garbage collection areas, vehicle entry and exits and other noise sources so that amenity of residents both within the development and in nearby buildings is reasonably protected.
- b) To ensure development is designed so noise and vibration from new businesses, light industrial and leisure/cultural/entertainment venues and other noise generating activities do not unacceptably affect the amenity of nearby residential and other noise or vibration sensitive uses.
- c) Home based businesses should not generate unreasonable levels of noise beyond their property boundary.

COMPLIES

Refer to Section 5.10.1. and 6.8. of the SEE and accompanying Acoustic Assessment report relating to road traffic noise from the nearby road network on future dwellings.

The Construction Environmental Management Plan to be provided at the construction certificate stage will ensure noise and vibration issues are mitigated.

| QDCP 2012 Control | Assessment of Compliance |
|---|---|
| <p>2.4 Contaminated Land Management</p> <p>2.4.2 Objectives:</p> <p>1) Enable Council to more adequately identify record and manage known and potentially contaminated land.</p> <p>2) Provide direction for Council in the gathering and assessment of information in relation to previous land use activities that may have resulted in contamination.</p> <p>3) Assist Council in the discharge of its functions and responsibilities in relation to existing and potential land contamination with reasonable care and due diligence to minimise potential risk to both public health and the environment.</p> <p>4) Inform the community, particularly those interested or involved in the planning and development process, of Council's procedures relating to existing or potential land contamination.</p> <p>5) Ensure that all stakeholders are aware of their responsibilities for the ongoing management of contaminated land.</p> <p>2.4.3 – 2.4.18. Controls</p> | <p>COMPLIES</p> <p>Refer to Section 5.10.2. of this SEE and accompanying Contamination Report.</p> |
| <p>2.5. Flood Management</p> <p>2.5.3. Objectives</p> <p>1) To reduce the impact of flooding and flood liability on individual owners and occupiers, and to reduce private and public losses resulting from flooding.</p> <p>2) To encourage construction and development which is compatible with the flood risk of the area.</p> <p>3) To ensure that buildings and other structures built in flood liable areas are designed and constructed to withstand the likely stresses of the 100yr flood.</p> <p>4) To minimise the flood risk to life and property associated with the use of land,</p> <p>5) To allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,</p> <p>6) To avoid significant adverse impacts on flood behaviour and the environment.</p> <p>2.5.5. – 2.5.8. Controls</p> | <p>COMPLIES</p> <p>Refer to Section 6.5. of the SEE and accompanying Stormwater Management and Drainage Report.</p> |
| 2.6. Landscaping | |

| QDCP 2012 Control | Assessment of Compliance |
|---|--|
| <p>2.6.3. Objectives:</p> <p>1) Landscape plans to reflect good quality design and construction works to be of a high standard and in accordance with approved plans.</p> <p>2) Landscape consultants and landscaping contractors, accredited by Council, to prepare plans and implement landscaping works.</p> <p>3) Landscape design to be considered in association with proposed works, building and subdivision design as early as possible.</p> <p>4) A living and working environment which is pleasant and safe to all people.</p> <p>5) The guidelines to establish a framework for Council accredited landscape consultants to prepare landscape plans.</p> <p>6) The guidelines to establish a framework for Council accredited landscape contractors to implement landscaping works;</p> <p>7) The guidelines to set out requirements for consultants and contractors to register with Council; and</p> <p>8) The guidelines for suspension, removal and withdrawal of consultants and contractors from registration with Council.</p> <p>2.6.4-2.6.15 Controls</p> | <p>COMPLIES</p> <p>The proposal satisfies these controls. Refer to the accompanying Landscape and Open Space Elements Report and Landscape Plan prepared by AECOM, which detail proposed Street Tree hierarchy and species.</p> |
| <hr/> | |
| 2.7. Sediment and Erosion Plans | |
| 2.7.1. Introduction | <p>COMPLIES</p> <p>Refer Section 2.7.2. – 2.7.3. of the QDCP 2012 assessment table.</p> |
| 2.7.2. – 2.7.3 Controls | <p>COMPLIES</p> <p>A detailed Soil, Water and Vegetation Management Plan and Construction Management Plan will be required at Construction Certificate stage. All works will be undertaken in accordance with the approved plans.</p> <p>As detailed in Section 6.6 of the SEE.</p> |
| <hr/> | |
| 2.8. Guidelines for Bushfire Prone Areas | |
| 2.8.1. Introduction | NOTED |
| 2.8.4. – 2.8.6. Controls | <p>COMPLIES</p> <p>The proposal is capable of complying with the specific and broad objectives of PBP (2019), the requirements of the Rural Fire regulations (2013) and therefore suitable for submission to the NSW RFS for the issuing of a bush fire safety authority.</p> <p>Refer to accompanying Bushfire Assessment Report.</p> |
| <hr/> | |
| 2.9. Safe Design | |

