QUEANBEYAN-PALERANG REGIONAL COUNCIL

Ellerton Drive Extension

FINANCIAL RISK ASSESSMENT

FINAL

JUNE 2016

SGS Economics & Planning

WSP | PARSONS BRINCKERHOFF

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Queanbeyan-Palerang Regional Council

FINAL

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REV	DATE	DETAILS
1	20/04/16	Preliminary Draft – not containing assessment of cost estimate
2	24/06/16	Revised Preliminary Draft – updated, not containing details on cost review
3	27/06/16	Draft - including review of cost estimate
4	28/06/16	Final

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EXECUTIVE SUMMARY

Purpose of the report

Queanbeyan-Palerang Regional Council (Council) proposes to develop a two lane road joining Ellerton Drive to the intersection of Cooma Street and Edwin Land Parkway, looping around the rural residential developments in the southeast of Queanbeyan. The project involves the design of a new 4.6km long sub-arterial road, which will be called the Ellerton Drive Extension (EDE), and is expected to reduce congestion on Canberra Avenue and Cooma Street by:

- Providing a way for Googong and Karabar residents to access the north side of the ACT without going through the Queanbeyan CBD, as currently the lack of river crossings forces traffic through the town centre
- Providing a town bypass route for heavy vehicles and other traffic between the Kings Highway or Sutton Road and Jerrabomberra, Hume and Environa, that avoids the CBD

The need for this road is due to growing population in Queanbeyan, in particular the new village of Googong, south of Queanbeyan city, which is planned to be home to around 17,000 residents. As the population grows it is expected that congestion along Cooma Street leading into Queanbeyan as well as the Queens Bridge will reach delays of unacceptable levels. There is also an ongoing issue that during a 1:100 flood event much of the CBD will be underwater and the town will be cut into two. The project will provide vehicular access over the Queanbeyan River in the 1:100 year average recurrence interval storm event.

In addition to funding from State and Federal Governments, the EDE will be paid for by a loan of between $20m and $35m which is expected to be paid for by developer contributions for new developments, most of which will come from the Googong village development. The purpose of this assessment is to determine the risk of Section 94 funding not being able to repay the loan within 20 years of the road being built.

The extension of Ellerton Drive is being designed to meet the following requirements:

- Construction of a two-lane, two-way carriageway, with 2.5m wide shoulders and climbing lanes where required and a shared path on the western side; and
- A new bridge over the Queanbeyan River that will cater for two traffic lanes and a shared path.

Working closely with Roads and Maritime Services, Opus International Consultants (Opus) were commissioned to undertake the design and documentation for the extension of Ellerton Drive.

In June 2014 the Australian Commonwealth and NSW State Governments announced a joint grant funding agreement of $50 million for the Project: $25 million from the Australian Commonwealth Government, $12.5 million from Restart NSW and $12.5 million from Transport for NSW.

Council intends to borrow the balance of funds to deliver the project and the contributions collected from land developments are intended to repay the principal and interest of the borrowed funds. Council will collect funds using both the Section 94 of the EP&A Act and Local Planning Agreements with selected developers.

Financial Risk Assessment

Council engaged WSP | Parsons Brinckerhoff and its sub-consultant SGS Economics and Planning to undertake a risk assessment of the extension of Ellerton Drive financial arrangements.

The principle objective of the risk assessment is to inform Council of the financial risks to which it would be exposed if the project with its present funding model were to proceed. The scope of services for this assessment addresses the following two parts, which aligns with the structure of this report:

PART 1: Identify and assess the risk to Council of project cost overruns.

PART 2: Identify and assess the risks around recovering the required funds from developers to meet the repayment obligations

The first of these parts will examine the risk that the cost of the project will exceed the current estimated cost, and therefore the available funding. The second of these parts will examine the risk that Council will not receive sufficient income from developers' development contributions to repay the principal and interest for the loans taken out by Council to fund the balance of the Project, and would therefore be compelled to seek additional funding in order to complete the Project.

PART 1: Identify and assess the risk to Council of project cost overruns.

The cost estimate review followed a methodology that considered the EDE cost objectives and initially established the context and basis against which to assess the EDE estimate outputs. The two key documents were:

- Roads & Maritime Project Estimating Manual
- AACE International, the Authority for Total Cost Management, Recommended Practices

The primary project documents reviewed were a detailed design estimate dated 16th June 2016 and the Ellerton Drive Estimate Report with the same date. Following an initial review of these documents, further discussions to clarify some points were held with the cost estimating consultant who had developed the estimate.

The main conclusions from the review of the EDE estimate are:

1. A project base estimate totalling $70.182 million (excluding GST, current dollars) has been prepared using first principles estimating which is consistent with typical industry practices for the detailed design milestone.
2. The project estimating contingency process reports a P90 equivalent output of $81.4 million.
3. An analysis of the expected accuracy range of actual cost from the cost estimate indicates the high value range to be between $80 million to $85 million.
4. The review has identified some minor ambiguities, gaps and issues with the estimate outputs including:
   a) Estimate assumptions and exclusions – minor ambiguities and gaps.
   b) Provisional sums and/or provisional quantities are not separately identified and reported.
   c) The estimate contingency allowances have not been reviewed with the project risk register to confirm the risks covered by the contingency allowances.

   Any updating of the estimate outputs to address the ambiguities, gaps and minor issues are not expected to materially change the estimate results.
5. The completion of estimate reality checks and estimate peer review are yet to be finalised.
6. Project development, investigation and design, property acquisition and project management/client representation estimate items have been determined by factoring or include Council advised values. Some of these items could be updated with actual/forecast costs or estimated from first principles.

Estimate Review Recommendations

The main recommendations from the review of the EDE estimate are:

1. The expected accuracy range of actual cost from the cost estimate involving a high value range of $80 million to $85 million appears reasonable for assessing Council's funding arrangements for EDE.
2. Council seek an estimate report update from the estimating consultant to address current reporting minor ambiguities, gaps and minor issues including:
   a) Confirm assumptions and exclusions details.
   b) Confirm risks included/not included in the contingency allowances.

   Any updating of the estimate outputs to address the minor ambiguities, gaps and issues are not expected to materially change the estimate results.
3. Council should update and revise the project development program and project risk register and confirm alignment with the estimate assumptions and contingency allowances.
4. Council should seek finalisation of reality checks and confirm plans for estimate peer review.
5. Council should adopt as part of commercial management procedures a clear definition of contingency including a management reserve component. The contingency and management reserve would be used to allow for risks confirmed in 2b) above and risks identified in the project risk register.
6. Following receipt of the estimating report update, reality checks and peer review if completed, Council should confirm the project base estimate and contingency allowances.

PART 2: Identify and assess the risks around recovering the required funds from developers to meet the repayment obligations

This second part of the assessment examines the risk that Council will not receive sufficient income from developers' development contributions to repay the principal and interest for the loans taken out by Council to fund the balance of the Project, and would therefore be compelled to seek additional funding in order to complete the Project.

Market conditions in Googong and Queanbeyan

The effective catchment for demand for Googong residences includes Queanbeyan, the ACT, and to a lesser extent, Palerang. The real estate market in these areas has been relatively flat since around 2010, much of which is due to difficulties experienced by the ACT's main employer, the Federal public service.

The main competitors for Googong dwellings are the new village planned in Tralee/South Jerrabomberra, new suburbs in Canberra such as Moncrieff and Bonner, and NSW country villages with residential lots available for sale, such as Bungendore and Murrumbateman.

Tralee's offering is most similar to Googong's. Prices are similar, although Tralee is closer to the centre of Canberra, and Googong has a greater range of community facilities within the village. Canberra suburbs are generally more expensive, and the closer to central Canberra, the more expensive they are. Costs of living in these areas may be higher due to higher rates, vehicle registration and so forth, but they also have greater access to Canberra's range of facilities, such as public transport and schools. Rural villages such as Murrumbateman and Bungendore have generally cheaper prices for land than Googong, with larger lot sizes, and residents may enjoy the village environments there, with greater access to country facilities, such as horse riding. However, these areas have the disadvantage of facing a longer commute to Canberra than a Googonian, and schooling options in these towns are also limited or non-existent.

Asking prices for vacant suburban land, capital region 2016

	SMALL LOTS <500SQM	LAND SIZE	LARGE LOTS >500 SQM	LAND SIZE	MINUTES TO LONDON CIRCUIT	MINUTES TO PARLIAMENT HOUSE
Googong	$224,000	371	$298,000	594	25	24
Bungendore			$215,000	672	37	33
Murrumbateman			$249,000	649	33	35
Moncrieff	$318,000+	431	$375,000	537	19	21
Ginninderra Estate	$275,000	371			16	20
Bonner	$380,000+	441			20	24
Denman Prospect	$419,990	484	$485,000	578	17	17
Harrison	$435,000	456			18	19
Casey	$450,000+	495			19	21
Coombs			$475,000	733	12	11
Lawson			$499,000	600	13	16

Source: Allhomes, 2016.

Demand and supply of new dwellings

Between 2016 and 2031, Queanbeyan is expected to grow by 14,000 people, which is expected to translate into 6,050 new households, and demand for an additional 6,500 new dwellings.

Demand for new dwellings depends heavily on the type of population growth a region expects. Families with children show strong preferences for freestanding three, four or five bedroom houses, retirees are fond of townhouses and units, and young singles show a preference for group housing or low cost units.

SGS used its Dwelling Demand model to forecast demand for different dwelling types in the Queanbeyan LGA. From 2016 to 2031, Queanbeyan is projected to require an additional 3,784 freestanding houses, an additional 1,893 townhouses or semi-detached dwellings, another 778 apartments, and another 46 other dwellings, for a total of 6,500 new dwellings.

Projected demand by dwelling type 2016-2031, Queanbeyan

	2016	2021	2026	2031
Separate house	12,974	14,268	15,546	16,757
Semi-detached / row / terrace / townhouse	3,048	3,636	4,263	4,941
Flat / unit / apartment	3,106	3,359	3,637	3,884
Other	123	137	154	168
Total Private Dwellings	**19,250**	**21,400**	**23,600**	**25,750**

Source: Based on NSW DPE projections for Queanbeyan and SGS modelling

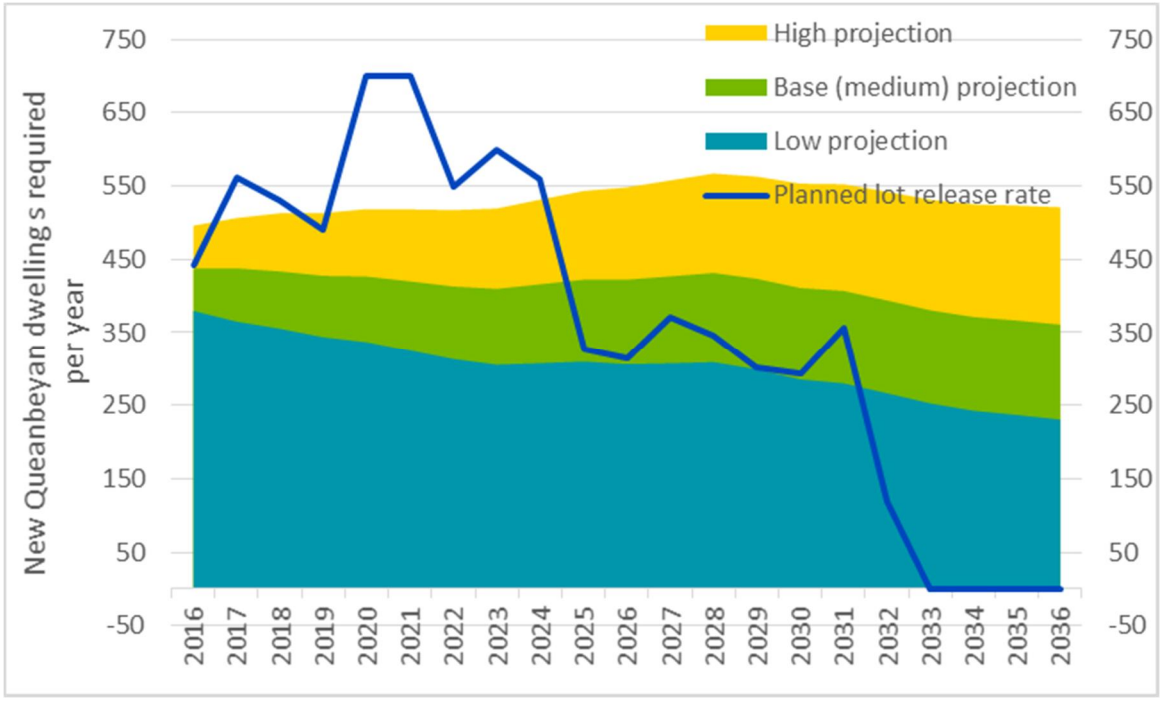
Googong and Tralee can be expected to comfortably meet Queanbeyan's projected demand for freestanding houses over the next 15 years. Googong has around 2,000 courtyard lots and 2,000 family lots left to sell, and the bulk of Tralee's 1,227 dwellings are expected to be some form of freestanding dwelling. Some of Googong's courtyard lots might suit the needs of households requiring terraces or townhouses, due to their smaller size and lower maintenance than traditional family dwellings. The rest of Queanbeyan has around 200 townhouses and units in the development pipeline, suggesting that between this, the 500 apartments proposed for Googong, and further apartments in Tralee and future Queanbeyan, the supply of apartments might be greater than demand.

Three demand scenarios based on ABS population growth in the ACT, and population projections by the NSW Department of Planning and Environment, have been used to estimate growth in dwelling demand in Queanbeyan. These scenarios are based on high, base case (medium), and low growth in population, and have been plotted against the planned land releases at Googong, South Jerrabomberra (Tralee) and other developments in Queanbeyan.

Under the Base or Medium demand scenario, growth in dwelling demand is expected to range between 400 and 440 new dwellings per year to 2031, after which it will decline to around 360 per year in 2036. Under this scenario, Googong lots are expected to sell at a rate of 278 per year, and under the low scenario, the sales rate is 200 per year.

This suggests that in the short term, new dwellings will be supplied at a faster rate than the growth in dwelling demand until the mid-2020s. Demand growth is unlikely to be sufficient to absorb the planned releases from both Googong and Tralee, suggesting that new land releases might need to be slowed. However, over the 20 year period between 2016 and 2036, most of the 9,000 planned lots for release should be absorbed.

