Sewer staging

APPENDIX A

Original Development Stage	Revised Lots	Number of Lots	Total Number of Lots	Current	Council Comments
1	1 - 176	176	176	A new 12 L/s pump station at the development + Emergency Storage of 50kL (8hrs ADWF). 580m of DN160 HDPE rising main connecting into the existing 150mm gravity sewer off Lovelle Street. 960m of 300mm sewer from MH GH01102 to SPS MV17. This new sewer will run parallel to the Whites Creek trunk sewer, providing additional capacity during wet weather events when flow can spill from MH GH01102 into the new sewer*. SPS MV17 pump capacity upgraded to 25 L/s. SPS MV17 rising main increased to DN200 HDPE. A total length of 230m.	The new pump station must be constructed and connected to council's infrastructure as per the current conditions The full size pump station and emergency storage (248kL) should be built at stage 1 at the beginning of the project <u>not added to over several years.</u> Commence concept design for sewer network upgrades for stages 2. *For consideration and comment – as briefly mentioned, there is a potential option for achieving this objective via an upsizing of the current main rather than duplication. This would deal more effectively with future growth in Moss Vale beyond this development. It may simplify approvals, but would require some agreements to be in place to manage the risks and costs to both parties. For this to work council would have to agree with the applicant on a contribution to the main upgrade (instead of funding and building a separate main) and guarantee deliver timeframes.
2	2A - 205 2B - 89	294	470	65 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF.	This to be done at stage 1 Concept design of network required Council has a strong preference not to extend the temporary STP to stage 2 due to potential environmental and health risks. While Council appreciates the issues and impacts to development staging if the upgrade of the Moss Vale STP is delayed, or does not align with potential development of Stage 2, Council is of the opinion that this issue needs to be

					addressed in the draft conditions of consent for the concept approval. In the circumstance that connection to Council's sewer system is not possible at Stage 2, any approval for extension will require a review of the existing operation of the plant and assessment of the potential risks of expanded use of the temporary STP, focussed on (but not limited to) the effects of the proposal on the community and environment. This will be part of any assessment approval of stage 2, if this circumstance arises. Expansion of the temporary STP operation will only be considered if there are no other viable alternatives.
3A & 3B	3 - 301	301	771	additional 40 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF.	This to be done at stage 1
4 & 5	4-66 5-153	219	990	Increase flow rate to 35 L/s at pump station at the development. An additional 60 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF. 2,430m of 300mm sewer from the development connecting to the 300mm sewer constructed in 2021. SPS MV17 pump capacity upgraded to 45 L/s.*	Emergency storage tank should be constructed to full capacity (248kL) at stage 1 (An additional 60 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF) *For consideration and comment –as per previous note - there is a potential option for achieving this objective via an upsizing of the current main rather than duplication. This would deal more effectively with future growth in Moss Vale beyond this development. It may simplify approvals, but would require some agreements to be in place to manage the risks and costs to both parties. For this to work council would have to agree with the applicant on a contribution to the main upgrade (instead of funding and building a separate main) and guarantee deliver timeframes.
6 & 7	6- 83	83	1073	At 2025 the only required infrastructure is an additional 40 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF.	This should be done at stage 1

Water staging

Original Development Stage	Revised Lots	Number of Lots (Stage)	Total Number of Lots	Current	Council preference
1	1 - 176	176	176	Stage 1 works consistent with Section "4.1 Proposed Servicing Strategy" of the Water Servicing Strategy report by Urban Water Solutions dated 20/04/2020. The pipework will need to be modelled to the minimum pipe size to ensure water quality is maintained for stage 1 whilst not compromising supply. The main installed will then be upgraded as further stages of the development progress Details must be provided as to how the applicant proposes to connect the ultimate and temporary water service for the estate to the existing network through the Hill Road Low reservoir system. Concept details must also be provided as to how the applicant proposes to augment the storage at this reservoir for the ultimate servicing of the estate.	Stage 1 to connect to via Hill Road reservoir zone. Location, and proposed method required (live preferably, as a shutdown requires the res to be isolated and network supply re-arranged). Possible locations – Hill Road, connection to the 525mm. Arthur Street connect to one of the trunk mains (250/300) – this second option would need to be modelled. (note: All previous modelling reports have connected directly to the reservoir/525 trunk). Water main sizing to be confirmed for early stages. Ultimate sized DN450 may cause water quality issues in earlier stages. Main to be upsized as development progresses. Connection via Yarrawa Road or Lovelle Street existing mains not allowed at this stage. – This is the Blakes Hill zone. Council requires that the Concept plan identify the long term site for the future reservoir. Council preferred site is adjacent to the Hill Rd Reservoir site. Needs same top water line and bottom water line to match the operating profile of the existing reservoir.
2	2A - 205 2B - 89	294	470		Short term strategy works must be completed prior to connection of Stage 2. Up to 480 lots may be serviced with these works. i.e. new valves in Bowral to force flow to Moss Vale and rezoning of Blakes Hill zone. Stage 2B requires additional reservoir (2.2ML for CG). Council preference to construct 10ML reservoir to maximise storage capacity at the preferred site (Hill Road). Dual 10ML reservoirs support growth beyond 2051 and minimise risk in the network with ability to supply to southern villages. Also provides greater flexibility for

					operation, maintenance and cleaning of structures. Obviously this would require a cost agreement for the CG component.
3a & 3b	3 - 301	301	771		Stage 3, 4 and 5 (up to 960 lots) require, at minimum, Stage 1 and/or Stage 2 of the Bowral to Moss Vale duplication main to be commissioned OR construction of a new booster pumping station on the existing DN375 B2MV trunk main (possible location at Eridge Park).
4 & 5	4-66 5-153	219	990		As above.
6 & 7	6- 83	83	1073		Full duplication of the Bowral to Moss Vale main to be commissioned.