| QDCP 2012 Control | Assessment of Compliance |
|---|--|
| 2.9.3. Controls | COMPLIES The principles of CPTED have been considered in the design of the structure plan for Neighbourhoods 345. |
| 2.10. Subdivision | |
| 2.10.3. Objectives | COMPLIES |
| 1) Provide for a range of allotment sizes to suit a variety of residential development. | The proposal accords with the objectives and controls in the following manner: |
| 2) Ensure that the size of an allotment is sufficient to provide a useable area for building, landscaping and access; | The design and layout of the proposed subdivision will enable Neighbourhoods 3-5 to be developed for residential purposes consistent with the structure plan and the desired future character of the area. |
| 3) Minimise any likely impact of subdivision and development on the amenity of neighbouring properties; | A variety of lot sizes is proposed which will permit a variety of dwelling types and densities with corner lots designed to maximise surveillance. |
| 4) Minimise any likely impact of subdivision and development on significant topographical and natural features of an allotment; and | The street network will promote accessibility and connectivity to the town centre and cultural, recreation and social facilities. As well as surrounding neighbourhoods. |
| 5) Control the scale of development so that it is compatible with the housing characteristics of the locality. | The street and associated traffic management facilities that are proposed comply with appropriate design principles, and will ensure adequate, safe and convenient use by future residents and visitors. |
| 6) Protect natural and cultural resources (e.g. native flora and fauna and places/items of Aboriginal and European heritage value) from land use or management practices which will lead to degradation or destruction. | The orientation of lots maximise solar access. |
| 7) Encourage the provision of useable open space which has the capacity for multi-use and is able to cater for a variety of recreational needs. | Appropriate lighting will be provided in the public domain and recreation areas. |
| 2.10.5. Controls | COMPLIES As above. |

| QDCP 2012 Control | Assessment of Compliance |
|---|---|
| <p>2.10.6. General Design Controls</p> <p>a) Consent must not be granted to a subdivision of land unless Council is satisfied that the density of allotments to be created reflects the land capability, natural constraints and hazard of the land and is consistent with and enhances the character of the surrounding residential development.</p> <p>b) Land should not be divided:</p> <p>i) In a manner which would prevent the satisfactory future division of land, or any part thereof;</p> <p>ii) If the proposed use is likely to lead to undue erosion of the land and land in the vicinity thereof;</p> <p>iii) Unless wastes produced by the proposed use of the land can be managed so as to prevent pollution of a public water supply or any surface or underground water resources;</p> <p>iv) Unless the development achieves the most efficient use of existing utility services (such as water supply and sewerage services), roads and streets, where connection to sewer is not possible, the allotment shall be suitable for on-site effluent disposal without adverse effect on ground or surface water quality;</p> <p>v) If the size, shape and location of, and the slope and nature of the land contained in each allotment resulting from the division is unsuitable for the purpose for which the allotment is to be used;</p> <p>vi) Where the land is likely to be inundated by floodwaters;</p> <p>vii) Where the proposed use of the land is the same as the proposed use of other existing allotments in the vicinity, and a substantial number of allotments have not been used for that purpose; and</p> <p>viii) If the division and subsequent use is likely to lead to the clearance of one or more significant trees;</p> <p>ix) Where any lot being created in a subdivision is of mixed title, the land held under Old System Title within that lot shall be brought under the Real Property Act.</p> | <p>COMPLIES</p> <p>The proposal creates new open space area for passive and active recreation.</p> <p>Refer to Landscape Design Report.</p> |
| 2.10.7. – 2.10.15. Controls | <p>COMPLIES</p> <p>As above.</p> |