Projected dwelling demand Growth and Land release, 2016-2036



Source: SGS modelling, 2016.[1]

[1] http://googong.net/introducing-googong/masterplan.php

Loan repayment risks

The base cost to build the EDE is expected to be $70.18 million dollars. An allowance for contingency of 15% or 16% results in an expected cost of $80.3 million or $81.40 million respectively, as shown in the table below.

EDE construction and loan assumptions

LOAN AND REPAYMENTS	
Total EDE cost ($ millions)	
Base cost	$70.18
P50 (15% contingency)	$80.30
P90 (16% contingency)	$81.40
Total government grants	$50
P90 loan amount	$31.40
Interest rate on loan	3.35%
Loan term	20 years

Source: Allhomes, 2016

If costs stay at the base level of $70.18 million, the loan will comfortably be paid off well before 2030, even under the very low demand of 200 dwellings per year. If the cost of the road runs over by $10-11 million dollars, under a base case scenario the loan will comfortably be repaid, although not until the early 2030s. Under the P50 scenario and low demand, the loan will be repaid in 2041, however under the P90 scenario, developer contributions will fall $600,000 short of repaying the loan.

Loan Repayment year by dwelling demand and construction costs

	LOW DEMAND	MEDIUM DEMAND
Construction costs		
Base - $70.18m	2026	2023
$80m	2040	2031
P50 - $80.3m	2041	2032
P90 - $81.4m	Requires funds to be sourced from elsewhere to repay loan	2033
$85m	Requires funds to be sourced from elsewhere to repay loan	2037
Maximum EDE cost in which loan can be repaid with developer contributions alone	$81.1 million, loan repaid in 2039	$87.2 million, loan repaid in 2042

Source: SGS calculations, 2016

Under a medium demand scenario, the maximum amount that can be borrowed for the EDE while still being repayable by Googong developer contributions is $37.2 million. Council can comfortably repay a loan between $30 million and $35 million (total road cost between $80 million and$85 million), though a small amount of refinancing may be necessary if the full $35 million is borrowed. Under a low demand scenario, Council can only repay a loan of $31.1 million with existing planned developer contributions. If the necessary loan exceeds this amount, Council will need to consider alternative funding, for example, using developer contributions collected for other offsite roads to repay the loan in the short term.

PART 1 - IDENTIFY AND ASSESS THE RISK TO COUNCIL OF PROJECT COST OVERRUNS

1 REVIEW METHODOLOGY

1.1 Introduction

The review methodology considers the EDE cost objectives and establishes the context and basis for assessing the EDE estimate outputs. Key reference documents are identified for the review, as below.

1.2 Methodology for assessment of risks to EDE cost objectives

1.2.1 EDE cost objectives understanding

Council Project cost objectives include:

- Obtaining a forecast project cost which has a high confidence level of not being exceeded.
- Establishing funding arrangements to fund the project costs.
- Forecasting completion cost and completion time to enable Council to plan financial arrangements with certainty and without the adverse impacts that unexpected financial outcomes produce.

1.2.2 EDE cost elements

The assessment considers the following elements important to EDE cost objectives:

- The EDE cost estimate.
- The EDE development program.
- The EDE risk register.

1.2.3 Assessment of risks to EDE cost objectives - context and basis

In recent times transport infrastructure in many countries have a history of overruns on cost forecasts and funding arrangements. The reasons for this will not be discussed in this report. However, the basis and methodology for this review will draw upon the learnings, research and developments as a result of the cost overruns.

The following documentation are used as a basis for the review:

- Roads & Maritime Project Estimating Manual
- AACE International, the Authority for Total Cost Management, Recommended Practices

1.2.3.1 ROADS & MARITIME PROJECT ESTIMATING MANUAL AND THE PROJECT ESTIMATE BASIS

Details on this manual:

> Roads & Maritime Project Estimating Manual, accessed 13 May 2016, Document name: Project estimating, Document number: PMO-EST-UG-001, Version and date: Version 2.0 (31 March 2008)

We understand document referenced above is the latest public available manual. However, internally RMS has revised practices which are being adopted for the development of the EDE cost estimate.

RMS has advised the EDE cost estimate has been developed to a standard for Gate 2 involving information as a minimum to be consistent with a Preliminary Business Case.

1.2.3.2 AACE INTERNATIONAL RECOMMENDED PRACTICES

The AACE recommended practices may be found at the AACE Recommended Practices webpage.

The recommended practices are a valuable tool for industry to achieve more realistic accuracy forecasts, better contingency estimates and more profitable investments/meet project financial objectives.

The reporting of this assessment will be guided by the recommended practices and terminology of AACE International. Key terminology/estimate definitions and features are recorded below.

BASE ESTIMATE

Estimate excluding escalation, foreign currency exchange, contingency and management reserves

BUDGET ESTIMATE

An estimate generally prepared to form the basis for authorization and/or appropriation of funds.

CONTINGENCY

The understanding of contingency is generally represented by the following:

An amount added to an estimate to allow for items, conditions, or events for which the state, occurrence, or effect is uncertain and that experience shows will likely result, in aggregate, in additional costs. Typically estimated using statistical analysis or judgment based on past asset or project experience. Contingency usually excludes:

1. Major scope changes such as changes in end product specification, capacities, building sizes, and location of the asset or project;
2. Extraordinary events such as major strikes and natural disasters;
3. Management reserves; and
4. Escalation and currency effects.

Some of the items, conditions, or events for which the state, occurrence, and/or effect is uncertain include, but are not limited to, planning and estimating errors and omissions, minor price fluctuations (other than general escalation), design developments and changes within the scope, and variations in market and environmental conditions. Contingency is generally included in most estimates, and is expected to be expended.

MANAGEMENT RESERVE

An amount added to an estimate to allow for discretionary management purposes outside of the defined scope of the project, as otherwise estimated. May include amounts that are within the defined scope, but for which management does not want to fund as contingency or that cannot be effectively managed using contingency.

CONFIDENCE INTERVAL

The probability that a result will be within a range.

CONFIDENCE LEVEL

The probability: 1) That results will be equal to or more favourable than the amount estimated or quoted; or 2) That the decision made will achieve the desired results; or 3) That the stated conclusion is true.

ACCURACY RANGE

An expression of an estimate's predicted closeness to final actual costs or time. Typically expressed as high/low percentages by which actual results will be over and under the estimate along with the confidence interval these percentages represent

MEANING OF RISK

An AACE recommended practice is that whenever the term "risk" is used that the terms meaning be clearly defined for the purposes at hand.

For the purposes of this review of the Project cost estimate "risk" means "an undesirable potential outcome and/or its probability of occurrence", i.e. downside uncertainty (a.k.a. threats). Opportunity on the other hand is a desirable potential outcome and/or its probability of occurrence", i.e. upside uncertainty. Contingency from a cost estimate is therefore quantification of the impact of uncertainty, i.e. "risks + opportunities".

RISK TYPES

Risk types fall into one of two categories; risks that have systematically predictable relationships to overall project cost growth outcome and those that don't. These categories have been labelled as "systemic" and "project-specific" risks for contingency estimating purposes.

The term systemic implies that the risk is an artefact of the project "system", culture, business strategy, process system complexity, technology, and so on. The term project-specific implies that the risk is, as it says, specific to the project.

Estimate accuracy is driven by systemic risks such as:

- Maturity level of definition
- Complexity of the project
- Quality of reference cost estimating data
- Quality of assumptions used in preparing the estimate
- Experience and skill level of the estimator
- Estimating techniques employed
- Time and level of effort budgeted to prepare the estimate

Typical project-specific risks (this list is far from inclusive):

- Weather
- Site Subsurface Conditions
- Delivery Delays
- Constructability
- Resource Availability

- Project Team Issues
- Quality Issues (e.g., rework)
- etc.…

56R-8 COST ESTIMATE CLASSIFICATION SYSTEM – AS APPLIED FOR THE BUILDING AND GENERAL CONSTRUCTION INDUSTRIES

A recommended practice of AACE International, the Cost Estimate Classification System provides guidelines for applying general principles of estimate classification to project cost estimates (i.e., cost estimates that are used to evaluate, approve, and/or fund projects).

2 INFO / DATA PROVIDED

2.1 Info / Data provided

The following information / data was provided for this review:

- Email 6 May 2016 from QPRC Director Infrastructure Services identified information on the webpage: http://www.qcc.nsw.gov.au/Ellerton-Drive-Extension/EDE and the traffic studies can be found on http://www.qcc.nsw.gov.au/Services/Roads-and-Traffic/Traffic-Studies/Traffic-Studies . What is included on this webpage is the REF, SIS, Addendum to the SIS, Archaeological Reports.
- Email 10 May 2016 from QPRC Director Infrastructure Services included following documents:
  - Opus Ellerton Drive Extension (EDE) Final Design Report, March 2016, Reference T-C0040.00, Issue 4
  - Microsoft Project file: Design and Construction Program151203 MS Project 2000.mpp, Development Program January 2015, Ellerton Drive Program of Work
  - Ellerton Drive Extension RiskRegister update 150416.xlsx, NSW Public Works Ellerton Drive Extension, Date Risk Register last reviewed: 08 April 2015
  - 151201 OPUS Cost Estimate 100% DD Estimate ver 3.xlsx
- Email 31 May 2016 from Opus consultants, link to Ellerton Drive Extension Final Design:

  Key reports downloaded:

  - T-C0040 00_Final Design Report_Optimised.pdf, Opus Ellerton Drive Extension (EDE) Final Design Report, March 2016, Reference T-C0040.00, Issue 4
  - T-C0040.00_Queanbeyan River Bridge Final Design Report_Issued.pdf, Opus Queanbeyan River Bridge Final Design Report, May 2016, Reference T-C0040.00, Final
- Email 14 June 2016 (copied) from Opus consultants including attached documents:
  - 160610 EDE final DD Estimate.xlsx
  - 160610 Ellerton Drive Estimate Report.pdf

2.2 Review of initial findings with estimating consultant

A summary of initial findings of the review of the final estimate outputs was submitted to Council on the 16 June 2016. An examination of these findings was undertaken with the estimating consultant from North Projects on the 21 June 2016.

This examination clarified some of the initial findings and confirmed the need for an update to the estimate outputs to clarify details in relation to estimate exclusions/assumptions and final estimate positions on risk items. Any updating to the final estimate outputs was not available prior to the issue of this report.

3 REVIEW OBSERVATIONS / FINDINGS

3.1 Summary of estimate review findings

The main features of project estimate outputs includes the following:

- The project base estimate is $70.182 million, reported to be estimated by first principles, excluding GST and based on current dollars.
- The project estimate including contingency is reported as:
  - P90 value of $81.4 million (includes contingency of 16%)
  - P50 value of $80.3 million (includes contingency of 15%)
- Project summary sheet analysis:
  - Three main estimated items – 5(ai) Road Construction, 5 (aii) Bridge Construction and 4(a) Utilities adjustment make up 87.7% of the base estimate
  - The remaining items make-up 12.3% of the base estimate and are either factored values or values provided by Council
- The estimate file: Con Sum sheet (roadworks):
  - An analysis identified provisional sum value items equals $1.366 million
  - Various roadworks provisional quantities items are noted, however these items are not easily filtered to quantify the value of roadworks provisional quantities.
- The estimate file: Con Sum - Bridge:
  - Various bridge works provisional quantities items are noted, however these items are not easily filtered to quantify the value of bridge works provisional quantities.
- The contingency values have been determined by allowances on estimate line items. No probabilistic estimating has been undertaken.

3.2 Estimate review findings

A record of the findings of the review of the estimate outputs is shown Table 3.1. The review has used the Roads & Maritime Project Estimating Manual, Project estimating, Document number: PMO-EST-UG-001 as a prompt.

The review is reported in a table format identifying:

- Reference – generally a reference to the Project Estimating Manual
- Findings – details on findings
- Conclusions/comments
- Recommendations.

A brief review of the project development program and project risk register in relation to the estimate follows the estimate review findings table.

Table 3.1 Estimate review findings record

REFERENCE	FINDINGS	CONCLUSIONS/COMMENTS	RECOMMENDATIONS
Estimating process			
General finding	The cost estimate outputs appear to be based on some of the requirements of the RTA Estimating Manual.	The estimating consultant advised the estimating was undertaken generally in accordance with latest RMS estimating processes and the requirements of the Estimating Manual are reported by exception.	Update the estimate reporting to explain further details on the estimating process.
3.2 Project stages	No commentary on estimate order of accuracy.	Not part of exception reporting.	
3.4 Factors influencing estimates	No comprehensive commentary on the 13 factors influencing estimates.	Not part of exception reporting.	
7.2 Procedure for preparing detailed estimate	Detailed estimate steps - Appears some of the steps implemented but the estimate report does not confirm details of all steps completed.	Not part of exception reporting.	
7.2 Procedure for preparing detailed estimate	Estimate report - Section 1.2 Estimate Process: → Five dot points noting: ▪ Independent quantities ▪ All rates from first principles ▪ Contingency based on available design detail (what about a risk register?).	The estimating consultant advised: → Quantities either provided by design consultant or calculated by first principles by the estimator → Contingency for each estimate line item determined by assessment of confidence in design outputs and assumptions → Project risk register not specifically recognised as part of estimate reporting.	As assessment should be undertaken of the project risk register to understand which items have been addressed in the estimate outputs and whether additional allowances for project risks should be made outside of the current estimate reporting.
4.8.1 Reality checks	Reality checks data noted for 11 items at bottom of 'Project Summary' sheets. However, no commentary or comparison on reality check details appears to be addressed in the estimate reporting.	It is understood RMS will undertake the reality checks using their extensive records from RMS projects.	Reality checks on the estimate should be completed to validate the estimate results.
4.8.2 Peer review	No reference identified about cost estimate peer review.	Peer review of the estimate by a third party is not in the estimating consultant's scope of work.	The plans for a third party review of the estimate should be checked and undertaken.

