9.3 Bungendore Water Security - Integrated Water Cycle Management Plan (Ref: ; Author: Hansen/Cunningham)

File Reference: 26.1.4/PJT0060-02-02/PJT0021-01/PJT0037-01/PJT0007/01

Recommendation

That Council:

1. **Adopt the Palerang Communities IWCM Strategy Option 3 – 2019 (Queanbeyan to Bungendore bulk water supply trunk main) as the preferred solution to the issue of the long-term water security for the town of Bungendore.**
2. **Endorse the development of the Queanbeyan to Bungendore bulk water supply trunk main (Palerang Communities IWCM Strategy Option 3 – 2019) to tender ready stage.**
3. **Accept an offer for grant funding made by the NSW Government under tranche 3 of the Safe and Secure Water Program for the above purpose.**
4. **Provide funds for Council's contribution toward the project from the Palerang Communities Water Fund reserves; and report back to Council via the Quarterly Budget Review Process of any supplementary vote request.**

Summary

Council exercises water supply and sewerage functions under Division 2, Part 3, Chapter 6 of the Local Government Act 1993. The NSW Department of Planning & Environment (DPIE), along with other local water utility (LWU) regulators, oversees and supports LWUs in the delivery of these services. Strategic Planning forms a key consideration for LWUs and historically this has been achieved through the development of an Integrated Water Cycle Management (IWCM) plan. Now routinely called the *Strategic Planning Assurance Framework*, the purpose of the plan (amongst other things) is to review and identify issues within the subject schemes and to develop strategies that address these issues in a timely way.

The *Palerang Communities IWCM* was commenced in 2015 and formally adopted by Council in February 2019. Without doubt the single most significant issue identified as part of this process was the need for the securement of additional sources of town water supply to support the future growth of Bungendore. Over the past six years, efforts have been concentrated toward the strategies identified as addressing this issue with initial indicators all being quite positive, the sentiment of which formed the basis of a key input to the *Bungendore Structure Plan 2048* and thus the enabling of greenfield development beyond the bounds of the established village boundary. Regrettably, the water availability situation since these initial successes has not eventuated as expected. It is now time to take stock on this situation, what it might mean for the future of further greenfield development (both in the immediate and longer term) and what might be the next steps for a supplementary supply of potable water for Bungendore.

This has serious implications from a land-use planning perspective given clause 6.11 Essential Services of *Palerang Local Environmental Plan 2014* which amongst other things states that development consent must not be granted unless the consent authority is satisfied that water services are available or that adequate arrangements have been made to make available when required. These issues are explored in detail and a further report follows which outlines the land-use planning matters.

Background

The Existing System

The Bungendore water supply scheme was first commissioned in 1966. It was based on the local *Bungendore Alluvial* groundwater source and, despite a number of augmentations since, this remains the case today. There are five existing groundwater bores within the system, four of which are located at Bungendore the fifth being located some 7.2km to the village's north east at Currandooly. Figure U-1 following shows a schematic of the system.

The four town-based bores are underpinned by Water Access Licence (WAL) 40AL412630 which has assigned a total annual allocation of 322ML/a. The Currandooly bore is attached to WAL 40AL415917 which enjoys an allocation of 150ML/a. Together these two WALs support Bungendore's town water supply to a combined capacity of 472ML/a.

The issuing of a WAL is not, however, all that is required to enable Council to access its groundwater entitlement. Physical bores can only be established through the issue of formal *Works Approvals* which are in turn attached to the WALs. For WAL 40AL412630 there are four bores that are collectively approved under Works Approval 40CA412631. For the Currandooly system, the single bore at that location is attached to its WAL 40AL415917 via Works Approval 40CA415918. The importance of this relationship between WAL and Works Approvals will become more apparent later in this report.

In terms of historical consumption, detailed records of annualised monthly usage for Bungendore have been kept by Council since 2001/2002. In that time the village has grown remarkedly from some 398 connected properties in 01/02 to 1,599 connected properties by 1 July 2022; an effective expansion of some 332%. Conversely though, usage has remained modestly stable with an average annual consumption increase of only 3.36ML/annum or 26.6% over the 21 years of records. This outcome is this result is the result of a number of factors including.

- Changes in usage patterns following droughts during the data period;
- Implementation of new tariff structures and pricing signals;
- Introduction of standing Water Conservation Measures;
- The effect of BASIX and measures such as rainwater tanks in a residential setting
- Greater consumer awareness of water as a resource and climate change more generally.

Figure U-2 following shows historical usage for Bungendore from 2001/2002 to today.

