11 May 2022

Director Communities and Place
Wingecarribee Shire Council
Civic Centre, 68 Elizabeth Street
MOSS VALE NSW 2571

Dear Geoff,

## CHELSEA GARDENS COOMUNGIE PRECINCT - WATER \& SEWER INFRASTRUCTURE STAGING PLAN

Premise is assisting Prime Moss Vale Pty Ltd ('Applicant') in this matter. On behalf of the Applicant we thank Wingecarribee Shire Council ('the Council') for its extensive analysis and advice since November 2021 which has been agreed to and forms the basis of the approach going forward for delivery of water and sewer infrastructure for the project.

On instructions from and on behalf of the Applicant we have prepared a water \& sewer infrastructure staging plan to service the development of the Chelsea Gardens Coomungie Precinct, being Lot 3 DP 706194 and Lot 12 DP 8660366 located at 32 Lovelle Street and 141 Yarrawa Road ('the Subject Land'). It has been prepared to enable a clear and concise strategy for delivery of sewer and water infrastructure for the stages of Chelsea Gardens and for referencing in any draft conditions of consent.

### 1.0 Background

The Applicant is the registered owner of the Subject Land.

The Applicant has lodged a concept development application ('DA') for residential subdivision of approximately 1,200 lots; including Stage 1 comprising a Torrens Title subdivision of 173 residential lots, two (2) lots for open space or drainage and two (2) residue Lots, with associated works including site clearing, tree removal, bulk earthworks and construction of new roads and public infrastructure, open space and restoration of a section of the Whites Creek on the Land ('the Development'). Council's reference no. for the DA for the Development is 20/0227.

Determination of DA 20/0227 is subject to the provisions of Wingecarribee Local Environmental Plan 2010 ('WLEP 2010'). Clause 7.10(2) of WLEP 2010 provides that development consent must not be granted unless the determining authority is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.

DA 20/0227 is also subject to the provisions of the Moss Vale Township Development Control Plan ('DCP'). Section 22: Chelsea Gardens Coomungie Precinct of the DCP specifically applies and requires a water and sewer servicing strategy for the Development.

The Council is the responsible water and sewer servicing authority for the Development.

Following detailed consultation with the Council a table of water and sewer issues, including Council's preferred approach was prepared by Council and issued to the Applicant via email on 24 December 2021 (see Appendix A). It is acknowledged that Appendix A refers to a total number of 1073 lots, which is consistent with a clarification letter by Beveridge Williams dated 3 December 2021 concerning amended stage boundaries in the revised indicative staging plan provided to Council on 3 December 2021. We note that development consent is being sought under the concept development application for up to a maximum of 1,200 residential lots, the maximum yield on which all infrastructure planning has been based. Final lot yields will be determined with detailed subdivision design, to be undertaken as part of future subdivision applications for Council's further and more detailed consideration. Council has noted this clarification and is satisfied in the understanding that 1200 residential lots is the maximum yield for infrastructure purposes.

### 2.0 The Staging Plan

The Staging Plan covers the construction and transfer to the Council of certain water and sewer infrastructure at various stages of the Development. This agreement is expected to be implemented by conditions of development consent.

The schedule at Appendix B sets out the water infrastructure to be constructed and transferred to the Council and the timing of the construction and transfer of the water infrastructure items. Note: in respect to item 2 (additional reservoir), whilst water modelling investigations confirm that the Development requires an additional 2.2 ML reservoir to service the development, the Council has expressed a preference to construct a 10ML reservoir at the preferred site (Hill Road) to maximise storage capacity at the preferred site (Hill Road). Dual 10ML reservoirs support growth beyond 2051, minimise risk in the network, have an ability to provide water supply to southern villages and provide greater flexibility for operation, maintenance and cleaning of structures. Given the above the Applicant is agreeable to the additional 10ML reservoir on a cost sharing basis with Council.

The schedule at Appendix C sets out the sewer infrastructure to be constructed and transferred to the Council and the timing of the construction and transfer of the sewer infrastructure items.
The above schedules should be read in conjunction with the following plans:

- Plan titled Stage 1 Lead-in Water Main Context Plan by JMD Development Consultants, ref: 18001W1 Rev D (Appendix D);
- Plans of proposed Stage 1 trunk main sewer works by Beveridge Williams, ref: 18001S2 Version B (Appendix E); and
- Plans of proposed Stage 2 trunk main sewer works by Beveridge Williams, ref: 18001 S 3 Version B (Appendix F).