REFERENCE	FINDINGS	CONCLUSIONS/COMMENTS	RECOMMENDATIONS
Contingency			
7.5.2 Contingency	Estimate Summary reports: Notes contingency falls with RMS requirement of 15% to 25% for detailed design. Estimate report does not explain how contingency allowances of 15% and 16% can be reported as P50 and P90 values. Estimate report states assessment of contingency (15%/16% allowances) based upon the available design detail. However, no explanation is given on this assessment.	The Estimating consultant confirmed the structure of the Excel estimating file - the reported P90 value (equals the base estimate plus a 16% contingency) was determined by the summation of contingency allowances on each line item in estimate. The P50 value was determined by a 15% contingency allowance on all line items. It appears the majority of line items have a 15% contingency allowance and some items have allowances ranging from 16% to 25%. These allowances result in a bottom line contingency allowance of 16%. The allowances are based on the estimator's assessment of design detail and assumptions for each line item. This approach to determining the contingency allowance is the process adopted by RMS to reporting a P90 value. The Estimating consultant noted a Practice Guide for a high level review related to contingency was used to assist contingency determinations.	Update the estimating reporting to include a commentary on how the contingency allowances have been determined.
Glossary of terms - Contingency	The RTA manual defines contingency. The estimate report identifies contingency in the Project Summary sheets and Estimate file sheets. However the estimate report does not provide specific commentary on contingency.	The AACE International Recommended Practices has a suitable explanation of contingency and management reserve etc.	Recommend that Council adopt a clear definition of contingency such as the definition by AACE International Recommended Practices to help Council structure its approach to management of contingency.

REFERENCE	FINDINGS	CONCLUSIONS/COMMENTS	RECOMMENDATIONS
Risk reporting			
3.4.12 Risk	The Estimating Manual refers to known and unknown risks. The estimate report does not reference known or unknown risks or appear to comprehensively explain how risks and contingency have been addressed. The estimate report (Section 2.5) refers to seven items of potential risk. It is not clear in the reporting how these risk items have been quantified in the estimate or covered as part of the contingency allowance? It is assumed the cost estimate contingency would typically be an allowance for project type risks but there is no concise commentary provided to confirm what the contingency covers. See further comments below.	It would be important for Council to have a clear understanding of the meaning of contingency in the estimate report including: → What are the exclusions? → Detailed list of assumptions → What risks are addressed by the contingency → How have the risks been addressed in the contingency? The AACE International Recommended Practices has a suitable approach to cost estimate risk which are categorised as either Systemic Risk or Project Risks.	The estimate report should be updated to clarify how risks have been addressed in the estimate outputs. Assumptions and exclusions should be clearly identified in the estimate reporting. The estimate report should identify which risks from the project risk register are addressed in the contingency allowances and which risks excluded.
Delivery program			
3.4.4 Construction program	The estimate assumptions commentary refers to a construction period assumption of 85 weeks. The estimate build-up has been based on 85 weeks. The Estimate Report Section 5.1 refers to: Construction commencement 2016, Project compete 2017.	A construction project completion in 2017 would not appear to be feasible unless a contractor is appointed early in the second half of 2016.	The estimate report should be updated to confirm the construction period allowed in the estimate.
Program related assumptions	The estimate file assumptions sheet and reporting notes: → No allowances for delays and costs due to presence of artefacts and endangered plant and wildlife species etc. → No allowance for wet weather or other delays but a delay value was noted in the estimate build-up → Allowance for construction duration: Is the earthworks haulage through the town centre or over the new bridge (the latter is reported as requiring a longer construction duration)?	The estimating consultant advised that in relation to these items respectively: → No allowance for a time delay but the contingency allowance is assumed to cover risk of presence of artefacts and endangered plant and wildlife etc. → A wet weather delay has not been quantified but contingency should cover cost of wet weather delay. → Final estimate does not allow for use of bridge or haulage through town (each side is standalone).	The assumptions records should be reviewed and updated and included as an appendix to the estimate report.

REFERENCE	FINDINGS	CONCLUSIONS/COMMENTS	RECOMMENDATIONS
Comments on assumptions/general comments			
4.2 Standard estimate summary 4.9.1 Estimate preparation 7.5.3 Documentation Requirements for documenting assumptions used to prepare the estimate	The estimate file assumptions sheet is noted. Assumptions are recorded under various location/item headings. Particular findings include. **1.** Utility costs are assumed but worked up from first principles. No quotes obtained. Higher contingency allowances recorded for utilities. **2.** Various earthworks assumptions recorded. The estimate appears to have higher contingency allowances for items with assumptions. **3.** Property adjustments noted as excluded from the estimate but there is an allowance in the estimate item R204. This assumption is incorrect and is to be changed. **4.** No allowances made for rehabilitation of existing roadwork, or adjustment to services or roadworks to facilitate plant establishment – directed not to include. **5.** Allowances for rehabilitating existing roads due to construction traffic: through town earthworks haulage, pavement and asphalt supply to the project – directed not to include.	Extensive deliberations appear to have been undertaken to scope and develop the estimate. However, estimating reporting should be updated to: → Ensure no ambiguities between the estimate basis and assumptions → Clarify the estimate items which are based on assumptions resulting in provisional sums and/or provisional quantities → Confirm exclusions and reasons for the exclusion.	Update the estimate report to: → Clarify the estimate basis and assumptions. → Document the value of items which are provisional sums/provisional quantities. → Confirm exclusions and reason for exclusion.
General comments	**1.** Some of the factored cost items shown in the Project Summary could be confirmed by actual/forecast costs or generated by first principles. **2.** Section 1.4 Scope of Works listing identifies potential for pedestrian underpasses at Jumping Creek Estate. An underpass has been included to allow for future pedestrian connections to future estates. **3.** Earthworks volumes do not take into consideration additional excavation that may be required to remove unsuitable material or any bulking factors – i.e. the estimate has been built on bank volumes.	Estimate reporting should ensure detailing of estimate assumptions are documented to avoid misinterpretations.	Update of the estimate reporting for assumptions and exclusions to ensure suitably detailed for readers not familiar with the estimate build-up detail.

3.3 Estimate expected accuracy range

The consideration of the EDE estimate expected accuracy range is based on the typical AACE International Recommended Practices Cost Estimate Classification System.

The expected accuracy range for the general construction industry (56R-08) for an estimate class 1 (comparable with a detailed design estimate) involves a high range of +3% to +10% and represents the typical percentage variation of actual cost from the cost estimate after application of contingency (typically at a 50% level of confidence) for given scope.

The estimate report documents a P50 value of $80.3 million. Using a high range of +3% to +10% results in a range of $82.4 million to $88 million as shown in Table 3.2. However, as noted in the analysis above in Section 4.2, the P50 result was not determined from a probabilistic analysis, and using an assumed P50 value of $77.3 million (which has better fit with a base estimate of $70.182 million and a P90 value of $81.4 million), a high range of +3% to +10% results in a range of $80.0 million to $85.0 million as shown in Table 3.2.

Table 3.2 Estimate accuracy high range

ESTIMATE VALUE	ACCURACY HIGH RANGES	
P50 value	**+3%**	**+10%**
$80.0 million	$82.4 million	$88.0 million
$77.3 million	$79.6 million	$85.0 million
Rounded million	$80.0 million	$85.0 million

This analysis suggests Council could reasonably expect an actual cost outcome high range value between $80 million to $85 million. However, this high range value is subject to project variables and the risks associated with the estimate. Extreme risks could lead to a larger high range value.

3.4 Project development program review findings

The ‘Design and Construction Program 151203’ which prints as Development Program January 2015 shows a construction letter of award in June 2016 and practical completion in August 2018. This represents a construction period of 112 weeks compared to the estimate construction period allowance of 85 weeks.

The Development Program should be updated to reflect current status and latest plans for project delivery. The construction period allowance of 85 weeks should be reasonably achievable. However, the Development Program should demonstrate how this duration would be achieved.

3.5 Project risk register findings

The EDE risk register last reviewed 8 April 2016 includes 106 risk items. A review of the risk items identifies at least 40 of the risk items are connected with the project estimate.

The risk items should be reviewed and their status updated to confirm the potential impact to the project estimate. The risk items with potential impact to the project estimate should be reviewed with the estimating consultant to confirm the contingency allowances.

Suggested improvements to the risk register include developing the risk description details into a structure of risk issue (not achieving an objective), potential causes and potential consequences.

4 CONCLUSION

4.1 Conclusions

The main conclusions from the review of the EDE estimate include:

1. A project base estimate totalling $70.182 million (excluding GST, current dollars) has been prepared using first principles estimating which is consistent with typical industry practices for the detailed design milestone.
2. The project estimating contingency process reports a P90 equivalent output of $81.4 million.
3. An analysis of the expected accuracy range of actual cost from the cost estimate indicates the high value range to be between $80 million to $85 million.
4. The review has identified some minor ambiguities, gaps and issues with the estimate outputs including:
    a) Estimate assumptions and exclusions – minor ambiguities and gaps.
    b) Provisional sums and/or provisional quantities are not separately identified and reported.
    c) The estimate contingency allowances have not been reviewed with the project risk register to confirm the risks covered by the contingency allowances.

    Any updating of the estimate outputs to address the ambiguities, gaps and minor issues are not expected to materially change the estimate results.
5. The completion of estimate reality checks and estimate peer review are yet to be finalised.
6. Project development, investigation and design, property acquisition and project management/client representation estimate items have been determined by factoring or include Council advised values. Some of these items could be updated with actual/forecast costs or estimated from first principles.

4.2 Recommendations

The main recommendations from the review of the EDE estimate include:

1. The expected accuracy range of actual cost from the cost estimate involving a high value range of $80 million to $85 million appears reasonable for assessing Council's funding arrangements for EDE.
2. Council seek an estimate report update from the estimating consultant to address current reporting minor ambiguities, gaps and minor issues including:
    a) Confirm assumptions and exclusions details.
    b) Confirm risks included/not included in the contingency allowances.

    Any updating of the estimate outputs to address the minor ambiguities, gaps and issues are not expected to materially change the estimate results.
3. Council should update and revise the project development program and project risk register and confirm alignment with the estimate assumptions and contingency allowances.
4. Council should seek finalisation of reality checks and confirm plans for estimate peer review.
5. Council should adopt as part of commercial management procedures a clear definition of contingency including a management reserve component. The contingency and management

reserve would be used to allow for risks confirmed in 2b) above and risks identified in the project risk register.

6. Following receipt of the estimating report update, reality checks and peer review if completed, Council should confirm the project base estimate and contingency allowances.

PART 2 - IDENTIFY AND ASSESS THE RISKS AROUND RECOVERING THE REQUIRED FUNDS FROM DEVELOPERS TO MEET THE REPAYMENT OBLIGATIONS

1 CATCHMENT DEFINITION

1.1 Introduction

Queanbeyan LGA, with Queanbeyan City as its major population centre, sits close to the ACT border in New South Wales. Two-thirds of Queanbeyan residents commute to the ACT for work. As such, its population patterns have more in common with those of the ACT than they do with other areas in regional NSW. Queanbeyan currently has a population of between 40,000 and 45,000, and expects to accommodate at least another 10,000 to 15,000 people by 2031.

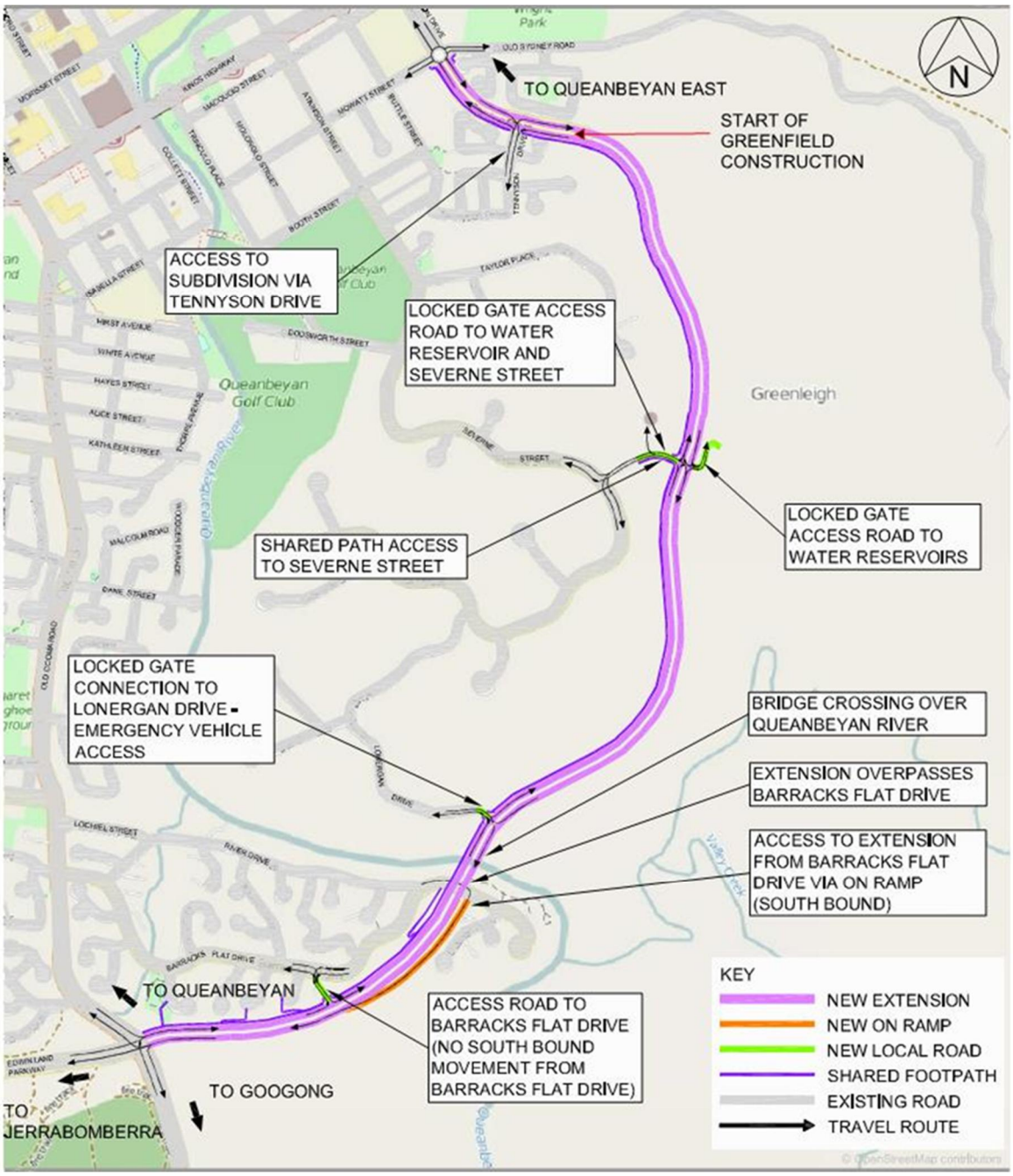
Many of these additional residents are expected to reside in the new village of Googong, located to the south of Queanbeyan. When completed, Googong Is expected to have approximately 17,000 new residents. Like Queanbeyan, most Googong residents will work in the ACT, and this will put pressure on the roads between Googong and the ACT border.