Appendix B - Local Planning Agreements

Assessment of the Local VPA Items

For a breakdown of works and details for each item below refer to the Landscape Design report submitted with this DA.

| Item | Characteristics | Size | Assessment |
|-----------------------------------|--|----------|--|
| Dedication of land for open space | | | |
| PTWL Conservation Area | Work as described in the PTWL Impact Assessment report prepared by Biosis dated Jan 2011 including removal of exotic woody vegetation, translocation of rocks into PTWL, revegetation with native grasses and establish a fence around the boundary of the conservation area. | 38.07 ha | Land dedicated. Works to be completed as part of future applications and ongoing management. |
| Dam Foreshore Protection | Generally consistent with the Landscape and Open Space Strategy, AECOM, 2010 (LOSS). Elements integrated into Yellow Box Reserve which bounds the Dam Foreshore Protection Area. Hard landscaping to include bush track, small shelter with signage and benches. Soft landscaping to include bushland restoration and general landscaping. | 70.59 ha | Works to be completed as part of future applications and ongoing management. |
| Buffer Corridor – Old Cooma | Generally consistent with the LOSS. Hard landscaping to include a path within open space, signage and benches. Soft landscaping to include general landscaping to meet APZ requirements. | 2.05 ha | Signage and benches previously provided within NH2. Remaining works will be provided as part of this DA. |
| Googong Common | Hard landscaping; share path, bush track and multi-use trail networks with lighting, bicycle racks, pedestrian access paths with lighting, access to creek line and pedestrian bridges across creek line, wayfinding and art elements, benches, water bubblers, bins and car parking. Soft landscaping: feature planting and riparian corridor restoration. | 18.62 ha | Remaining works will be provided as part of this DA. |
| | 1 x Regional Playground, 1 x Community Garden | | Regional Playground will be provided within Yellow Box Reserve in the NH345 DA. |
| | 14 x Small shelters, 5 x Small shelters with BBQ, 4 x small shelters with interpretive signage, 3 x medium shelters, 4 x medium shelters with BBQ, | | Shelters and BBQs have been provided in previous DAs regarding the Common. Remaining works are addressed as part of this DA. |

| Item | Characteristics | Size | Assessment |
|----------------------------------|--|---------|---|
| | 3 x large shelters with BBQ. | | |
| | 1 x Community Garden | | One community garden is already included in the common within NH1A Stage 6. Another potential community garden is proposed as part of this DA. Other works to be completed as part of future applications. |
| Nangi Pimble (formerly Hill 800) | Lookout structure with pedestrian access and interpretive signage. | | Lookout structure to the north of Nangi Pimble was provided as part of previous DAs. Southern part of this connection will be provided as part of this DA. |
| | Hard landscaping to include key path (2m wide) network, bicycle racks, wayfinding signage, 1 x small shelter with interpretive signage, water bubbler, bins and carparking. | | Paths included in the northern part of Nangi Pimble in the NH2 DA. Remainder will be provided as part of this DA. Refer to NH3 Park for details of other facilities to be provided in the southern stage of Nangi Pimble. |
| | Soft landscaping | | Remainder will be provided as part of this DA. |
| Sportsfield 7 | Double soccer field co-use with Rugby League, amenities, irrigation, flood lighting, spectator seating and car parking. | 2.44 ha | Sportsfield 7 will be provided as a single soccer field athletics track as part of this DA. |
| NH Park 3 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, benches, water bubblers, bins 1 x Neighbourhood Playground (NP03) suitable for all ages, 1 x medium sized shelter with BBQ. Soft landscaping to include feature planting at entries and general landscaping. | 1.48 ha | NH Park 3 will be provided in NH3 as part of this DA. All elements have been included in this submission. |
| NH Park 4 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, benches, water bubblers, bins 1 x Neighbourhood Playground (NP04) suitable for all ages, 1 x medium sized shelter with BBQ. Soft landscaping to include feature planting at entries and general landscaping. | 0.99 ha | NH Park 4 will be provided in NH4 as part of this DA. All elements have been included in this submission. |
| NH Park 5 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle | 0.34 ha | NH Park 5 will be provided in NH5 as part of this DA. |