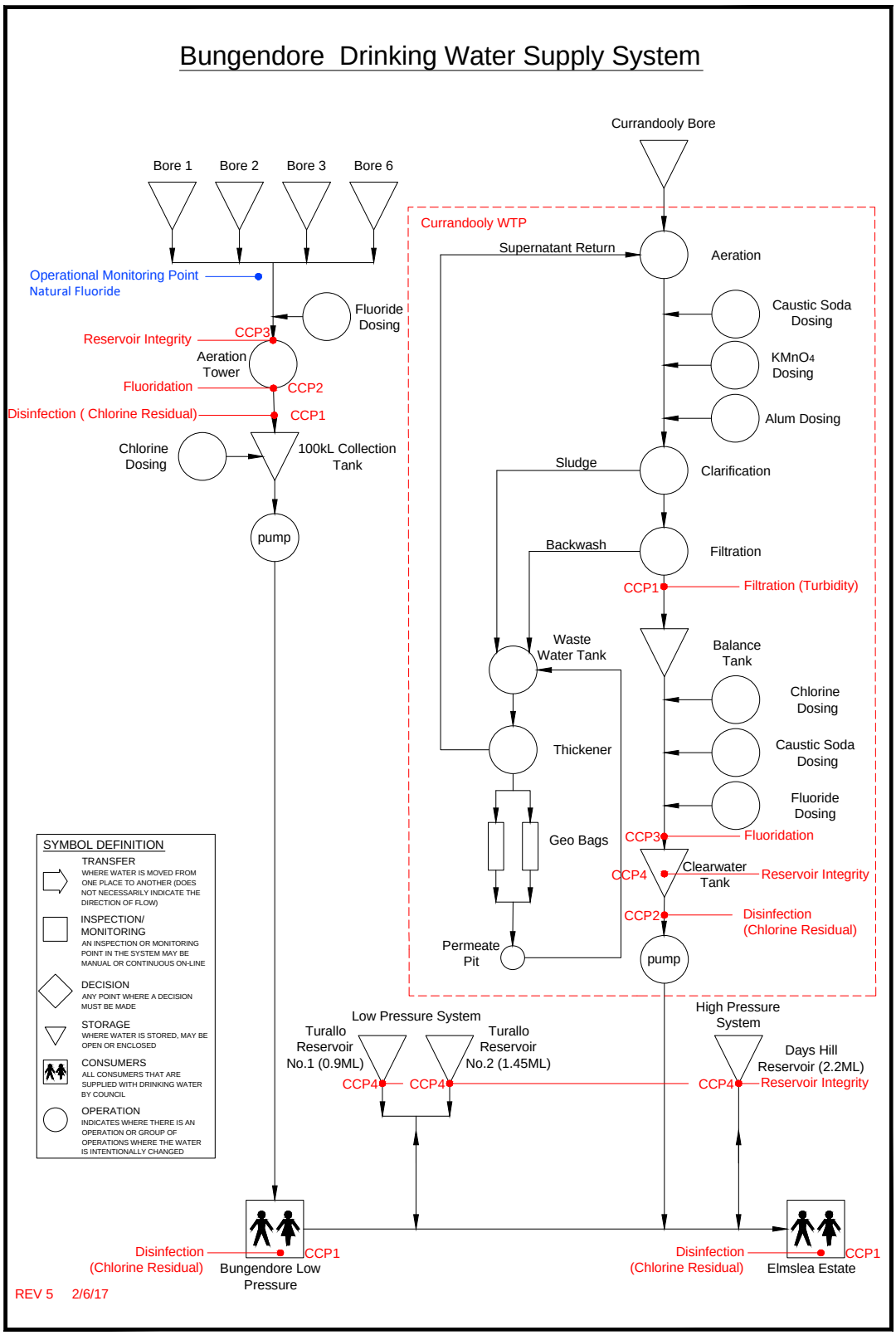

Figure U-1 – Bungendore Water Supply Schematic

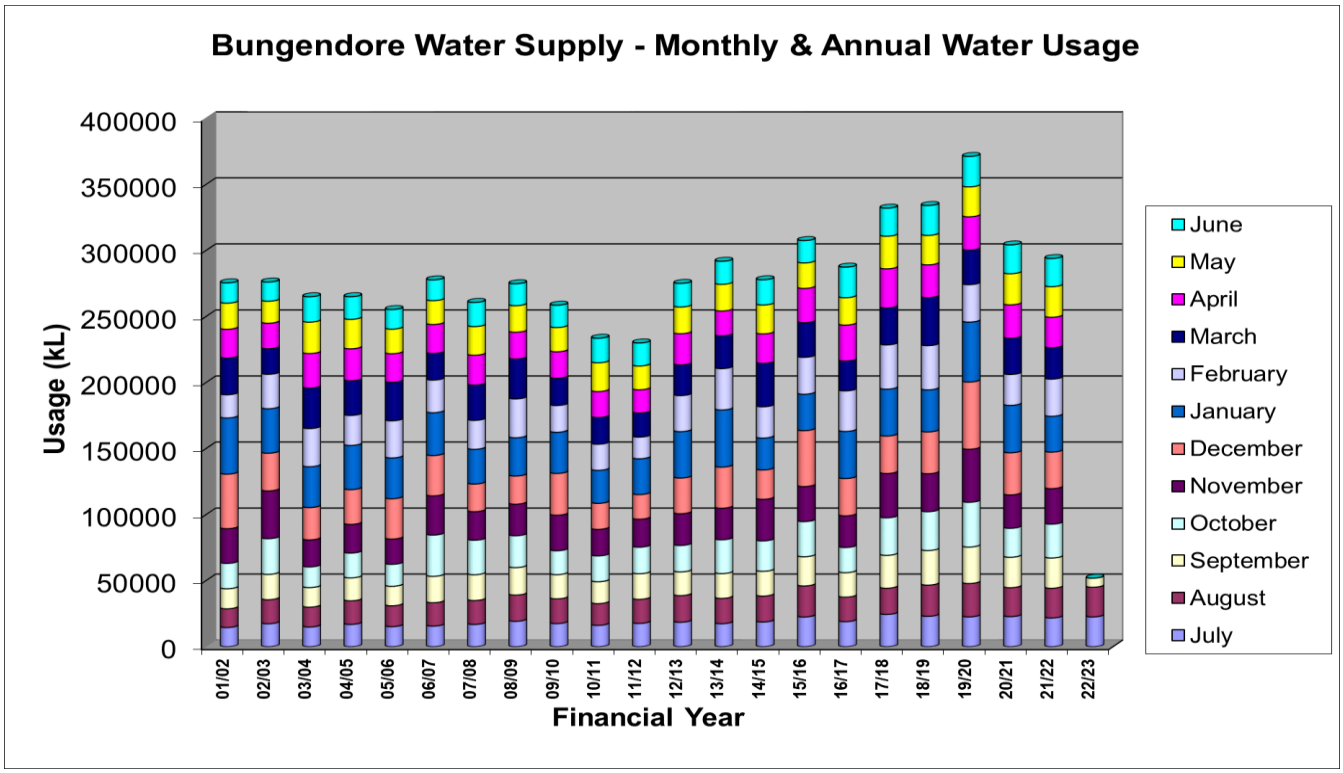

Figure U-2 – Historical water consumption for Bungendore

Despite the fact that both sources (WALs) are allocated from the same Bungendore alluvial groundwater source, the raw water quality from both is markedly different. As a result, the level of treatment required is also quite different. Water drawn from the town-based bores is of such superior quality that little additional treatment is required save aeration (to remove dissolved carbon dioxide), chlorination and disinfection. The raw supply from the Currandooly bore has elevated levels of iron and manganese and as such the level of treatment required, and thus capital investment, is much greater. The contrast in these two treatment trains is starkly demonstrated in the schematic shown in figure U-1.

Notwithstanding the superior qualities of the town sourced raw groundwater and the treated Currandooly product water, consumer experiences with a groundwater-based town supply can be varied, particularly for new residents unaccustomed to groundwater supplies. For the most part this relates to the fact that groundwater almost always comes with higher levels of mineral hardness and Total Dissolved Solids (TDS); two largely aesthetic criteria that routinely present themselves to more sensitive consumers as visible scaling of some appliances and taste or “mouth feel”, respectively.

Figure U-3 following shows the results of these two analytes for Bungendore when compared to the surface water based supplies at Braidwood and Captains Flat for the routine NATA laboratory tests conducted on 21 June 2022.

Analyte	NHMRC[1] Guideline Value[2]	Bungendore		Braidwood	Captains Flat
		Town Supply	Currandooly Supply		
Total Hardness as $CaCO_3$ (mg/L)	200[3]	147	80	27	24
TDS (mg/L)	600[4]	371	293	65	54

Figure U-3

Notes:

1. National Health and Medical Research Council – Australian Drinking Water Guidelines
2. Table 10.6 (ADWG) Guideline values for physical and chemical characteristics
3. 60-200mg/L good quality. <60mg/L possibly corrosive. >200m/L increasing scaling
4. <600mg/L = good. 600-900mg/L = fair. 900-1200mg/L = poor. >1200mg/L = unacceptable

Whilst it is evident that the Bungendore water supply is well within the acceptable industry standards for these two water quality parameters, the starkness in difference between the comparative surface water supplies certainly gives some insight as to why new residents might more readily notice a difference, particularly if they have just relocated from areas of surface supplies like Canberra or Sydney.