A Googonian travelling to the southern side of the ACT would most likely travel up Cooma Street to Edwin Land Parkway and cross the border at Lanyon Drive; those travelling to the north side of the ACT would likely take Cooma Street to Canberra Avenue through the Queanbeyan CBD, then Yass Road over the border. This is projected to put pressure on Cooma Street through Karabar, and on Queanbeyan CBD roads, particularly during peak hour. In addition, further growth and development in Queanbeyan City is adding to congestion in this area.

To reduce these pressures, Council proposes to develop a two lane road joining Ellerton Drive to the intersection of Cooma Street and Edwin Land Parkway, looping around the rural residential developments in the southeast of Queanbeyan, as shown in Figure 1.1. This road will be called the Ellerton Drive Extension (EDE), and is expected to reduce congestion on Canberra Avenue and Cooma Street by:

- Providing a way for Googong and Karabar residents to access the north side of the ACT without going through the Queanbeyan CBD
- Providing a town bypass route for heavy vehicles and other traffic between the Kings Highway or Sutton Road and Jerrabomberra, Hume and Environa, that avoids the CBD.

Figure 1.1 Proposed Ellerton Drive Extension (EDE)



It is expected that the EDE will cost between $80 million and $85 million to build. It is also expected that $50 million of this will be provided by Commonwealth and State Governments, with $25 million from the Commonwealth Government, $12.5 million from ReStart NSW, and $12.5 million from Transport for New South Wales.

The balance of funding is expected to be paid for by developer contributions under Section 94 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and Local Planning Agreements (LPAs).

The bulk of this funding, around 81%, is expected to come from Googong developer contributions, with contributions from other Queanbeyan developments and Tralee making up the balance. Council expects to borrow the balance of funding, and use the developer contributions to repay the loan and the interest incurred.

The purpose of this assessment is to determine the risk of Section 94 funding not being able to repay the loan within 20 years of the road being built. Variables to be considered in this assessment include:

- The size of the loan (related to the expected cost of building the EDE),
- Property sales figures at Googong and elsewhere in Queanbeyan, which may affect Council's ability to source funds from developers,
- The share of developer contributions directed towards the EDE and repayment of the associated loan, and
- The terms of the loan, such as interest rates and repayment terms.

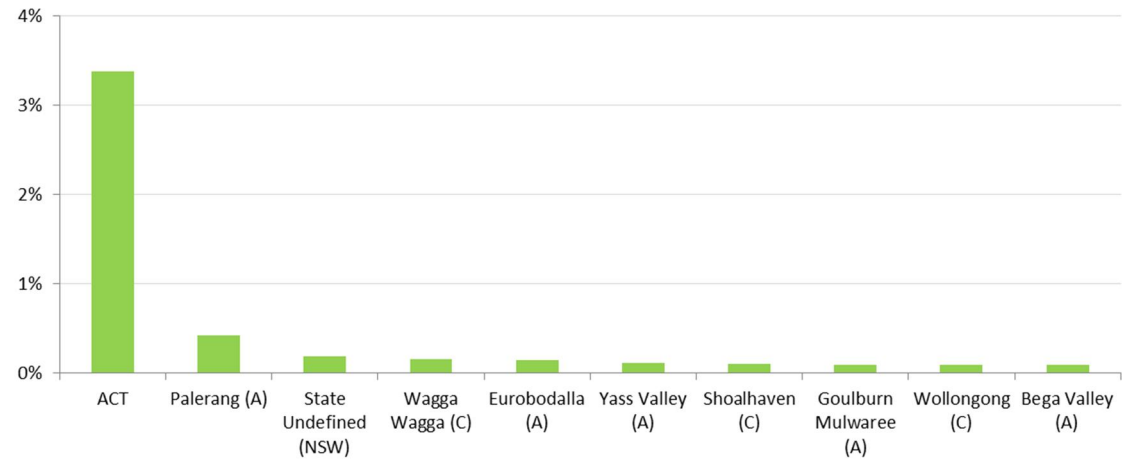
1.2 Catchment definition

It is important to identify the geographic areas where people are likely to move from to live in the Googong development and Queanbeyan LGA. This is in order to analyse the likely supply and demand for different types of housing, population patterns, and other factors which may influence the likely take up rate of housing in Googong, and resultant Section 94 contributions.

1.2.1 Recent movers to Queanbeyan

ABS Census data from 2011 (as the most recent available) has been used to identify the origin of recent homebuyers and movers to the Queanbeyan LGA. Figure 1.2 shows the top 10 LGAs where people were living one year prior to the 2011 Census (Queanbeyan has been excluded from this figure).

Figure 1.2 Top 10 LGAs of origin of Queanbeyan residents 1 year ago, 2011

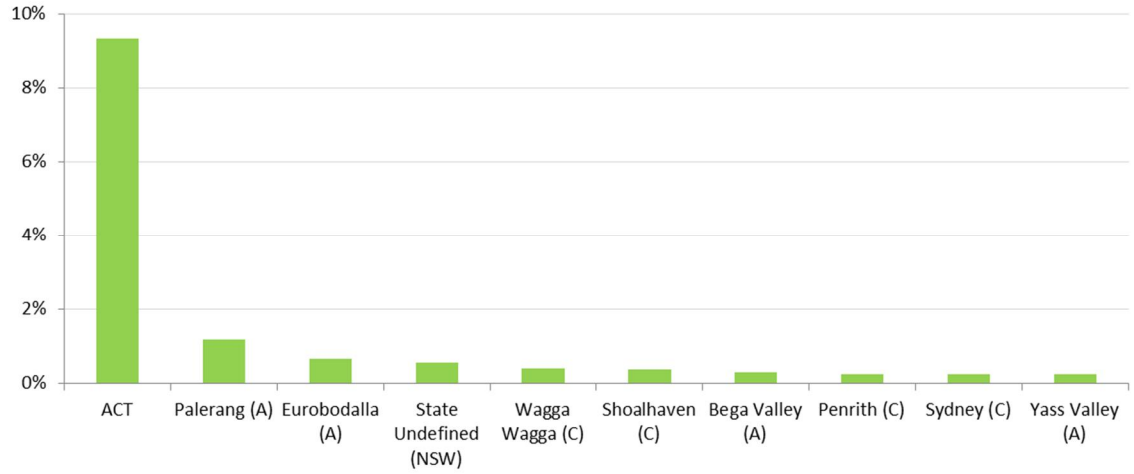


Source: ABS Census TableBuilder, 2016.

By far, the most people had moved from the ACT compared to other LGAs, followed by Palerang, which is immediately adjacent to Queanbeyan. Other LGAs in the capital region, such as Yass and Goulburn Mulwaree are also in the top 10, though there were also people moving from the South Coast region, such as Eurobodalla, Shoalhaven, and Bega Valley, as well.

Similar movement patterns can also be seen in people who were living outside of Queanbeyan five years prior to the Census, as shown in Figure 1.3 (Queanbeyan has been excluded from this figure).

Figure 1.3 Top 10 LGAs of origin of Queanbeyan residents 5 years ago, 2011



Source: ABS Census TableBuilder, 2016.

Even more people were living in the ACT five years prior as a proportion of the population compared to one year prior, at above 9%. Palerang was also the next most common location, and the other LGAs where people were living were broadly similar to those in Figure 1.2. This indicates that it is primarily people from within the Capital Region and South Coast which are moving to Queanbeyan.

1.2.2 Employment patterns

Table 1.1 shows the number of people working in Queanbeyan, the ACT, Palerang, and the Yass Valley by their LGA of residence in 2011.

Table 1.1 Location of employment by place of residence, 2011

RESIDENCE	PLACE OF WORK			
	ACT	**Queanbeyan**	**Palerang**	**Yass Valley**
ACT	171721	3374	447	240
Queanbeyan	12712	5029	186	17
Palerang	3756	656	1982	20
Yass Valley	3518	113	18	2830

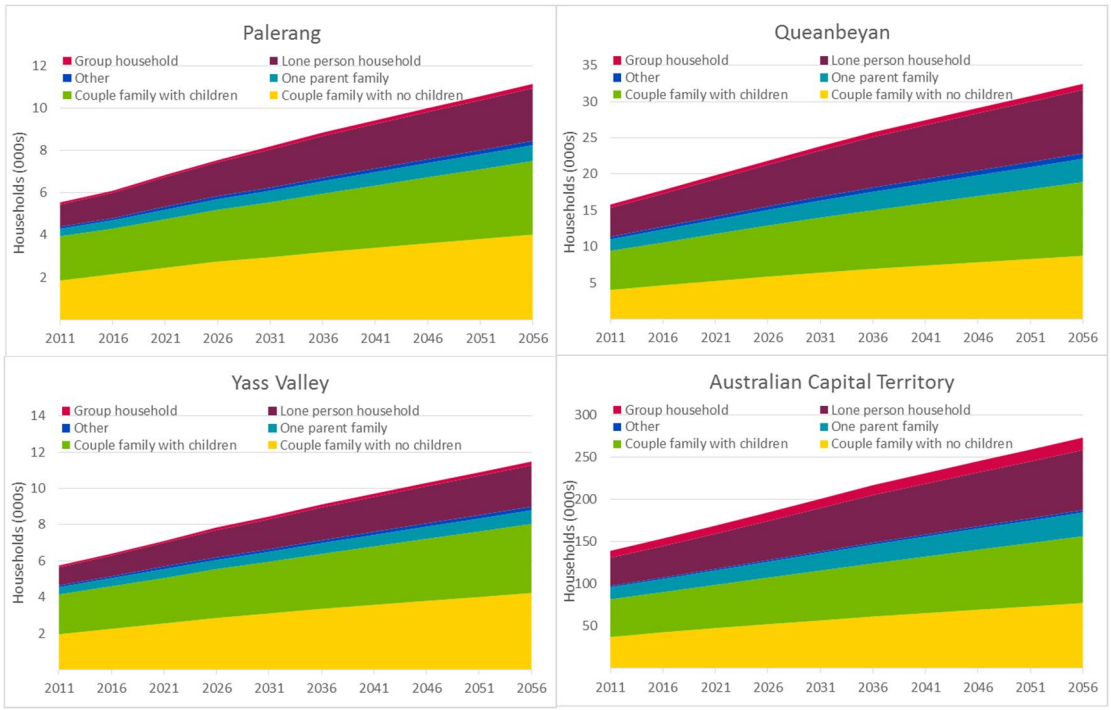
Source: ABS Census Tablebuilder, 2015.

Perhaps unsurprisingly, the vast majority of people living in the ACT work within the ACT, while much lower numbers work in surrounding LGAs. Conversely, more Queanbeyan residents travel to work in the ACT than work in Queanbeyan itself, and a similar pattern can be seen in both Palerang and the Yass Valley. This illustrates the influence that the ACT has on its surrounding region, and that employment and housing trends in Canberra are likely to heavily influence future patterns of settlement in Queanbeyan.

1.2.3 Forecasts of household type

Another important element to consider in this financial risk analysis is the housing types which are likely to be on offer as part of the Googong development, and the types of housing that are likely to be demanded in Queanbeyan, Canberra, and nearby areas. Figure 1.4 illustrates the projected number of different types of households in the four LGAs discussed above to 2056.

Figure 1.4 Household type forecasts



Source: DPE and ABS projections, SGS calculations, 2015.

Overall, there are expected to be increases in each of the types of household. Across the region, the fastest growth is expected to be in the number of lone person households. These households, and couple families without children, are increasing due to longer life expectancies, as adult children move out of home.

In Queanbeyan in particular, there is expected to be a lower rate of growth in couple families with children and group households, with the highest rate from lone person households and couple families with no children. While the overall rate of growth of households with children is lower, the growth in this type of household is expected to be higher in Queanbeyan than in Palerang, Yass Valley, and the ACT. These demographic shifts are likely to impact on the types of housing demanded in future.

1.3 Summary

To a great extent, Queanbeyan LGA, including Googong, has a similar catchment to the ACT. The short driving distances from Googong and Queanbeyan to Canberra, particularly the employment hubs of the inner south, means that a Canberra worker can readily choose to live in Queanbeyan or Googong if the dwelling product suits them. It is not uncommon for Palerang workers to reside in Queanbeyan, although it is relatively uncommon for a Yass Valley resident to work in Queanbeyan. It would be reasonable to suggest that the catchment for Googong and the rest of Queanbeyan consists of Queanbeyan LGA itself, the ACT, and to a lesser extent Palerang and Eurobodalla.

2 MARKET CONDITIONS AND PIPELINE SUPPLY

Housing prices in the ACT and the Capital Region have been relatively flat from 2010 to 2015 as public service efficiency dividends and a wave of redundancies shocked the Capital Region workforce.

2.1 Sales in Googong and the Queanbeyan region

To gain an understanding of the housing market in the Queanbeyan area, and how this might affect the take up of housing and resultant developer contributions at Googong, median sales prices for housing in recent years has been examined.

Table 2.1 shows the median sales price for non-unit properties in Googong in the last 10 years.

Table 2.1 Median sale prices ($) Googong 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Median non-unit	535,000	480,000	391,250	643,250	620,000	400,000	935,000	252,000	250,000	259,500	260,218
Total sales	23	24	26	18	10	13	23	210	227	370	288

Source: Allhomes data, 2016.[2]

The fluctuation in the prices in Googong is not a good indicator of dwelling value. Prior to 2012, dwellings were mostly rural residential properties with established houses, which tend to attract a high premium. In 2012 the first Googong blocks went on sale, so the median sale price represents a vacant block, not a house, as is the case in more established suburbs.

Table 2.2 shows the median non-unit sales in the suburbs of Queanbeyan, as well as the nearby areas of Bungendore and Canberra. Figure 2.1 illustrates the trend in prices between 2005 and 2015.