The Staging Plan is subject to the following matters:

- the proposed cost-sharing basis for the additional 10 ML water reservoir as described above.
- that the sewer and water infrastructure nominated under the Strategy is not deliverable unless a development consent is granted consistent with DA 20/0227 as currently lodged for approval.
- In the event of a refusal (including on appeal) the Strategy is discontinued.

Please contact either myself or the Applicant with any questions.
Your sincerely,


Paul Hume
Senior Town Planner

Appendices

| $\qquad$ | Revised Lots | Number of Lots | Total Number of Lots | Current | Council Comments |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1-176 | 176 | 176 | A new $12 \mathrm{~L} / \mathrm{s}$ pump station at the development + Emergency Storage of 50 kL ( 8 hrs ADWF). 580 m of DN160 HDPE rising main connecting into the existing 150mm gravity sewer off Lovelle Street. <br> 960 m of 300 mm 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*. <br> SPS MV17 pump capacity upgraded to $25 \mathrm{~L} / \mathrm{s}$. SPS MV17 rising main increased to DN200 HDPE. A total length of 230 m . | The new pump station must be constructed and connected to council's infrastructure as per the current conditions <br> The full size pump station and emergency storage ( 248 kL ) should be built at stage 1 at the beginning of the project not added to over several years. <br> Commence concept design for sewer network upgrades for stages 2. <br> *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 | $\begin{gathered} 2 \mathrm{~A}-205 \\ 2 \mathrm{~B}-89 \end{gathered}$ | 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 <br> Concept design of network required <br> 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. <br> 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 A \& 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 | $\begin{gathered} 4-66 \\ 5-153 \end{gathered}$ | 219 | 990 | Increase flow rate to $35 \mathrm{~L} / \mathrm{s}$ at pump station at the development. <br> An additional 60 kL of emergency storage at the main pump station to satisfy the design requirement of 8 hours storage at ADWF. <br> $2,430 \mathrm{~m}$ of 300 mm sewer from the development connecting to the 300 mm sewer constructed in 2021. SPS MV17 pump capacity upgraded to $45 \mathrm{~L} / \mathrm{s}$.* | Emergency storage tank should be constructed to full capacity ( 248 kL ) 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) <br> *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 <br> 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 rearranged). <br> 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). <br> 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. <br> Connection via Yarrawa Road or Lovelle Street existing mains not allowed at this stage. - This is the Blakes Hill zone. <br> 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 | $\begin{gathered} \hline 2 A-205 \\ 2 B-89 \end{gathered}$ | 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. <br> Stage 2B requires additional reservoir (2.2ML for CG). <br> 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 <br> would require a cost agreement for the CG component. |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- |
| $3 \mathrm{a} \& \mathrm{bb}$ | $3-301$ | 301 | 771 |  | Stage 3, 4 and 5 (up to 960 lots) require, at minimum, Stage 1 and/or <br> Stage 2 of the Bowral to Moss Vale duplication main to be <br> commissioned OR construction of a new booster pumping station on <br> the existing DN375 B2MV trunk main (possible location at Eridge Park). |
| $4 \& 5$ | $4-66$ <br> $5-153$ | 219 | 990 |  | As above. |
| $6 \& 7$ | $6-83$ | 83 | 1073 |  | Full duplication of the Bowral to Moss Vale main to be commissioned. |


| Column 1 | Column 2 | Column 3 | Column 4 |
| :---: | :---: | :---: | :---: |
| Item | Public Purpose | Manner \& Extent | Timing/ Works Completion Date |
| A. Carrying out of Work |  |  |  |
| 1. Connection to existing Hill Road Lower Reservoir. | Water Services | Connect directly to the existing water main infrastructure in the vicinity of the Lower Reservoir, with final connection details to be determined by water modelling and in consultation with Council. <br> To be delivered by Applicant. | Work is to be completed prior to the issuance of the Subdivision Certificate which creates the 1st residential lot. |
| 2. Construct additional 10ML reservoir | Water Services | To be constructed in the vicinity of existing Hill Road reservoirs with final location to be determined in consultation with Council. <br> To be delivered under a joint funding and delivery arrangement with Council to be determined on the basis of the development requiring 2.2 ML of the additional 10ML water storage. | Work is to be completed and commissioned prior to the issuance of the Subdivision Certificate which creates the $382^{\text {nd }}$ residential lot. |