The IWCM

The principal purpose of the IWCM process was effectively to take a complete stocktake of the subject water and sewerage schemes, to identify any issues, to consider strategies aimed at addressing these issues, to prioritise them and thus to adopt a preferred path going forward. The outcomes of the IWCM were instrumental in the subsequent development of the supporting *Development Servicing Plans* (adopted by Council on 24 June 2020) and the new tariff structure (adopted by Council on 28 April 2021).

Without doubt, the single biggest issue identified by this IWCM process was the growth pressures facing Bungendore and thus the need for additional supplies of town water to support this growth. Undertaken prior to the independent *Bungendore Structure Plan 2048* project, the IWCM similarly identified likely high growth scenarios that could potentially result in demand for serviced residential properties upwards of 4,000 tenements or around 11,700 residents by the end of the 30 year planning or study window (see excerpt from IWCM in figure U-4 following).

5.2 Population projections

The occupied residential property projection for each town is shown in Table 5.1, and the serviced population projection for each water supply and sewerage scheme is provided in Table 5.2.

Table 5.1: Occupied residential property projections

		2016	2021	2026	2031	2036	2041	2046
Bungendore	Water	1,074	1,719	2,356	2,918	3,379	3,737	4,004
	Sewerage	1,068	1,713	2,350	2,912	3,373	3,731	3,998
Braidwood	Water	469	499	530	563	599	636	676
	Sewerage	426	456	487	520	556	593	633
Captains Flat	Water	193	195	197	199	202	204	206
	Sewerage	182	184	186	188	191	193	195

Table 5.2: Serviced residential population projections

		2016	2021	2026	2031	2036	2041	2046
Bungendore	Water	3,148	5,039	6,905	8,554	9,904	10,952	11,734
	Sewerage	3,130	5,022	6,887	8,536	9,887	10,934	11,717
Braidwood	Water	1,062	1,129	1,200	1,276	1,356	1,441	1,532
	Sewerage	965	1,032	1,103	1,179	1,259	1,344	1,434
Captains Flat	Water	426	431	436	440	445	450	455
	Sewerage	402	407	411	416	421	426	431

Figure U-4 (IWCM population projections for Bungendore)

In terms of what this meant for the Bungendore Water Supply going forward, the IWCM identified the need for the following by the end of the 30 year planning window:

- An additional 1,000 ML/a of supply capability; and
- An additional 4.5ML/day of headwork capacity.

In considering how to deal with this first requirement the Project Reference Group (PRG) of the time considered the following options:

- Additional entitlements and supporting extraction ability from the town alluvial system;
- Exploration of a new borefield in the Lachlan Fold Belt (LFB) fractured rock groundwater source;
- A pipeline connection to Canberra's ICON source from the established Queanbeyan water supply system.

Council's preference of the time was for additional extraction ability from the town based alluvial source although this was deemed not possible due to the limits imposed by the *Long Term Average Annual Extraction Limit* (LTAAEL); a regulated cap limiting the total volume of WALs that can be issued for the aquifer. The IWCM identified the cap at 1,268ML/a noting that the sum of all of the aquifer's WALs issued at the time totalled some 1,238ML/a. Despite this 30ML/a gap in allocations, the clear outcome of the time was that unless some licence trading was possible the Bungendore alluvial groundwater source was essentially fully allocated and therefore not a going concern in terms of satisfying Bungendore's future requirements, or even an acceptable portion thereof.

It was at this juncture that the LFB fractured rock source was first considered. This was an entirely new proposition to Council and was actively encouraged by DPIE officers of the time due to its relative underutilisation and to what was otherwise thought by regulators to be a theoretically large and readily available resource.

In developing the final options, the PRG settled on the following (Figure U-5)

Target for compliance	Issue	Option	Scenario		
			1	2	3
Water Security and headworks capacity Level of Service	The dry year demands exceed the current licensed entitlement. The peak day demand will exceed the combined capacity of the Bungendore and Currandooly WTPs around 2025.	**Water Supply Option 1** – Extraction from Lachlan Fold Belt source followed by Bungendore alluvial source.	✓ Stage 1 2019 Stage 2 2032	-	-
		Water Supply Option 2 – Extraction from Lachlan Fold Belt source only.	-	✓ Stage 1 2019 Stage 2 2032	-
		Water Supply Option 3 – Bulk supply from ICON Water	-	-	✓ 2019

Figure U-5 (taken from table S1 of the IWCM Strategy)

Option 1 was favoured since it allowed the development of the solution in stages, thus assisting in terms of cash flows, whilst keeping the initially preferred solution from the alluvial source open for the second stage in the eventuality that access rules or trading circumstances changed for the better.

Option 2 was the natural alternative to option 1 in the situation that the second stage alluvial conditions remained restricted at the nominal year of 2032. Of course, both options 1 and 2 were based on an underlying assumption that the fractured rock source was economically and readily available. Virtually nothing was known about fractured rock as a town water source at the time though and that was about to be a journey in its own right.

Option 3 was least preferred at the time due to its cash flow implications although it was noted that, as a solution, its benefit would extend well beyond just the 30-year planning window considered by the IWCM.

Fractured Rock

The search for fractured rock bore candidates commenced in 2016 with the identification of around eight initial target sites. Over the following 12 months around $600,000 was invested in the drilling of test bores, two of which, were ultimately identified as being potential production bore candidates. These were locally known as the Jim Gray and Bungendore East bore sites. Council's consultant hydrogeologist of the time conducted a series of tests including bore logging and field pump tests (both constant and step) the results of which were published in a report that recommended a potential combined annual yield of up to 635ML/a. This report was the subject of a number of consultations with DPIE hydrogeologists which eventuated in the

presentation of a Departmental memorandum (WAMs 25960 – 13 November 2017) which recommended (amongst other things):

1. *The pumping test data indicates that a more realistic capacity from the bores is around 500ML/year subject to monitoring and mitigation of impacts*

2. *Discuss alternative options for mitigating potential impacts with Council as the next step*

In providing the report, the covering introduction went on to say.

"Council should note that the estimated capacity of the bores is difficult to assess and could be more or less than envisaged and there is some risk associated with attributing a volume based on the info [sic] provided. The estimated capacity of 500 ML/yr should not be relied upon but is provided to give some indication of the possible yield to assist Council in their considerations.

A trigger and action plan provides the best opportunity to maximise yield without significant impact on 3rd parties and there may be some avenue for Council to negotiate satisfactory outcomes with potentially affected parties."

The intention of providing the above exchange is not at all to apportion blame for the ultimate failure of the fractured rock program. Rather it is to demonstrate, perhaps now with some considerable hindsight, the collective lack of understanding as to the workings of this aquifer source and to introduce the vexed concept of the rules around third party impacts for groundwater extraction in NSW.

Suffice to say though that even at the suggested and reduced yield of 500ML/a the Jim Gray and Bungendore East bores were still considered to be entirely viable (notwithstanding the latter's more challenging TDS and hardness qualities), and it was on this basis that an application was made for a LFB fractured rock WAL for 1,000ML/a. This was issued on 16 July 2019 under WAL 40AL417755.