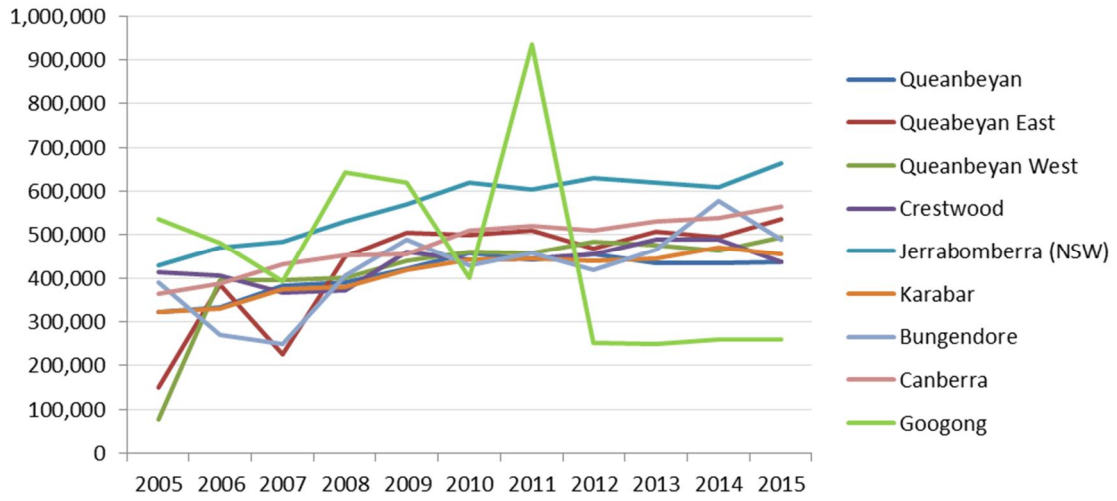
Table 2.2 MEDIAN NON-UNIT SALE PRICES FOR NEARBY AREAS ($) 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Queanbeyan	322,000	331,500	381,250	390,000	420,000	457,000	442,800	456,000	435,000	435,000	438,000
Queanbeyan East	150,000	385,000	226,500	450,000	505,000	500,000	509,000	467,000	507,500	495,000	535,000
Queanbeyan West	77,500	395,000	395,050	400,000	440,000	459,000	458,950	483,500	475,000	462,000	495,000
Crestwood	414,000	405,000	367,000	372,000	459,500	440,750	443,800	455,000	488,500	489,000	437,000
Jerrabomberra (NSW)	430,000	469,500	483,000	529,500	571,000	618,750	604,000	630,000	620,000	608,200	662,500
Karabar	322,500	331,000	375,000	380,000	419,500	440,750	445,000	439,500	445,000	471,000	455,000
Bungendore	390,000	270,000	249,000	405,000	490,000	430,000	457,000	417,500	465,000	577,000	489,000
Canberra	362,500	386,000	431,200	452,500	456,000	510,000	520,000	510,000	530,000	537,500	565,000

Source: Allhomes data, 2016.

[2] See http://www.allhomes.com.au/ah/research/property-and-past-sales

Figure 2.1 Median non-unit sale prices ($) 2005-2015



Source: Allhomes data, 2016.

There has been a general increase in prices across these suburbs in the past 10 years, though prices in the Queanbeyan suburbs have generally remained lower than in the ACT and Bungendore. The median price in Jerrabomberra has been consistently higher than elsewhere, and this may be due to its closer proximity to Canberra.

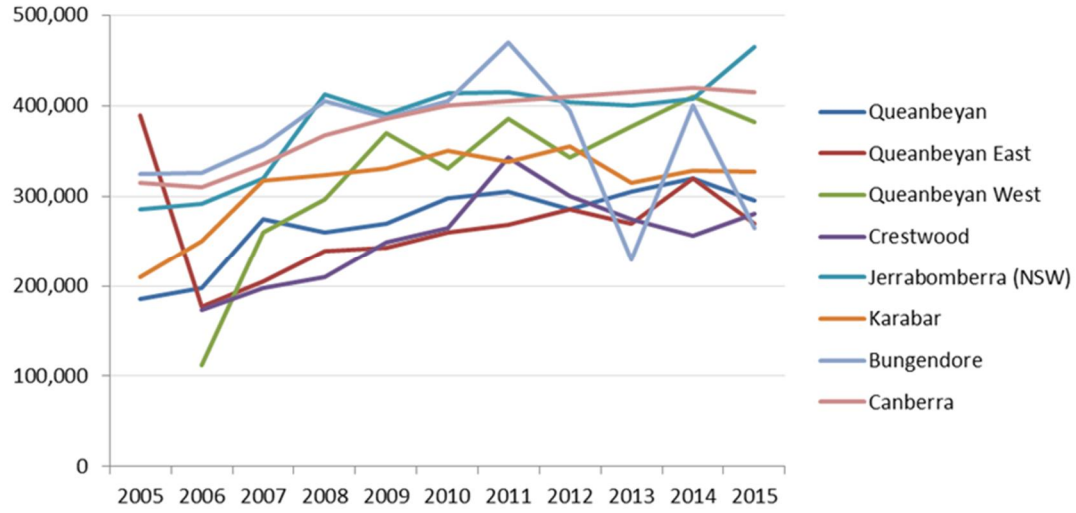
Table 2.3 shows the median sale prices for units in the same areas since 2005. Figure 2.2 illustrates the trend in these prices over time (there are no units in Googong yet).

Table 2.3 MEDIAN UNIT SALE PRICES FOR NEARBY AREAS ($) 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Queanbeyan	185,000	198,000	275,000	260,000	270,000	298,000	305,000	285,000	305,000	320,000	295,000
Queanbeyan East	389,000	177,000	205,000	239,000	243,000	259,475	268,000	285,000	270,000	320,000	270,000
Queanbeyan West	N/A	112,000	260,000	297,000	370,000	330,000	385,000	342,500	377,000	410,000	381,500
Crestwood	N/A	173,750	198,000	210,000	248,250	265,000	342,500	300,000	275,000	256,000	280,000
Jerrabomberra (NSW)	285,000	291,000	319,000	412,500	390,000	413,500	415,000	404,000	400,000	407,000	465,000
Karabar	210,000	250,000	317,250	323,000	330,000	350,000	338,000	355,000	315,000	328,000	327,500
Bungendore	325,000	325,750	356,000	405,000	387,000	405,000	470,000	394,000	229,000	400,000	265,000
Canberra	315,000	310,000	335,000	367,000	385,000	400,000	405,000	410,000	415,000	420,000	414,900

Source: Allhomes, 2016.

Figure 2.2 Median unit sale prices ($) 2005-2015



Source: Allhomes, 2016.

As shown above, the prices for units in Canberra have been consistently higher than those for most Queanbeyan suburbs, with the exception of Jerrabomberra. Units in Bungendore have also been consistently higher priced compared to Queanbeyan suburbs, though this fluctuated in more recent years.

The median unit price is also much lower than what non-unit housing has sold for. The prices for units are also likely to be a result of new stock coming onto the market in these areas, where previously the dominant housing type was detached and single family homes.

Table 2.4 shows the total number of property sales in Queanbeyan suburbs, Bungendore and Canberra since 2008.

Table 2.4 NUMBER of SALES PER YEAR IN NEARBY AREAS 2008-2015

	2008	2009	2010	2011	2012	2013	2014	2015
Queanbeyan	544	647	477	415	331	346	226	281
Queanbeyan East	228	209	155	186	165	141	162	151
Queanbeyan West	110	109	81	70	58	76	50	48
Crestwood	169	198	147	147	151	147	101	116
Jerrabomberra (NSW)	318	276	234	259	229	235	206	201
Karabar	171	140	125	163	103	165	124	133
Bungendore	166	145	148	180	181	185	136	155
Canberra	7,298	7,630	10,957	8,799	7,293	8,357	7,693	8,808

Source: Allhomes, 2016.

Canberra's numbers are much larger due to its relative size, but there has been a declining trend since the peak of over 10,000 sales in 2009. The year 2007 had the peak number of sales for most of the Queanbeyan suburbs, which have generally declined in total sales since.

2.2 Vacant land asking prices

Googong has a range of lot sizes, from courtyard lots of less than 400 square metres to larger lots up to 900 square metres. Table 2.5 shows the results of a search of the lowest cost vacant blocks available for sale in a number of new residential developments (Mr Fluffy blocks in established suburbs were ignored), both under 500 square metres and over 500quare metres, in Canberra and surrounding towns.

Table 2.5 Asking prices for vacant suburban Land, capital region 2016

	SMALL LOTS <500SQM	LAND SIZE	LARGE LOTS >500 SQM	LAND SIZE	MINUTES TO LONDON CIRCUIT	MINUTES TO PARLIAMENT HOUSE
Googong	$224,000	371	$298,000	594	25	24
Bungendore			$215,000	672	37	33
Murrumbateman			$249,000	649	33	35
Moncrieff	$318,000+	431	$375,000	537	19	21
Ginninderra Estate	$275,000	371			16	20
Bonner	$380,000+	441			20	24
Denman Prospect	$419,990	484	$485,000	578	17	17
Harrison	$435,000	456			18	19
Casey	$450,000+	495			19	21
Coombs			$475,000	733	12	11
Lawson			$499,000	600	13	16

Source: Allhomes, 2016.

Googong's lots are significantly cheaper than those available in the ACT, even when lot size and distance from town is taken into account. A Googong courtyard lot of 371 square metres is currently asking for $224,000, while the same size block in the Ginninderra Estate (at Holt) costs $50,000 (22%) more, despite only being four minutes' closer to Parliament House. Canberra suburbs that are a similar distance central from Canberra, such as Bonner and Moncrieff, are considerably more expensive for similar sized lots.

Cheaper lots can be found in Bungendore and Murrumbateman, which are rural villages in Palerang and Yass Valley respectively. Some of the cheaper family lots in these villages sell for between $200,000 and $250,000, which is cheaper than Googong blocks of similar sizes. However, the commute to central Canberra is around ten minutes longer.

2.3 Pipeline supply

Table 2.6 shows the extent of recent and upcoming residential construction projects within the Queanbeyan LGA. Many of these projects are in their early stages, so it is difficult to assess what types or the eventual numbers of dwellings will come from these developments, though some appear to be for units or apartments and mixed use facilities as well as detached lots.

Most of the applications in the Googong area concern subdivisions, though there are some which have begun their design or construction phases. A large number of lots are proposed for the subdivisions at Tralee. Applications for unit and townhouse dwelling developments are more prevalent in central Queanbeyan, Queanbeyan East, and at Crestwood. The lion's share of value in new developments is in the suburbs of Googong, with over 4,000 new dwellings in the pipeline, and somewhat less at Tralee/South Jerrabomberra, with around 1,600 dwellings. Developments elsewhere in Queanbeyan are generally smaller, with only the Elysium development valued at noticeably more than $3 million, and only a couple of hundred new dwellings in total.

Most of the new developments in Queanbeyan itself are townhouses and units. Googong and Tralee will be predominantly delivering freestanding houses, although some units will be delivered in these new areas, they are not the main form of addition to the market.

Table 2.6 Pipeline supply for Queanbeyan LGA

PROJECT	NUMBER OF LOTS/DWELLINGS	SUBURB	ESTIMATED VALUE	PROJECTS COMMENCES	STAGE/STATUS
Aprasia Ave subdivision and dwellings	13/13	Googong	$1,800,000	5 June 2017	Subdivision application/possible
Googong subdivision and dwellings	29/29	Googong	$6,525,000	16 May 2016	Subdivision approval/possible
Googong subdivision	43	Googong	$1,720,000	15 June 2016	Subdivision application/possible
Googong North Village – Vista Apartments	N/A, Mixed use	Googong	$3,210,000	14 June 2016	DA/possible
Googong subdivision and dwellings	10/10	Googong	$2,500,000	17 October 2016	Possible
Googong residential subdivision and dwellings	10/13	Googong	$2,390,000	9 May 2016	Subdivision approval/possible
Googong residential subdivision – Stage 1b	592	Googong	$47,000,000	14 March 2016	Contract let/firm
DHA housing	18	Googong	$3,600,000	23 February 2016	Tenders/submission of design proposals
DHA housing	19	Googong	$4,000,000	23 February 2016	Tenders/submission of design proposals
Googong Rd subdivision	20/20	Googong	$2,340,000	14 November 2016	Subdivision application/possible
Alchin St subdivision	21/21	Googong	$840,000	14 December 2015	Construction/commenced
Googong subdivision and dwellings	10/9	Googong	$1,250,000	12 September 2016	Subdivision application/possible
Googong residential subdivision and dwellings	10/12	Googong	$3,300,000	14 March 2016	Contract let/firm

PROJECT	NUMBER OF LOTS/DWELLINGS	SUBURB	ESTIMATED VALUE	PROJECTS COMMENCES	STAGE/STATUS
Googong subdivision and dwellings – Stage 6 and 3B	84/47	Googong	$31,580,000	21 September 2016	Construction/commenced
Googong Subdivision and dwellings	5/5	Googong	$1,200,000	13 June 2016	Subdivision application/possible
DHA Googong	22	Googong	$6,500,000	25 February 2015	Construction/commenced
Googong North Residential subdivision – Stage 5	15	Googong	$6,000,000	4 August 2014	Construction/commenced
South Tralee residential subdivision	106	Tralee	$52,742,000	26 September 2016	Subdivision application/possible
South Tralee residential subdivision	238	Tralee	$52,742,000	12 September 2016	Subdivision application/possible
South Tralee residential subdivision	1242	Jerrabomberra	$30,000,000	15 September 2017	Sketch plans/possible
River Dr & Lochiel St units	12	Karabar	$1,800,000	29 February 2016	Building application/firm
Donald Rd townhouses	7	Queanbeyan	$1,400,000	25 July 2016	DA/possible
Bungendore townhouses	4	Queanbeyan	$723,000	29 August 2016	DA/possible
Uriarra Rd townhouses	10	Queanbeyan	$1,532,000	19 September 2016	DA/possible
Dodsworth St townhouses	5	Queanbeyan	$890,000	14 March 2016	Development approval/possible
Lowe St Mixed use development – Ngambri on the Park	30	Queanbeyan	$3,200,000	16 May 2016	Development approval/possible
Mulloon St townhouses	4	Queanbeyan East	$680,000	13 June 2016	Development approval/possible
Uriarra Rd units	33	Queanbeyan	$2,980,000	7 December 2015	Contract let/firm
Derrima Rd units	8	Queanbeyan	$1,250,000	13 July 2016	Development approval/possible
Gilmore Place townhouses	4	Queanbeyan	$520,000	16 May 2016	Building application/firm
Elysium Townhouses/apartments	100	Queanbeyan East	$22,000,000	29 September 2015	Contract let/firm
Powell St townhouses	4	Queanbeyan	$520,000	14 December 2015	Development approval/possible
Morton St townhouses	12	Queanbeyan	$2,900,000	13 April 2015	Construction/commenced
High St townhouses	4	Queanbeyan East	$820,000	17 March 2015	Building approval/not available
Googong residential – further stages	3,808	Queanbeyan	$100,000,000	1 October 2016	Early planning/early
Wanna Rd rural/residential subdivision	9	Queanbeyan	$210,000	16 June 2014	Completed

PROJECT	NUMBER OF LOTS/DWELLINGS	SUBURB	ESTIMATED VALUE	PROJECTS COMMENCES	STAGE/STATUS
Karabar St townhouses	4	Queanbeyan	$800,000	20 August 2014	Completed
Buttle St townhouses	4	Queanbeyan	$800,000	6 January 2014	Construction/not available
Uriarra Rd townhouses	5	Crestwood	$985,000	16 May 2016	Development approval/possible
McKeahnie St townhouses	8	Crestwood	$1,560,000	8 June 2015	Construction/commenced
Richard Ave townhouses	8	Crestwood	$1,035,000	8 February 2016	Development approval/possible
Ross Rd units	8	Crestwood	$830,000	15 April 2016	Development approval/possible
Arthur St townhouses	4	Crestwood	$890,000	17 November 2014	Construction/commenced
Uriarra Rd Villas	7	Crestwood	$700,000	9 June 2014	Construction/commenced

Source: CordellConnect database, 2016.[3]

2.4 Summary

Dwelling prices in Queanbeyan, the ACT and surrounds have been relatively flat since 2010 due to underwhelming employment conditions in the region's main employer, the Federal public service. Googong has been no exception to this, with land prices relatively flat since the Googong suburb was launched in 2012. Googong makes up the bulk of new development in Queanbeyan's pipeline, especially in the development of freestanding family dwellings. Tralee will also offer some freestanding dwellings. Other offerings elsewhere in Queanbeyan are mainly townhouses and units.