## APPENDIX B <br> SCHEDULE OF ITEMS - WATER INFRASTRUCTURE

| 3. Construct Stage 1 and / or Stage 2 of Bowral to Moss Vale water main duplication OR new booster pumping station on the existing DN375 B2MV trunk main. | Water Services | Option to be determined by water modelling and in consultation with Council. <br> To be delivered in accordance with Council's Water and Sewer Development Servicing Plan. | Work is to be completed and commissioned prior to the issuance of the Subdivision Certificate which creates the $471^{\text {st }}$ residential lot. |
| :---: | :---: | :---: | :---: |
| 4. Completion of Bowral to Moss Vale water main duplication | Water Services | Final design to be determined by in consultation with Council. <br> To be delivered by in accordance with Council's Water and Sewer Development Servicing Plan. | Work is to be completed and commissioned prior to the issuance of the Subdivision Certificate which creates the 961 ${ }^{\text {st }}$ residential lot. |
| B. Dedication of Land |  |  |  |
| 5. Part Lot 12 DP 866036. | Water Services | Dedication to Council of Land associated with construction of additional 10ML reservoir (Works item 2). <br> To be delivered by Applicant. | Land to be dedicated prior to the issuance of the Subdivision Certificate which creates the $382^{\text {nd }}$ residential lot. |

SCHEDULE OF ITEMS - SEWER INFRASTRUCTURE

| Column 1 | Column 2 | Column 3 | Column 4 |
| :---: | :---: | :---: | :---: |
| Item | Public Purpose | Manner \& Extent | Timing/ Works Completion Date |
| A. Carrying out of Work |  |  |  |
| 1. <br> (a) Construction of sewer pump station SPS1 with emergency storage of 248KL (8 hours Average Dry Weather Flow) with flow rate of 12L/s. <br> (b) Construction of 580 m of a rising main (DN160 HDPE) connecting with the existing 150 mm gravity main in Lovelle Street. <br> (c) Construction of 960 m of a 450 mm gravity main connecting MH GH01102 to SPS MV17. <br> (d) Upgrading of SPS MV17 pump capacity to 25 L/S. <br> (e) Upgrading of 230 m of rising main from SPS MV17 to DN200 HDPE. | Sewer Services | Final designs to be determined by and in consultation with Council. <br> To be delivered by Applicant. | Work is to be completed prior to the issuance of the Subdivision Certificate which creates the 1st residential lot. |

## APPENDIX C <br> SCHEDULE OF ITEMS - SEWER INFRASTRUCTURE

| 2. <br> (a) Increase flow rate capacity at SPS1 to 35L/s. <br> (b) Construction of an additional $2,430 \mathrm{~m}$ of 450 mm gravity main. <br> (c) Increase flow rate capacity of SPS MV17 to 45L/s. | Sewer Services | Final designs to be determined by and in consultation with Council. <br> To be delivered by Applicant. | Work is to be completed prior to the issuance of the Subdivision Certificate which creates the $772^{\text {nd }}$ residential lot. |
| :---: | :---: | :---: | :---: |
| B. Dedication of Land |  |  |  |
| 1. Part Lot 12 DP 866036. | Sewer Services | Dedication to Council of Land associated with construction of sewer pump station SPS1 (Works item 1(a)). <br> To be delivered by Applicant. | Land to be dedicated prior to the issuance of the Subdivision Certificate which creates the 1st residential lot. |








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\begin{abstract}

Notes: this plan and longitudinal section has been prepar USING LEVELS INTERPOLATED FROM LDAR DATA AND
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DEEALS
PLAN OF STAGE 2 TRUNK SEWER WORKS Associated with chelsea gardens DEVELOPMENT, YARRAWA ROAD MOSS VALE

|  | NOTES: <br> THIS PLAN and LONGITUDINAL SECTION HAS been prepared USING LEVELS Interpolated from lidar data and LOCATION OF SERVICES AS PROVIDED BY WINGECARRIBEE SHIRE COUNCIL AND/OR DIAL BEFORE YOU DIG INFORMATION only and is for planning purposes only. all levels and pipe grades are subject to CONFIRMATION OF LEVELS BY SURVEY <br> 3. Location of the proposed sewer pipe relative to EXisting services has yet to be confirmed. all design detalls including location, level and length of pipe is sub Ject to confimation of location and level of EXISTING SURFACES AND SERVICES |
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ASSOCIATED WITH CHELSEA GARDENS ASSOCIATED WITH CHELSEA GAR
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