Formal application for a Works Approval for these two bores, based on a combined allocation of 500ML/a, was made on 11 March 2021. The regulator's determination was issued on 12 July 2021 where a combined volume of only 216ML/a was offered based on an apportionment of 16ML/a to Jim Gray and 200ML/a to Bungendore East. In addition to this, the maximum flowrate for Jim Gray was reduced from its former 8.5l/s to 6.5l/s. In making this initial determination, the regulator made the following two additional comments:

- *"These limits have been imposed due to assessed risks at both sites"*

- *"These extraction limits may be varied at any time by the Department in the event of unanticipated unacceptable impacts to neighbours or the environment."*

A number of considerations came into play following this advice not the least of which related to the viability of fractured rock going forward. Whereas alluvium targets can fairly confidently be targeted at any location within the known bounds of the alluvium, fractured rock targets, as the name suggests, need to coincide with water bearing rock fissures. A difficult task at best and along with it comes challenges in respect of land access, easements, long pipelines and even access to electricity. The value in fractured rock being a solution for the Bungendore Water Supply lay in its promise to provide a large volume solution and at even the slightly reduced expectation suggested in the Department's November 2017 memorandum it did that.

At 500ML/a the proposal still represented the midpoint of the long term target of 1GL/a and as such reflected nicely the intent of Council's adopted "option 1" of its IWCM strategy.

Whilst the determination did not elaborate on what the "assessed risks" were, with time it became evident that the main issue lay in third party impacts. In other words, the effect of Council's proposed bore/s on established third party bores. Even those issued for Basic Landholder Rights (BLR), the learning being that town water supply purposes holds no higher priority for water than any other use, even BLR.

In consultation with the Regulator, Council made the decision to conduct further field pumping tests on the Jim Gray bore given that this bore was the site most affected by the determination. Over a period of three weeks in September 2021 the Jim Gray bore was the subject of continuous pumping with detailed monitoring established at nearby private fractured rock bores in an effort to better quantify any third party impacts. The tests were conducted by Council's consultant hydro geologists and culminated in a report to the regulator seeking a review of the July 2021 determination. This request was submitted on 3 November 2021. The response to this report was received from the Regulator on 7 June 2022 at which time the original determination was reaffirmed.

Over the period of these fractured rock investigations around $1m was spent on various field works, studies, consultancies and advance designs. The value in fractured rock as a solution was always about its volumetric promise. It was always going to require some significant treatment, and thus financial investment, and this could have readily been justified against the yields initially anticipated. Regrettably, at the reduced yields identified in the determination, it now cannot.

The Alluvium

At about the time of the follow up field testing of the Jim Gray bore in September 2021, and as a contingency, attention again turned to the prospects of the alluvium source and, for the first time since the IWCM, the prospect of option 3 – the bulk water supply line.

With the encouragement of DPIE, Council made a formal application for both the residual 30ML/a of entitlement that remained within the alluvial LTAAEL as well as a special 300ML/a entitlement known as a Special Purpose Access Licence (SPAL). The thinking behind this being related to Council's long-term preference for the superior quality town based alluvial source and its relatively low cost capital and operational outlay. At a potential entitlement of only 330ML/a it was not ever thought of being the whole solution but certainly as a good interim measure given that greenfield development was now well underway. The bulk water pipeline option could thus be investigated and developed in its own time as part of the more complete solution.

WAL43990 for the 30ML/a of alluvium was issued to Council on 9 November 2021 with WAL44105 SPAL for the 300ML/a being issued on 15 March 2022. The task now lay in establishing additional bores to access these entitlements. In effect, Works Approvals.

A number of prospective bore sites were identified, all within the town area and all within Council controlled land. Again, with the encouragement of DPIE, Council engaged the services of an eminent consultant to assess the proposed sites against the established regulator's own assessment rules. Like for the fractured rock, these were almost entirely concerned with third party impacts and, like for the fractured rock, Council's consultant reported favourably on the prospects of all five nominated sites.

The formal application for Works Approval was made on 16 May 2022 with the determination, refusal, being issued on 9 September 2022. In determining the matter, the regulator stated:

"The WM Act does not permit the granting of an approval where it cannot be demonstrated that there will be no more than minimal harm done to the water source as a consequence of the construction and use of the proposed works."

Interestingly, the determination offered a suggestion for two other potential alluvial bore sites though, both located around 7.5km NNE from Bungendore on private property within the area of the existing Currandooly bore but closer to Lake George. This suggestion, whilst welcomed, is not favoured given its long distance from town, its location on private property, its closer proximity to Lake George (potential quality issues) and its almost certain requirement for an additional Water Treatment Plant. In a similar vein to the fractured rock situation, the level of investment required is considered too great for just 300ML/a when in the ultimate term 1,000ML/a is required.

Report

As it currently stands, and despite now holding additional groundwater entitlements of 1,330ML/a, Council does not have actual access to any additional supplies of water for the township of Bungendore beyond the 472ML/a that it has traditionally held. Through the journey described above, and in good faith, judgements were made that supported the greenfield growth of Bungendore. Underpinning this growth was an assessment that there were indeed available additional supplies of water although it is now evident that these cannot be reliably secured from groundwater, not without some review or relaxation of the rules and almost certainly not to the volumetric extent initially envisaged and ultimately required for the town.

In consideration of the Bungendore Structure Plan's assessment for expected infill growth going forward, and with the knowledge of the number of additional greenfield allotments currently approved, the IWCM predicts that Council's current entitlement of 472ML/a will be exceeded at 538ML/a in a dry year and will reach around 424ML/a in a normal year. The decision now therefore is whereto from here?

Assuming the desire is to continue to attempt to secure an additional source of water then it is recommended that Council's attention now be directed again toward the bulk water pipeline option.

Considered as option 3 in the original IWCM project, and effectively revived as such internally from about September 2021, a number of actions have already been put into play since this time in an effort to better prepare Council should it decide to pursue this option. The first relates to intergovernmental negotiations.

The reticulation of water from the Queanbeyan network to any area beyond the former Queanbeyan City Council's LGA (as at 2006) is not automatically permitted and is subject to agreement between the NSW and ACT Governments and possibly even the Commonwealth. A mechanism exists, via the *Cross Border Water MOU 2006*, and initiated recently by the NSW Government with a proposal to establish a working group with the ACT Government, QPRC and Yass Valley Council representatives to facilitate regional town water security discussions.

The development of an agreement that permits Council to extend its supply from Queanbeyan to Bungendore via a trunk main would be an absolute precondition for any construction works. It does not though preclude the development of the project through feasibility, concept,

detailed design or even ready for tender stage and that forms the basis of one for the recommendations before Council in this report.

The second development is a recent unsolicited offer for funding assistance from the NSW Government under its tranche 3 of the Safe and Secure Water Program (SSWP). The offer directly relates to assisting with a solution for the issue of Bungendore's long-term water security and is aimed at the delivery of a tender ready package of works by 30 June 2024. Whilst the offer is made on the basis of a 25% contribution, given that the package may be as much as $5m, any financial assistance would be most beneficial. Council's contribution for the package could be taken from available water fund externally restricted assets such as s.64 developer contributions. The deadline for the project is ambitious though and study works would need to commence with haste following any Council decision to do so and the finalisation of any enabling funding deed.