At present, Googong is competitively priced, substantially cheaper than suburbs in Canberra of comparable size and distance to Canberra's centre, while charging higher prices than offerings further out in New South Wales.

[3] Accessed 02/05/16, http://www.cordellconnect.com.au/

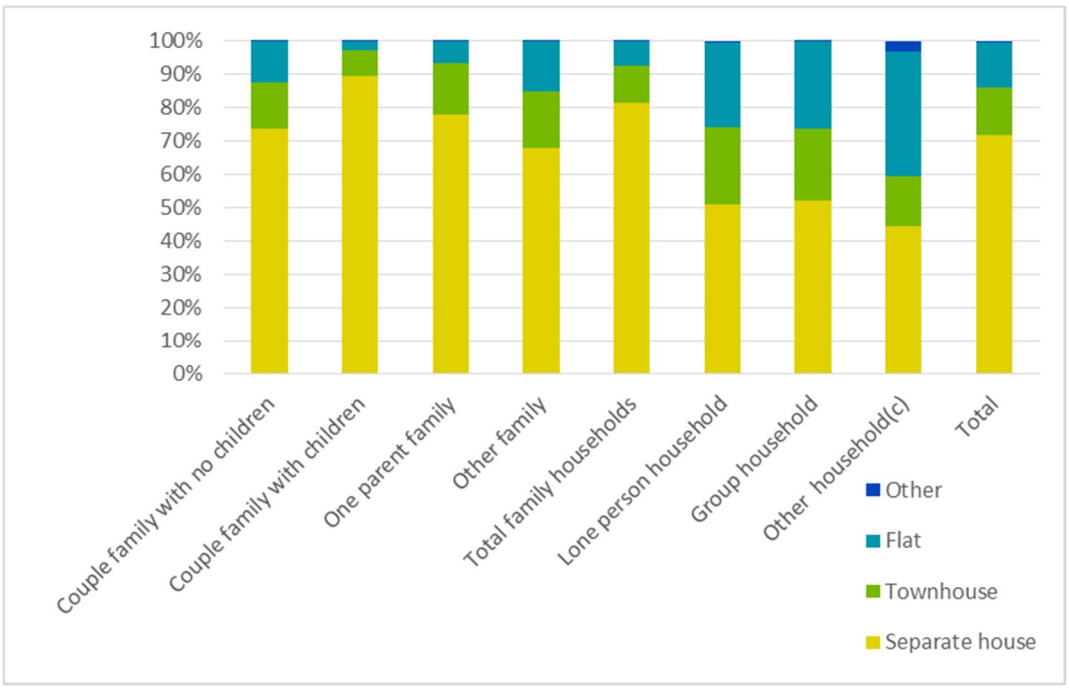
3 LATENT DEMAND FOR PRODUCT TYPES

Most of the new dwellings proposed for Googong are freestanding family homes, on traditional family sized lots or smaller courtyard lots. Some apartments have been planned, including a three storey apartment complex in the Googong village centre.

3.1 Demand for different types of housing

The vast majority of housing in the Capital Region is made up of detached homes, as shown in Figure 3.1.

Figure 3.1 Dwelling use by household type, Capital Region, 2011

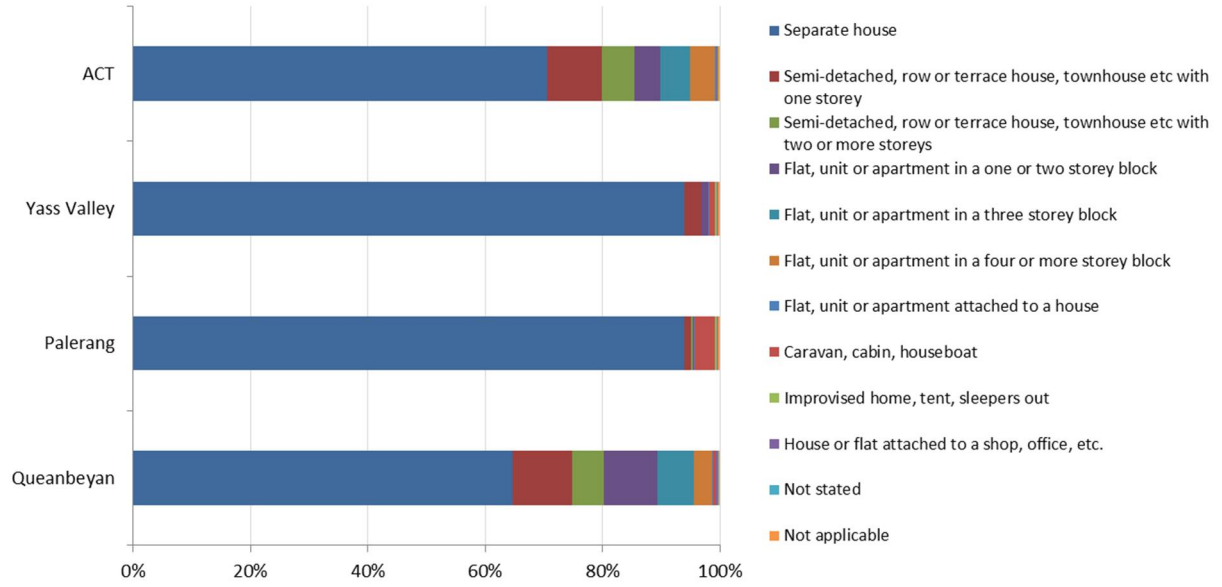


Source: ABS Census Tablebuilder, 2015.

Lone person, group, and 'other' households occupy the highest proportion of townhouses and flats, and families with children are predominantly living in detached housing types.

Figure 3.2 shows the breakdown in types by LGA.

Figure 3.2 Dwelling Types by LGA, 2011

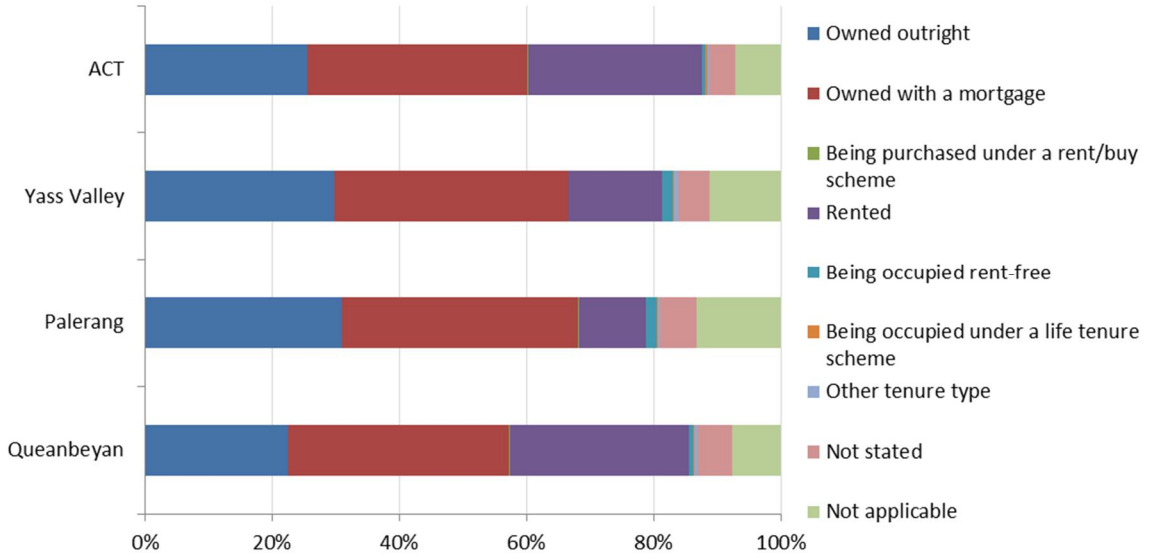


Source: ABS Census Tablebuilder, 2015.

In both Palerang and Yass Valley, around 90% of people live in separate houses. In the ACT, the figure is closer to 70%, while Queanbeyan has the most diversity in housing types, with less than 65% living in separate houses. This is likely in part due to the age of the Queanbeyan settlement compared to the other areas and its more concentrated CBD form, while Palerang and Yass are still quite rural in character.

Figure 3.3 illustrates the housing tenure types in each LGA.

Figure 3.3 Tenure Type by LGA 2011

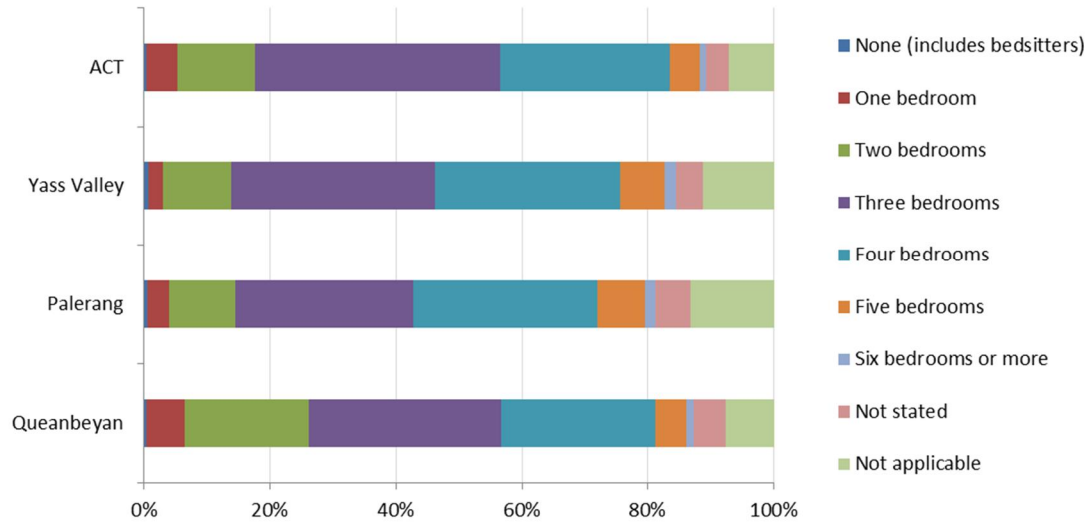


Source: ABS Census Tablebuilder, 2015.

As shown above, the Queanbeyan LGA has a lower proportion of people who own their own home, either with or without a mortgage, than the other locations. This is likely due to the lower socio-demographic profile of the LGA compared Palerang, Yass, and Canberra, rather than the affordability of property there. Queanbeyan also has the highest proportion of renters, though there is a similar proportion in Canberra.

Figure 3.4 gives an indication of the size of houses in each of the LGAs, looking at the number of bedrooms in household dwellings.

Figure 3.4 Number of bedrooms in dwelling by LGA 2011



Source: ABS Census Tablebuilder, 2015.

Queanbeyan has a similar proportion of dwellings with 3 bedrooms or fewer, between 50% and 60%. Palerang has the highest proportion with four or more bedrooms, though this is similar to the rate in the Yass Valley, with less than 50% of dwellings in the two LGAs with three bedrooms or fewer. This is likely indicative of a demand for family properties in these areas as opposed to more compact dwellings in the urban areas of Queanbeyan and Canberra.

3.2 Population and dwelling forecasts

The Department of Planning and Environment provides population projections for Queanbeyan LGA, as shown in Table 3.1. Between 2016 and 2031, Queanbeyan is expected to grow by 14,000 people, which is expected to translate into 6,050 new households and demand for an additional 6,500 new dwellings.

Table 3.1 Projected population growth 2016-2031, Queanbeyan

	2016	2021	2026	2031
Population	44,500	49,100	53,800	58,500
Households	17,800	19,800	21,800	23,850
Average household size	2.47	2.45	2.44	2.42
Dwellings	19,250	21,400	23,600	25,750

Source: Based on NSW DPE projections for Queanbeyan.

Demand for new dwellings depends heavily on the type of population growth a region expects. Families with children show strong preferences for freestanding three, four or five bedroom houses, retirees are fond of townhouses and units, and young singles show a preference for group housing or low cost units.

Based on these population projections, SGS used its Dwelling Demand model to forecast demand for different dwelling types in Queanbeyan LGA, based on historical dwelling preferences for certain household types in the region, and the changing prevalence of these household types. Table 3.2 shows the results.

From 2016 to 2031, Queanbeyan is projected to require an additional 3,784 freestanding houses, an additional 1,893 townhouses or semi-detached dwellings, a further 778 apartments, plus another 46 other dwellings, for a total of 6,500 new dwellings.