| Item | Characteristics | Size | Assessment |
|---------------|---|---------|---|
| | racks, wayfinding signage and minor arts element, benches, water bubblers, bins 1 x Neighbourhood Playground (NP05) suitable for all ages, 1 x medium sized shelter with BBQ. Soft landscaping to include feature planting at entries and general landscaping. | | All elements have been included in this submission. |
| Local Park 10 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, small shelter (1), benches, water bubbler and bins. Car parking in adjacent streets. Soft landscaping to include feature planting at entries and general landscaping. | 0.19 ha | Local Park 10 will be provided in NH3 as part of this DA. All elements have been included in this submission. |
| Local Park 11 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, small shelter (1), benches, water bubbler and bins. Car parking in adjacent streets. Soft landscaping to include feature planting at entries and general landscaping. | 0.35 ha | Local Park 11 will be provided in NH3 as part of this DA. All elements have been included in this submission. |
| Local Park 12 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, small shelter (1), benches, water bubbler and bins. Car parking in adjacent streets. Soft landscaping to include feature planting at entries and general landscaping. | 0.83 ha | Local Park 12 will be provided in NH5 as part of this DA. All elements have been included in this submission including the WSUD 11. |
| Local Park 13 | Hard landscaping to include pedestrian access paths with pedestrian lighting, bicycle racks, wayfinding signage and minor arts element, small shelter (1), benches, water bubbler and bins. Car parking in adjacent streets. Soft landscaping to include feature planting at entries and general landscaping. | 0.3 ha | Local Park 13 will be provided in NH5 as part of this DA. All elements have been included in this submission. |
| Civic Space 3 | Hard landscaping to include feature paved access/spaces, pedestrian lighting, minor arts and signage elements, wayfinding signage, benches, water bubblers, bins and 1 x medium shelter. Soft landscaping to include street trees, feature planting at key areas and general landscaping. | 0.66 ha | Civic Space 3 will be provided in NH3 as part of this DA. Detailed design of civic spaces are subject to future applications. |
| Civic Space 4 | Hard landscaping to include feature paved access/spaces, pedestrian lighting, minor arts and signage elements, wayfinding signage, benches, water bubblers, bins and 1 x medium shelter. Soft landscaping to include street trees, feature planting at key areas and general landscaping. | 0.68 ha | Civic Space 4 will be provided in NH4 as part of this DA. Detailed design of civic spaces are subject to future applications. |
| Civic Space 5 | Hard landscaping to include feature paved access/spaces, pedestrian lighting, minor arts and signage elements, wayfinding signage, benches, water bubblers, bins and 1 | 0.25 ha | Civic Space 5 will be provided in NH5 as part of this DA. Detailed design of |

| Item | Characteristics | Size | Assessment |
|--|--|---------|---|
| | x medium shelter. Soft landscaping to include street trees, feature planting at key areas and general landscaping. | | civic spaces subject to future applications. |
| Community Facility | | | |
| NH4 Community Facility | Dedicate land and provide a building that includes meeting room, kitchen, storage and amenities space. | 0.18 ha | Provision of community facility that is nominated to be integrated with the Sportsfield 7 pavilion, adjacent to the NH4 Neighbourhood Centre and is subject to future applications. |
| On Site Local Roads | | | |
| AV1 – Gorman Avenue (formerly Googong) Carriageway | | | Provided as part of previous approvals and completed as part of this DA. |
| AV1 – Gorman Avenue Carriageway | | | Provided as part of previous approvals and completed as part of this DA. |
| AV1 – Gorman Avenue RCBC over Montgomery Creek | | | Provided as part of this DA |
| Local Bus Infrastructure | | | |
| Bus Shelters | Supply and install bus shelters | | Provided as part of this DA. Refer to Civil Infrastructure drawings. |