Land acquisitions and easements are likely to be the biggest risks to the project as they often have quite significant timeframes. These would need to commence soonest following the feasibility study and that gateway's signoff on the project's operational financial viability. Whilst the current SSWP funding does not extend to the construction phase it is almost certain that Council will require substantial financial support for that when the time comes. The recently announced Accelerated Infrastructure Fund Round 3 is the sort of program that would be ideal for that purpose at some later date.

The third development relates to the programmed revision of the IWCM. As part of its 2022/23 Operational Plan, Council voted funds to review the IWCM in line with the usual 4 yearly cycle. The events in Bungendore and the offer of the tranche 3 SSWP have overtaken this process somewhat. In normal circumstances the IWCM would be reviewed and modified in the light of the past few years of groundwater works at which time after adoption by Council any new strategies would be implemented. The review will still occur, but it is proposed to do that concurrently to the project of firming of the bulk supply option to tender ready stage. The nexus to this arrangement lies in the fact that the option was identified and prioritised as part of the original IWCM process and as such continues to have validity. Application has also been made for grant assistance for the IWCM review process as well and it is expected that this application will be determined by the Department within the next few weeks. Regardless of the outcome though, the review will be undertaken during the 22/23 financial year with the strategy to be presented to Council for adoption at that time.

Risk/Policy/Legislation Considerations

Without doubt the biggest risk for the bulk pipeline solution lies in the current lack of certainty for intergovernmental approval to supply water beyond bounds of the former Queanbeyan City Council LGA. Whilst this does not affect the construction phase, since clearly construction would not commence without these matters being satisfactorily resolved, it risks the sunken costs of any detailed design work and, perhaps more importantly, the costs of any land/easement acquisitions along the route. In the event that the necessary intergovernmental approvals were never realised the value of the "for tender" packages would be lost along with the potential for the further development of Bungendore.

Financial, Budget and Resource Implications

Something of the order of $1m has been expended on the development of the various groundwater solutions aimed at resolving the future Bungendore water supply. Unless an opportunity arises that would enable ready access to additional town based alluvial sources that might act as an immediate supplement to supply there is not much point in investing further in groundwater.

Option 3 (the bulk supply pipeline) should now be considered the preferred option and it seems logical to progress this through the various stages of design development with the aim to have it at tender ready stage at the earliest opportunity. As with the recently announced Accelerated Infrastructure Fund Round 3 opportunity, projects really only gain candidacy for opportunities such as these if they are indeed "tender ready".

The potential to secure SSWP funding for this design process presents an additional incentive as does the ambitious target date of 30 June 2024.

Council's contribution toward the design, land acquisition and tender ready stage would be sourced from reserves held in the water fund.

Links to QPRC/Regional Strategic Plans

The proposal is consistent with Option 3 as identified in the Strategic Direction of the Palerang Communities IWCM adopted by Council in February 2019.

Conclusion

The future development of Bungendore is dependent on the expansion of the Bungendore Water Supply. The Palerang Communities IWCM identified this as a significant issue and recommended a series of three prioritised options by way of remedy. The initially preferred solutions of groundwater have now proved to be unviable, and attention is now turned to the third option, the bulk water pipeline from Queanbeyan. Part of the recommendation above seeks to secure Council's concurrence for the development of this option (including land acquisition/easement matters) to the point of "tender ready" status. It also seeks consent to accept any grant funding offered for this purpose.

It is acknowledged that the resolution of any intergovernmental approvals will be contingent on the project ultimately progressing to construction phase as will be the securement of additional grant funds for that purpose in the future.

The Palerang Communities IWCM review will continue as originally planned with the final document to be presented to Council for consideration and adoption at the earliest opportunity.

Attachments

Nil

9.4 Bungendore Water Security - Structure Plan/Current Planning Proposals and Scoping Proposals (Ref: ; Author: Hansen/Carswell)

File Reference: PJ0060-02-02, 26.1.98-02

Recommendation

That Council:

1. **Note that the current water supply for Bungendore is conditionally adequate for:**
   a. **the approved subdivisions within Bungendore, and**
   b. **infill subdivisions on land in Bungendore currently zoned for residential uses where the Development Application demonstrates compliance with the existing minimum lot size under the Palerang Local Environmental Plan 2014.**
2. **Review the supply source of potable water situation for the future residential growth of areas identified in the Bungendore Structure Plan 2048 every 6 months and report to Council with the first due by April 2023.**
3. **Agree not to progress Scoping Proposals or Planning Proposals for rezoning of land for residential purposes located in the area covered by the Bungendore Structure Plan 2048 until a supplementary source of potable water for Bungendore has been adequately arranged.**
4. **Review the Bungendore Structure Plan 2048 upon the release of the findings of a reviewed Queanbeyan-Palerang Regional Council Integrated Water Cycle Management Strategy – Palerang Communities 2018.**
5. **Request the advocacy and support of the NSW Government to provide a supplementary source of potable water for Bungendore noting that this has been identified as a priority action in the draft South East and Tablelands Regional Plan 2041 and in the NSW State Infrastructure Strategy 2022 where the implementation of the regional water strategies to improve water security are to be done in earnest before the next drought occurs.**
6. **Receive a further report in relation to the refunding or otherwise of fees for Scoping and Planning Proposals already received by Council for proposals in Bungendore that now cannot progress.**

Summary

As highlighted in the previous report, Bungendore Water Security - Integrated Water Cycle Management Plan, the implications from a land-use planning perspective is significant for Council and the community.

The gravity of this is further added to following the receipt of recent correspondence from the Department of Planning and Environment stating *"…If it is confirmed that access to a secure water supply cannot be realised in the short-medium term, DPE will not support any planning proposals to rezone the land identified in the Bungendore Structure Plan for future residential use, including the Bungendore East planning proposal."*

The purpose of this report is to ensure Council is suitably informed of the current demands for housing growth and the ramifications an unsecured town water supply has on current and future Planning Proposals.

Background

The forward planning for the growth and land use zone changes in Bungendore has been guided by Land Use and Water Strategies as well as Land-Use Structure Plans. The most recent being the *Bungendore Structure Plan 2048* which reviewed and replaced the *Bungendore Land use Strategy & Structure Plan* adopted by Council on 5 August 2010. This Structure Plan has also been referenced and incorporated into the Bungendore section of the *Queanbeyan Palerang Local Strategic Planning Statement* which sets the land use planning direction for the local government area for the next 20 years.

The *Bungendore Structure Plan 2048* was prepared on the information available at the time and was adopted by Council in February 2020 (Attachment 2 – Minute No. 041/20). Endorsement by the NSW Department of Planning, Industry and Environment then occurred in September 2020. Bungendore was identified to grow within the capacity of the town's water allocation which was increased by the NSW Government.

This Structure Plan identified residential growth areas for Bungendore for the following years to 2048. The growth areas were identified with a short/medium term and a long term timing sequence to allow for the orderly development and expansion of servicing (Attachment 1 – Figure 1L). As such, the Plan (and its predecessor) provides the strategic justification to consider rezonings for additional housing that are consistent with the Plan.