Table 3.2 Projected demand by dwelling type 2016-2031, Queanbeyan

	2016	2021	2026	2031
Separate house	12,974	14,268	15,546	16,757
Semi-detached / row / terrace / townhouse	3,048	3,636	4,263	4,941
Flat / unit / apartment	3,106	3,359	3,637	3,884
Other	123	137	154	168
Total Private Dwellings	**19,250**	**21,400**	**23,600**	**25,750**

Source: Based on NSW DPE projections for Queanbeyan and SGS modelling

Googong and Tralee can be expected to comfortably meet Queanbeyan's projected demand for freestanding houses over the next 15 years. Googong has around 2,000 courtyard lots and 2,000 family lots left to sell, and the bulk of Tralee's 1,227 dwellings are expected to be some form of freestanding dwelling. Some of Googong's courtyard lots might suit the needs of households requiring terraces or townhouses due to their smaller size and lower maintenance than traditional family dwellings.

It is possible there may be a small oversupply of apartments in the short term, depending on the development schedule. As noted earlier, Queanbeyan has plans in the pipeline for around another 200 medium to higher density dwellings, including a 100-unit apartment complex. Googong has plans for around 500 units in the development. It is likely that some units may be planned in Tralee, which means that existing planned supply in 2016 would be sufficient to cover most of the demand expected for the next 15 years. This suggests that there may be a slowing in the demand for new unit developments in Queanbeyan itself.

3.3 Latent or unmet demand

As noted earlier, residential property prices have been fairly flat from around 2010-2015, suggesting that supply is doing a good job of meeting demand, with no substantial surplus or deficits. There are some indicators in early 2016 data that suggest that demand is starting to grow faster than supply.

3.3.1 Growth in rental vacancy rates

Residential vacancy rates from SQM research show that in the postcode of 2620 (in which Queanbeyan is the most populous area), vacancy rates started climbing from below two percent in 2012, to highs of around 4-5% in 2014 and 2015. Since January 2016, rental vacancies have fallen significantly, to 1.8% in May 2016. Residential vacancy rates in Canberra have followed a similar pattern, although vacancy

rates have been lower overall. In 2012 vacancy rates in Canberra fell below 1%, then climbed in 2013 to hover around 2-2.5% in 2014 and 2015. Since the start of 2016, stock on the market has fallen significantly, and vacancy rates are down to 1.1% in May 2016.

3.3.2 Growth in rents

Table 3.3 shows the movement in rents in Canberra and postcode 2620 (mostly Queanbeyan). Rental prices for houses, units, three bedroom houses and two bedroom units are almost all lower than they were three years ago. Recent growth patterns suggest the fall in rents may have bottomed out, with Queanbeyan showing high rental growth in the last quarter, and Canberra showing high rental growth in the last year. SQM Research breaks down its rental figures by dwelling type, but there is nothing to suggest that there is substantial unmet or latent demand for a certain type of dwelling more than others.

Table 3.3 Growth in Rents, Canberra and Queanbeyan, June 2016

	RENT 14 JUN 16	ROLLING MONTH $ CHANGE	ROLLING QUARTER % CHANGE	12 MONTH % CHANGE	3 YEAR % CHANGE
Postcode 2620 (QBN)					
All Houses	$446.9	5.1%	14.8%	1.6%	-0.8%
3 br Houses	$434.9	7.1%	1.7%	-0.1%	-1.4%
All Units	$291.5	2.8%	19.3%	4.4%	-8.2%
2 br Units	$313	8.7%	18.0%	10.7%	-3.2%
Canberra					
All Houses	$524.3	-0.3%	-1.3%	9.2%	1.2%
3 br Houses	$481.8	0.1%	-1.2%	5.7%	-1.2%
All Units	$408.3	2.0%	4.5%	6.9%	-0.5%
2 br Units	$412.7	-0.6%	0.6%	5.8%	-0.5%

Source: SQM Research, 2016

This combined with the relatively lacklustre growth in dwelling prices suggests that there is not substantial latent or unmet demand for dwellings in general or certain dwelling types.

3.4 Ability of existing and planned supply to meet projected demand

Based on the above, three demand scenarios based on ABS population growth for the ACT have been used to estimate growth in dwelling demand in Queanbeyan, under High, Medium and Low levels of growth.

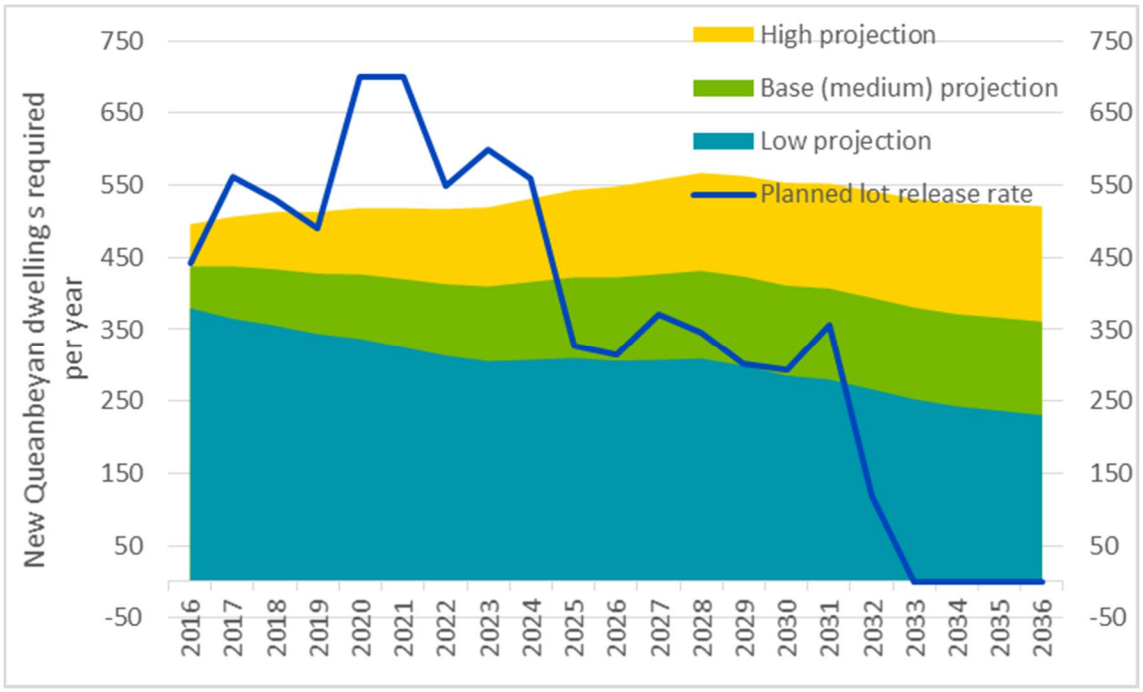
Table 3.4 Growth Scenarios

	TOTAL ADDITIONAL DWELLINGS REQUIRED 2016-2036
Low demand scenario	**10,667**
Base demand scenario	**8,196**
High demand scenario	**5,964**

These scenarios have been plotted against the planned land releases at Googong, South Jerrabomberra (Tralee) and other developments in Queanbeyan. Figure 3.5 shows the projected growth in dwelling demand in Queanbeyan under high, medium and low growth scenarios, against the proposed lot releases. Under the Base or Medium demand scenario, growth in dwelling demand is expected to range between 400 and 440 new dwellings per year to 2031, after which it will decline to around 360 per year in 2036.

This suggests that in the short term, new dwellings will be supplied at a faster rate than the growth in dwelling demand until the mid-2020s. Demand growth is unlikely to be sufficient to absorb the planned releases from both Googong and Tralee, suggesting that new land releases might need to be slowed. However, over the 20 year period between 2016 and 2036, most of the 9000 planned lots for release should be absorbed.

Figure 3.5 Projected dwelling demand Growth and Land release, 2016-2036



Source: SGS modelling, 2016.[4]

[4] http://googong.net/introducing-googong/masterplan.php

4 LOCAL COMPETITIVE OFFER

4.1 Attributes of Googong

Googong is likely to be an attractive option for buyers in comparison to other parts of the Canberra region in coming years due to several factors. The Master plan map of Googong is shown in Figure 4.1.

Figure 4.1 Googong township master plan

Source: Googong Township Pty Ltd., 2016.[5]

The area has the benefit of being in close proximity to both the Queanbeyan CBD and to the ACT, and is therefore well located in access to services as well as employment opportunities. Googong is around 25 minutes' drive to Civic, and is even closer to the Inner South and Fyshwick as employment centres, as well as being around 10 minutest to central Queanbeyan by car.

Googong is also planned to have amenities within the suburb which will likely be attractive to potential home buyers. These include public and private schools, local shopping villages and a central precinct with 40,000 square metres of commercial space, a library, recreational and environmental spaces, an indoor sports centre, sports fields and parks, and other multi-purpose community facilities.

The housing types on offer at Googong are likely to appeal to a wide variety of people, but particularly to those looking for lower density and single detached dwellings. These types of house will appeal to

5 http://googong.net/introducing-googong/masterplan.php

families, who may not be able to afford the higher prices in other locations. The range of lot sizes, including large family blocks to small courtyard sized blocks, will meet the needs of households who want a large backyard as well as those who only want a small outdoor area while still holding a separate title.

4.2 Attributes of other sites in the region

The major competitors to Googong include other new developments in Queanbeyan (Tralee, new construction in older Queanbeyan); new suburbs in Canberra (e.g. Coombs, Bonner, Moncrieff, West Belconnen) and suburb-sized blocks in NSW villages close to the ACT border (e.g. Bungendore and Murrumbateman).

4.2.1 Tralee/South Jerrabombera

Tralee or South Jerrabombera is Googong's most comparable competitor. It offers predominantly freestanding houses on family and courtyard sized lots, within the Queanbeyan LGA and within a short drive of Canberra or the Queanbeyan Town Centre. Like Googong, it has been planned with generous open spaces and parkland, sporting fields and a town centre. Two schools and a childcare centre have been proposed. Prices are similar to those offered in Googong.

When completed, South Jerrabombera will have around 10,000 residents and 3,500 dwellings. It will be a smaller village than Googong. Some people may prefer living in a smaller village, but the smaller population will mean that there will be a smaller range of facilities available compared to Googong.

4.2 Subsection of Tralee

Advantages compared to Googong

- Closer to the centre of Canberra, only 20 minutes' drive to London Circuit or 18 minutes to Parliament House
- Closer to other centres, such as Hume and Jerrabomberra
- Planned Park and Ride transit facility to access Canberra

Disadvantages compared to Googong

- Googong is planned with five smaller village centres and a larger town centre, while Tralee has only one town centre

- Googong is designed for most residents to easily walk to a local shop, while some Tralee residents may not be able to
- Googong has easy access to Googong dam
- Fewer local schooling options

4.2.2 Canberra

Most people who will consider buying at Googong will consider Canberra alongside it. Some newly developed suburbs close to the centre of town such as Coombs and Lawson will be too expensive for many families, although their access to Canberra centres will be superior. A buyer or renter who considers Googong as a possible home may also consider some of the new outer suburbs of Canberra, such as Moncrieff, Bonner and West Belconnen, as alternatives.

4.3 subsection of Moncrieff

Advantages compared to Googong

- Slightly closer to Canberra's employment centres
- Greater accessibility to Canberra on public transport
- Easier access to Canberra facilities, such as the Canberra schooling system

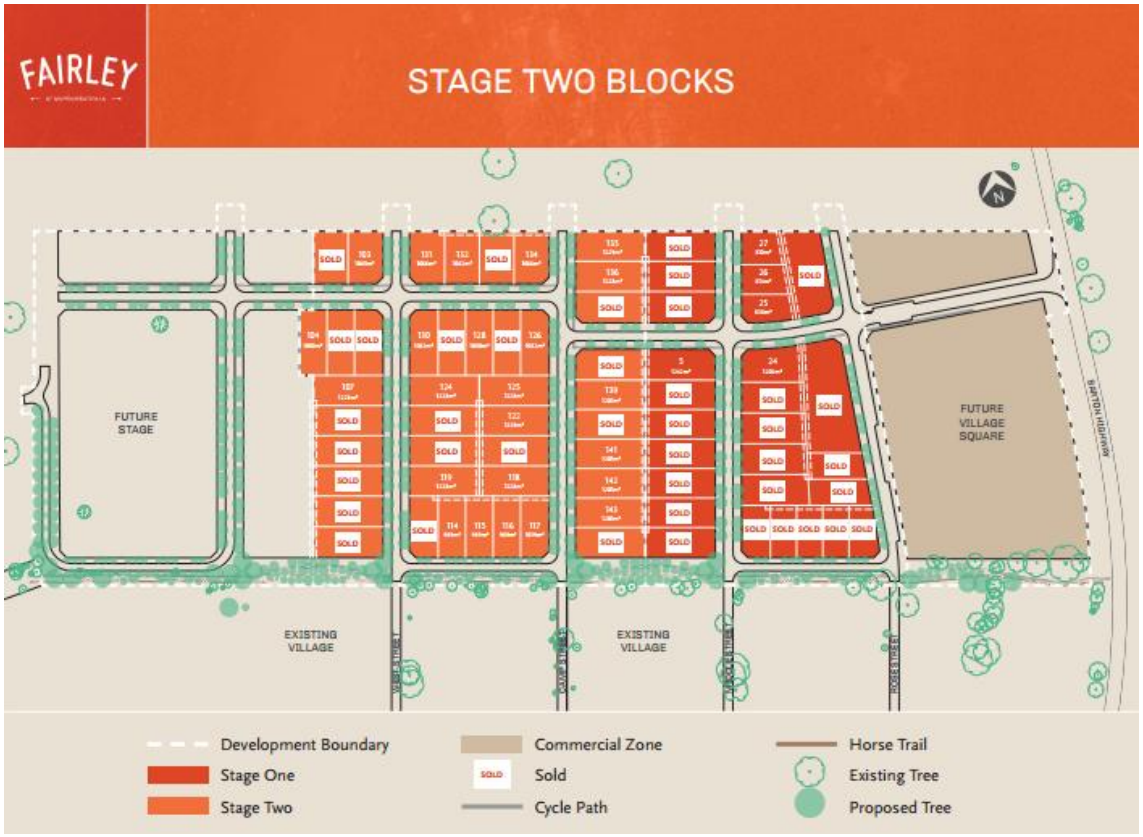
Disadvantages compared to Googong

- In most cases, a Canberra house will be more expensive than an equivalent house in Googong
- 99 year lease instead of a freehold land title
- Costs of living such as vehicle registration and property rates can be more expensive in Canberra
- Less open space within walking distance

4.2.3 Murrumbateman and Bungendore

Murrumbateman and Bungendore are both rural villages within 30 to 40 minutes of the centre of Canberra. Unlike other offerings in Canberra and Queanbeyan, these are both towns with fewer than 5,000 residents, and are more than 15 minutes' drive to the nearest town. These villages have much more of a country feel than Queanbeyan or Canberra's offerings, and are likely to retain that even as they add new residential developments. These towns are surrounded by some farming properties, and popular hobby farms, which tend to be more expensive than residential lots, including those in Canberra.

4.4 Subsection of Fairley, Murrumbateman



Advantages compared to Googong

- Suburban sized lot prices are significantly cheaper than Googong for a given land size
- More of a country village feel – proximity to country lifestyle amenities such as wineries, horse riding, country pubs and country fairs
- Quieter than a suburb in a larger town

Disadvantages compared to Googong

- Longer commute into town for Canberra workers
- Fewer jobs in the vicinity
- Lack of schooling options; no schools in Murrumbateman and no high school in Bungendore
- Congestion on the Barton Highway during peak hours between Murrumbateman and Canberra

5 TAKE UP ANALYSIS

This section uses the findings of the previous sections to assess the risk that slower than expected land sales in Googong may result in difficulty paying off the loan for the EDE. It considers the likely take up rate of residences in Googong based on our assessment of expected population growth and the attractiveness of the offer at Googong relative to alternatives. It then uses the expected stream of LPA and s94 revenues from Googong, Tralee and Queanbeyan to model the repayments of the loan for the EDE.

5.1 Likely rate of take up in Googong

As noted in Section 3.4, planned land releases in Googong, Tralee and the rest of Queanbeyan are likely to exceed demand for new dwellings from population growth. The projected demand for new dwellings in Queanbeyan to 2031 is 400 to 440 per year, most of which will be freestanding houses or townhouses.

As a baseline, SGS has estimated a sales rate of 278 dwellings in Googong per year. This fits in well with the expected land releases in Tralee and the rest of Queanbeyan. It is slightly less than the proposed developer land release of around 300 lots per year. Under this sales rate, Googong can expect to be completely sold by approximately 2033.

Under the low demand scenario, a sales rate of 200 dwellings per year in Googong was assumed, contributing to overall growth in dwelling demand of 300 to 400 lots per year in Queanbeyan as a whole. Under these assumptions, Googong is expected to be completely sold by 2040.

5.2 Assumptions for loan and repayments

The base cost to build the road is expected to be $70.18 million dollars. An allowance for contingency of 15% or 16% results in an expected cost of $80.3 million or $81.40 million respectively. Costs are broadly expected to fall between the range of $80 million and $85 million, as shown in Table 5.1

Table 5.1 EDE construction and loan assumptions

LOAN AND REPAYMENTS	
Total EDE cost ($ millions)	
Base cost	**$70.18**
P50 (15% contingency)	**$80.30**
P90 (16% contingency)	**$81.40**
Likely range	**$80 - $85**
Total government grants	**$50**
P90 loan amount	**$31.40**
Interest rate on loan	**3.35%**
Loan term	**20 years**

Source: Allhomes, 2016

Although total developer contributions amounts to tens of thousands of dollars per lot, only a portion of this will be allocated to offsite roads, in particular the EDE. The developments that are expected to make the greatest use of the EDE make the greatest share of developer contributions, namely Googong. Table 5.2 EDE Developer contribution assumptions shows the assumptions made in the model regarding the proportion of developer contributions for each lot that will be allocated to the EDE. This is based on LPA and s94 plans for Googong, Tralee and Queanbeyan.

Table 5.2 EDE Developer contribution assumptions (2016 dollars)

	GOOGONG LPA	GOOGONG S94	TRALEE	OTHER QBN
Lots 468sqm or larger	**$4,652**	**$6,224**	**$39**	**$1910**
Lots smaller than 468sqm	**$3,795**	**$5,151**	**$39**	**$1910**
Apartments	**$2,748**	**$3,688**	**$39**	**$1910**

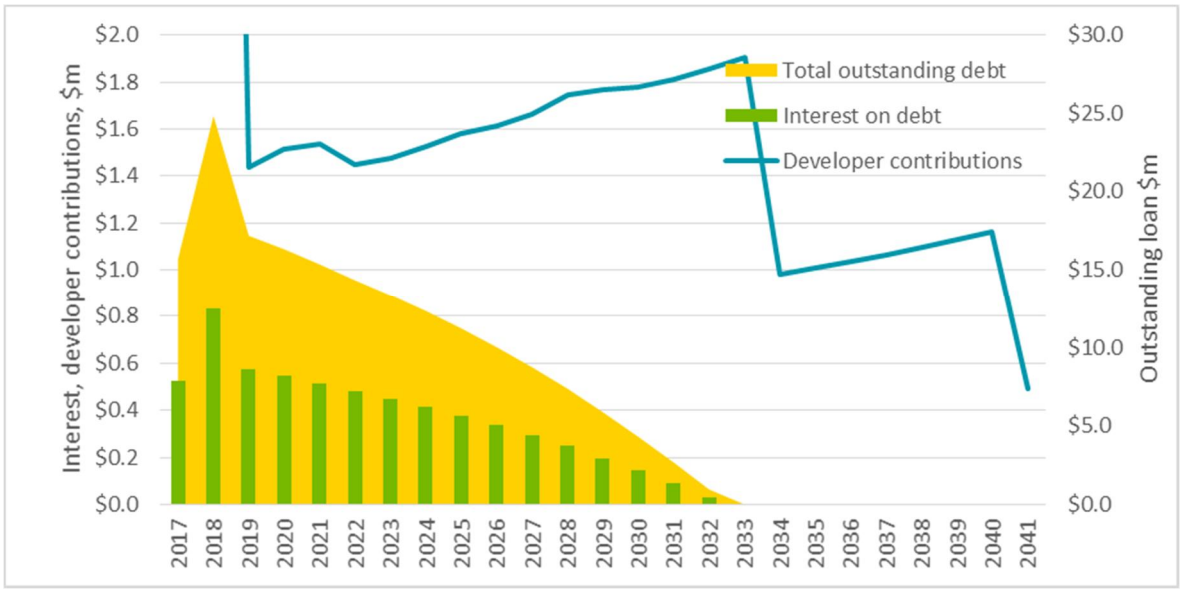
Source: Allhomes, 2016
Note: Googong s94 contributions to EDE may be less due to caps on s94 contributions

It should be noted that there is some flexibility in these arrangements. The share of developer contributions allocated to the EDE can be varied depending on road priorities. For example, a number of road upgrades allowed for in the Googong s94 plan are not scheduled to occur in 2026 and beyond. Tralee's contributions are small as it is not expected Tralee residents will be significant users of the EDE. Half of other Queanbeyan s94 contributions were allocated to the EDE. Googong is expected to be the main developer contributor to the EDE.

5.3 Risk assessment

The under the Medium demand forecast, it is expected that the loan will be comfortably paid off by 2032, assuming the P90 16% contingency scenario, in which the EDE costs $81.4 million, requiring a loan of $31.4 million. The baseline assessment results are shown in Figure 5.1. This scenario assumes sales of 278 dwellings per year at Googong, and total growth in dwelling demand of 400 to 440 new dwellings per year in Queanbeyan LGA.

Figure 5.1 Baseline loan repayment assessment – p90 construction costs

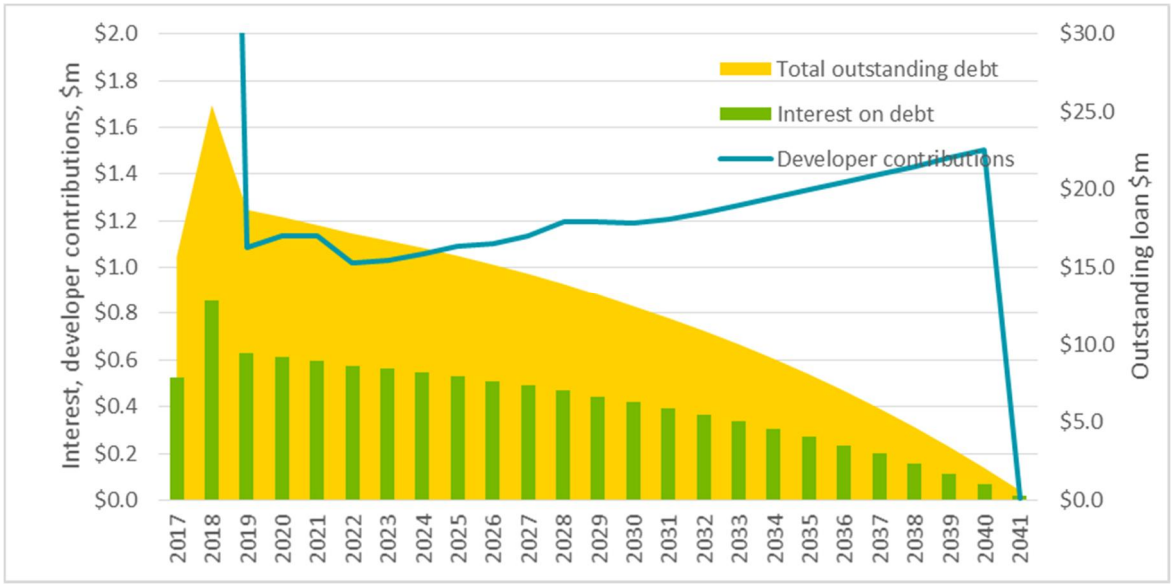


Source: SGS calculations, 2016

In the event of slowing population growth in Queanbeyan, demand may be lower than expected. This analysis assumes that dwelling demand moves in line with population growth, so if population growth is assumed to be lower, land sales in Googong, Tralee and elsewhere in Queanbeyan will be slower.

Under a low demand scenario, in which Googong dwelling demand is set at 200 per year and Queanbeyan's annual dwelling demand growth is 300 to 400 per year, Council is not able to pay off the loan for the EDE under the P90 cost estimates. If no additional funds are directed to repaying the EDE loan, by 2040 there will still be around $600,000 left to repay. Under the P50 scenario, the loan is repaid in 2041.

Figure 5.2 Low demand loan repayment assessment – p90 construction costs



Source: SGS calculations, 2016

Table 5.3 shows the expected year that the loan will be repaid under the risks of low and medium demand, plus higher than expected construction costs. The yellow highlights indicate scenarios in which the loan can only be repaid if the loan term is longer than 20 years, while the green highlights indicate scenarios where the loan cannot be repaid using developer contributions alone.

This analysis finds that if costs stay at the base level, the loan will comfortably be paid off well before 2030, even with very low demand. If the cost of the road runs over by $10 to $11 million dollars, under a base case scenario the loan will comfortably be repaid, although not until the early 2030s. Council can repay the loan if total costs fall between $80 million and $85 million, although some minor refinancing might be needed if costs reach $85 million.

If demand is low, then a longer loan term will be necessary for the expected cost range of $80 million to $85 million. If the total cost of the road exceeds the P90 mark of $81.1 million, funds other than allocated developer contributions may be needed to repay the loan.

Table 5.3 Loan Repayment year by dwelling demand and construction costs

	LOW DEMAND	MEDIUM DEMAND
Construction costs		
Base - $70.18m	**2026**	**2023**
$80m	**2040**	**2031**
P50 - $80.3m	**2041**	**2032**
P90 - $81.4m	**Requires funds to be sourced from elsewhere to repay loan**	**2033**
$85m	**Requires funds to be sourced from elsewhere to repay loan**	**2037**
Maximum EDE cost in which loan can be repaid with developer contributions alone	**$81.1 million, repaid in 2039**	**$87.2 million, repaid in 2042**

Source: SGS calculations, 2016

5.3.1 Loan refinancing

Council aims to repay the EDE loan within 20 years. If developer contributions are not sufficient to have the loan repaid by 2036-37, either due to higher than expected construction costs or lower than expected sales, they may need to consider refinancing the loan. This is likely if the total cost of the EDE is $85 million or higher under a medium level of demand, or of the total cost is $78 million or higher under a low level of demand.

Table 5.3 assumes that if this refinancing is necessary, the loan will be refinanced at the same interest rate of 3.35%. If the best available interest rate that can be negotiated is higher than this, then the loan may not be repayable from developer funds alone. Alternatively, Council may need to consider using funds allocated for other purposes.

5.3.2 Using funds collected for other purposes

An alternative to refinancing may be to consider allocating a greater share of LPA and s94 contributions to repaying the EDE loan than planned, delaying other community facilities and new roads. However, the lower growth rates may mean that these facilities will not be needed until later. For example, the Googong s94 Contributions Plan allows for $4 million to upgrade the intersection at Lanyon Drive and Canberra Avenue, timed for 2026. If demand for Googong and Queanbeyan properties is slower than expected, the need for this upgrade will be delayed. The developer contributions collected for this road could be used to pay the EDE loan, and the intersection upgrade could occur later.

6 CONCLUSION

There are risks involved in borrowing money to build a road in anticipation of future property sales and to provide the demand for the road, and in sourcing the funding to repay the loan. A significant risk related to relying on developer contributions to repay the loan is that lower than expected land sales may result in contributions being insufficient to pay out the loan. Another is the risk that the costs of the road will be higher than expected and exceed what can be repaid with developer contributions. Council plans to borrow between $20 million and $35 million to build the Ellerton Drive Extension (EDE) to reduce pressure on roads through the Queanbeyan CBD, predominantly paid for through developer contributions from sales of land at Googong, a village development south of Queanbeyan that plans to house 17,000 residents.

This analysis finds that the Googong product is competitively priced compared to alternatives in the catchment area, such as Canberra's suburbs, Tralee and rural villages elsewhere in NSW. An assessment of population projections by the ABS, NSW DPE and SGS' dwelling demand model suggests that an additional 400 to 440 new dwellings will be required in Queanbeyan each year to meet demand. This is higher than developers' anticipated supply, so it is likely that developers will not meet their short term sales targets.

Under this medium demand scenario, Council can repay a loan for the EDE for up to an amount of $87.2 million by 2037. If the EDE only costs $70.18 million, it can be repaid in 2023. If the total cost of the EDE lies between $80-$85 million, Council will be able to repay the loan using developer contributions allocated to the EDE.

If demand for property in Googong is low, the loan can be repaid by developer contributions allocated to the EDE, as long as the total cost of the road is no more than $81.1 million. If the cost of the EDE exceeds this amount, Council may need to use developer contributions allocated towards other roads to pay out the EDE loan, and delay other infrastructure to service Googong. Since lower demand means there will be less need for infrastructure, this delay is unlikely to be problematic.