Report

Current Rezoning Activity in Bungendore

The term Planning Proposal is the name given to rezoning applications and Local Environmental Plan amendments under the *Environmental Planning and Assessment Act 1979*. Planning Proposals for rezoning land for residential purposes have been considered by Council (Attachment 2) and include the area north of Elmslea at 176 Tarago Road (now known as Elm Grove Stage 1 and 2) and the area at 4610 Kings Highway known as Bungendore East. The Elm Grove rezoning was finalised in May 2020 and the land rezoned from RU1 Primary Production to R2 Low Density Residential.

Following the finalisation of the *Bungendore Structure Plan 2048*, a request was submitted for rezoning of land at 175 and 217 Tarago Road known as Ashby (125 dwellings approximately). This was considered at Council's Planning and Strategy meeting of 14 October and wasn't supported at that time (Attachment 2 - PLA 149/20).

The Planning Proposals for the short/medium term options are the North Elmslea (Elm Grove Estate Stages 1 and 2) (351 dwellings) and Bungendore East Planning Proposals (592 dwellings) and are labelled on the Structure Plan Map in Attachment 1.

Bungendore East Planning Proposal

The Bungendore East rezoning had been lodged in 2015 with the former Palerang Council and held in abeyance until the completion of the *Bungendore Structure Plan 2048* and the confirmation of water supply for the growth area. Upon the issue of the Water Access Licence (WAL) by the NSW government, this was provided to the NSW Department of Planning, Industry and Environment who advised that it satisfied their preconditions to authorise the consideration of the rezoning of land at Bungendore East (4610 Kings Highway). This authorisation is called a Gateway Determination and it specifies consultation, conditions and timeframe for the rezoning (which are called Planning Proposals) to be completed.

The Bungendore East Planning Proposal is nearing the completion of the Agency Consultation stage and is yet to reach the Public Consultation stage of the process. The Department's timeframe in the Gateway Determination specified 21 July 2022 for the completion of the process and they have yet to advise of any extension to this timeframe.

Scoping Proposals

Rezoning activity in Bungendore also includes the lodgement of Scoping Proposals. These are the precursors to a formal Planning Proposal and are similar in many ways to the Preliminary rezoning enquiry process Council had in place before the Department of Planning introduced a new process and guidelines in late 2021. The scoping proposal process was a way the Department of Planning and Environment saw to reduce the timeframe of Planning Proposals, by requiring studies and agency input at the Scoping Proposal stage. Council resolved to adopt a process to consider Scoping Proposals at the 13 April 2022 Council meeting (Attachment 2 - Minute No. 147/22).

To date, Council has received three Scoping Proposals for residential rezonings in Bungendore. One was for that part of 176 Tarago Road located between the 250m and 500m radius of the Bungendore Waste Transfer Facility and referred to as Elm Grove Stage 3. This was supported by Council at its meeting 23 February 2022 (Attachment 2 – Minute No. 079/22). The second Scoping Proposal is for 175 Tarago Road known as Ashby and is still being reviewed by staff. The third proposal is at 174 Tarago Road, only recently submitted that is referred to as Elm Grove Stage 4 which proposes 789 lots.

The location and context (excepting Elm Grove Stage 4) to the *Bungendore Structure Plan 2048* is shown in Figure 2L below.

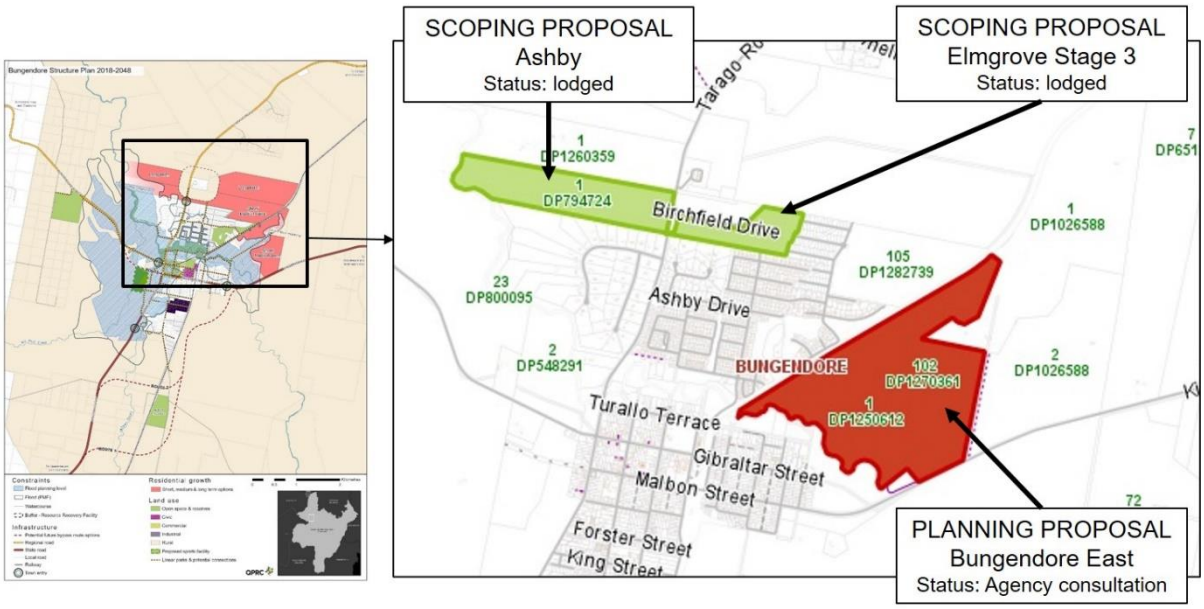

Figure 2L - Current rezoning proposals (Scoping and Planning Proposals) September 2022

Rezoning enquiries

In addition to the Planning Proposal and Scoping Proposals, two enquiries to pursue future Scoping Proposals have been submitted for rezonings for residential purposes. One is on land identified within the *Bungendore Structure Plan 2048* as a long-term growth area and the other is outside the area identified for growth. In the normal course of events, the consideration and advice to proponents would be that long term options identified in the Structure Plan would not be supported until the completion of the Short / Medium term area (namely Bungendore East). This is consistent with Council's resolution on 14 October 2020 (Attachment 2 – PLA 149/20) as previously discussed.

The advice given for the rezonings on land not identified for residential growth in the Structure Plan has been to not support as there is no strategic justification. Council's policy for growth in Bungendore is set by the *Bungendore Structure Plan 2048*.

At this point in time additional advice for both enquiries is that the issue of a supplementary source of potable water for Bungendore is required to be addressed and arranged prior to accepting any future Scoping Proposals or Planning Proposals.

Development Applications and existing zoned residential land

In terms of residential subdivisions occurring on land that is currently zoned to support residential development, the *Bungendore Structure Plan 2048* anticipated up to 460 lots/dwellings over the life of the plan (i.e. to 2048). From 2017 when the infill development research was conducted, there have been 192 new residential lots created (refer to Figure 3L).

In addition, the land rezoned in 2020 for the Elm Grove Stages 1 and 2 residential development, there have been two Development Applications for subdivision into 91 lots and 260 lots respectively (refer to Figure 4L). Both applications have been approved with the Stage 1 subdivision being registered and the separate titles created for the lots. Council has been advised that it is expected that dwelling construction on Stage 1 will begin to occur later this year. Stage 2 of the Elm Grove development is at the subdivision construction stage.

In assessing Development Applications for development including subdivision, the *Palerang Local Environmental Plan 2014* requires Council to be satisfied that the supply of water is available. This clause (Clause 6.11) is reproduced below.

6.11 Essential services

Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required—

(a) the supply of water,

(b) the supply of electricity,

(c) the disposal and management of sewage,

(d) stormwater drainage or on-site conservation,

(e) suitable vehicular access.

The supply of water is essential for any residential subdivision of land. The existing water supply capacity for Bungendore is adequate for the approved Elm Grove Stages 1, and 2 subdivisions and for the infill subdivisions anticipated by the *Bungendore Structure Plan 2048*.

These developments and the subsequent construction of dwellings on the new lots created can occur without exceeding the 50th percentile normal to dry year differential capacity of the water supply capacity.

Figure 3L - Bungendore Infill Residential Subdivisions since 2017

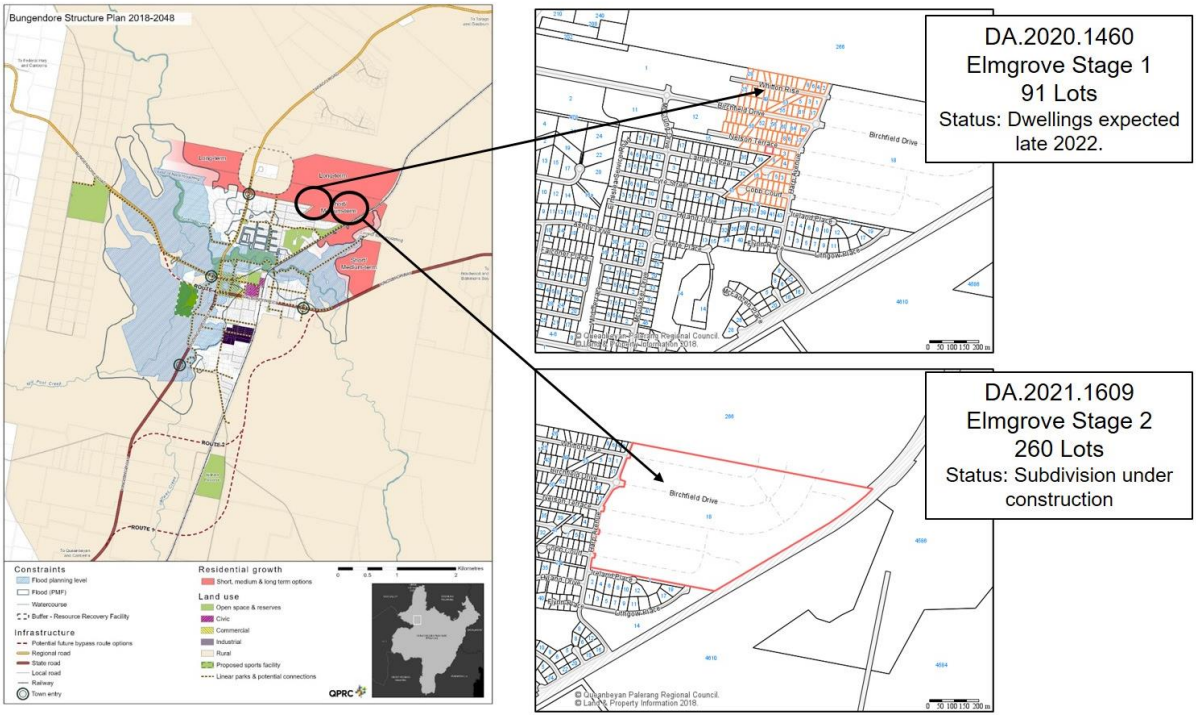

Figure 4L - Development Applications for Residential Subdivision Approved for Elm Grove

Risk/Policy/Legislation Considerations

During the preparation of the *Bungendore Structure Plan 2048* staff have acted on the best available information as well as in accordance with Council policy and the requirements of the *Environmental Planning and Assessment Act 1979* and its Regulations. Nevertheless, it is considered that there is some potential for reputational risk. In addition, it is likely that the achievement of Palerang Communities IWCM Strategy Option 3 – 2019 (Queanbeyan to Bungendore bulk water supply trunk main) will take considerable time to gain approval and to build. This provides the opportunity for housing in Bungendore to become unaffordable.

Land Use Planning Policy and Legislation

Forward planning for future land use and growth is covered in Part 3 of the *Environmental Planning and Assessment Act 1979.* The Act requires Council to prepare and review a Local Strategic Planning Statement (LSPS) every 7 years. The Queanbeyan Palerang LSPS was prepared and adopted by Council in June 2020 (Attachment 2 - Minute No. 154/20) and published on the NSW Planning portal as required. This LSPS incorporated the findings of the *Bungendore Structure Plan 2048*. Both documents set the strategic policy direction for land use and rezonings (Planning Proposals) for Bungendore.

Planning proposals are required to prepared in accordance with the *Environmental Planning and Assessment Act 1979* and the Department of Planning and Environment Guidelines for Preparing Local Environmental Plans.

Planning proposals must have a strategic justification (in this case, consistency with the *Queanbeyan-Palerang Local Strategic Planning Statement, and* the *Bungendore Structure Plan 2048*) and be reviewed against the relevant *State Environmental Planning Policies* (SEPP's) and Ministerial Directions. To progress, Planning proposals must be supported by Council and receive a Gateway Determination from the NSW Department of Planning. The Gateway Determination will then specify the consultation required and timeframe for completion. Where a Gateway Determination timeframe cannot be met, Council may request an extension.

The Gateway Determination for Bungendore East (PP-2021-916) was issued on 21 January 2021. The time frame for completion of the process was 21 July 2022 (this included an extension of 6 months). Council's further request for an extension has yet to be determined. In light of the water security concern Council received the following advice from DPE 6 September 2022:

"…If it is confirmed that access to a secure water supply cannot be realised in the short-medium term, DPE will not support any planning proposals to rezone the land identified in the Bungendore Structure Plan for future residential use, including the Bungendore East planning proposal. "

This means that any proposals for the rezoning of land for residential purposes within the *Bungendore Structure Plan 2048* area cannot be supported or progressed now. Further work is now required to secure a supplementary source of potable water for additional residential zonings. Until that work is complete, current, and future Scoping Proposals should not be accepted

Development Applications Policy and Legislation Considerations

Development applications for land uses requiring the supply of water continue to be assessed under clause 6.11 Essential Services of the *Palerang Local Environmental Plan 2014*. As detailed in the Palerang Communities IWCM, development applications for infill development within the existing urban zoned areas of Bungendore are within the capacity of the 50th percentile differential between a normal and dry year. This means that at full development of Elm Grove Stages 1 and 2 as well as the anticipated infill, Council's entitlement in a repeat of a 2019/2020 year would probably be exceeded by up to 48ML (or by 10%). If there are development applications for a high-water consumption uses within Bungendore, they will need to be reviewed carefully and a determination made as to the availability within the existing water supply to service them.

Financial, Budget and Resource Implications

Planning proposals and Scoping Proposals are subject to the payment of fees. The uncertainty of securing a supplementary source of potable water supply for the future rezonings for Bungendore mean that the current Scoping Proposals and Planning Proposals cannot be progressed. This raises the issue of payment and reimbursement of fees.

Planning Proposal fees

The Bungendore East Planning Proposal fees were confirmed at Council's Planning and Strategy Meeting on 10 June 2020 (Attachment 2 – PLA070/20) where Council resolved that:

> *"…f. The applicant pays the fees for the processing of the planning proposal that would have applied under the former Palerang Council Fees and Charges, indexed to the current financial year."*

Initial fees were paid, and the next fees are due at the Public Exhibition milestone. These fees are based on the hours worked and currently amount to 169 hours equating to $46,767. In light of the uncertainty of the progression of the Planning Proposal, the response from the Department, and the potential for the Gateway timeframe not being extended with the risk of the applicant being required to recommence the process, Council has the following options:

1. to charge the fee to date ($46,767)
2. forgo the fees accumulated to date
3. charge the fees as per Council's 2022/23 Operational Fees and Charges ($47,244 plus $178 per hour after 280 hours) when the Planning Proposal process recommences. This option assumes the Department of Planning and Environment decline to issue a further Gateway extension of time.

Scoping Proposals

Currently there are three scoping proposals lodged with Council. One where fees have been paid and two where the invoice for payment is yet to be issued. As both cannot progress at present, the following options are available to Council:

1. continue to invoice and charge as normal
2. cease accepting Scoping Proposals for residential purposes for Bungendore until a supplementary source of potable water for Bungendore is arranged
3. reimburse charges/and or provide credits (where payment has been made) for current scoping proposals for residential purposes for Bungendore once they can resume the process.

Links to QPRC/Regional Strategic Plans

The relevant land use Strategic Plans are the *Queanbeyan-Palerang Local Strategic Planning Statement*, the South East and Tablelands Regional Plan 2036, the draft South East and Tablelands Regional Plan 2041 (on exhibition until 23 September 2022) and the State Infrastructure Strategy 2022-2042.

The *Queanbeyan-Palerang Local Strategic Planning Statement* and the South East and Tablelands Regional Plans both anticipate growth for Bungendore and link that growth to a secure water supply.

The current the South East and Tablelands Regional Plan 2036 states that:

An acceptable reticulated water supply is required for any new land release or an increase in housing densities in existing areas. The provision of potable water must conform to the following water planning principles:

- *a reliable supply to provide certainty for consumers (both residential and other);*
- *an affordable water supply in terms of both capital and recurring costs; and*
- *a quality of supply that meets relevant health standards.*

The draft South East and Tablelands Regional Plan 2041 goes further and identifies on pages 25 and 62 that:

Resolution of infrastructure deficiencies and water security will be a key focus [for the Capital Subregions which includes QPRC].

The State Infrastructure Strategy 2022-2042 identifies the need to improve water security and quality in regional NSW…

However, the current local water utility entitlements, particularly surrounding the ACT, are not sufficient to meet future demand from the potential population growth. Establishing close, inter-jurisdictional planning for infrastructure delivery and service provision will address the barriers for water security in areas such as Yass, Murrumbateman and Bungendore.

The draft South East and Tablelands Regional Plan also then puts forward the following priority action:

Action 10.1 (Priority)

Explore the development and implementation of a sub-regional water strategy for the Capital subregion that addresses water security, infrastructure provision and allocation.

Stakeholders

- *Department of Regional NSW, NSW Office of the Cross-Border Commissioner, Water NSW, Department of Premier and Cabinet and other NSW Government agencies where relevant*
- *Yass Valley, Queanbeyan - Palerang and Goulburn - Mulwaree Councils*
- *ACT Government.*

This action is supported, and the urgency should be conveyed to the NSW Government to ensure that the housing supply anticipated and planned for in good faith in the *Bungendore Structure Plan 2048* can be realised as planned. To this end it is recommended that Council formally request advocacy and support from the NSW Government. This is particularly relevant as the State Infrastructure Strategy 2022-2042 also affirms the importance and priority of secure water supplies including in regional areas.

The State Infrastructure Strategy 2022-2042 states:

Completing strategic planning for each catchment across the State should remain an important priority of the NSW Government. The Government should also begin to plan in earnest for each new infrastructure project it identifies. It is essential that the Government progresses implementation of the State, metropolitan and regional water strategies to improve water security before the next drought occurs.

…

It is critical that water resources are shared equitably and responsibly to ensure economic growth in regions without compromising the health and resilience of natural water systems.

…

The NSW Government has also implemented the Safe and Secure Water Program which is investing in upgrades to infrastructure (such as bores, pipelines and treatment plants) that will assist LWUs with the provision of safe and reliable water for regional communities. In certain cases, this work is supported by the Public Works Advisory to ensure community needs and public health are protected.

The Safe and Secure Water Program is a source of funding for Council to pursue and support and advocacy from the NSW Department of Planning and Environment should be requested to emphasise Council's case for Bungendore, especially as it endorsed the growth planned for Bungendore by endorsing the *Bungendore Structure Plan 2048*.

Conclusion

Currently the residential growth for Bungendore that was identified by Council's adopted *Bungendore Structure Plan 2048* in February 2020 and then endorsed by the Department of Planning, Industry and Environment in September 2020, cannot be realised due to the limited future Water Allocation.

Licences issued by the NSW Government are not being able to be implemented in the subsequent Works Approvals. This means that the current Bungendore East Planning Proposal Council has been progressing through the agency consultation stage, cannot proceed. Advice to that effect has been received from the Department of Planning and Environment. It also means that the Scoping Proposals for residential purposes in Bungendore are also unable to be progressed.

Land already zoned for residential purposes and the infill residential subdivision that can occur on them under the current *Palerang Local Environmental Plan 2014*, may still be considered for development consent where a development application is lodged as the current water supply for Bungendore has conditional capacity for the existing zoned land.

9.4 Bungendore Water Security - Structure Plan/Current Planning Proposals and Scoping Proposals (Ref: ; Author: Hansen/Carswell) (Continued)

In the interim until a supplementary source of potable water is secured for the growth of Bungendore, no further Scoping Proposals, Planning Proposals or rezoning enquiries should be supported or encouraged. Proposals currently lodged with Council should not progress.

Council should receive a further report in relation to the refunding or otherwise of fees for Scoping and Planning Proposals already received by Council for proposals in Bungendore that now cannot progress.

Attachments

Attachment 1 Bungendore Structure Plan 2048 *(Under Separate Cover)*

Attachment 2 Relevant Resolutions *(Under Separate Cover)*