

Memo

To:	The Reporting Planner – Rebecca		
Cc:	Paul O'Shaughnessy,		
Date:	28 April 2021	File Ref:	RMS19006
Subject:	RMS 19006 WILLOWBANK DEVELOPMENT		

Specialist Report NCC 3 Waters

This specialist report provides an assessment of the three waters infrastructure that is provided to support the application at 16 Willowbank Ave, Te Awa. I have reviewed the application material, section 92 information and appendices.

The application is a staged subdivision consent; stage 1 is a straightforward fee-simple subdivision, with stages 2-8 being designed within a gated community. The Roding and services are designed to Code of Practice (CoP) Standards, with the three waters infrastructure to be vested to Council, and the Roding within Stages 2 – 8 remaining in private ownership managed by a resident's society. Easements in gross will be registered on the title to provide access to Council for the three waters infrastructure.

Wastewater

Proposed positioning of the wastewater pump station at the intersection of the development and Eriksen Road is problematic. While the requirement for the wastewater pump station to be in a separate Lot is technically met, it does not meet the other requirements in the CoP, by providing a safe work site for operators or public, buffer zone, parking and manoeuvring for operator vehicles and is likely to impinge on the sight lines of the intersection. No evidence has been offered to confirm sightlines. The wastewater operators will need to access the pump for operation and maintenance tasks with small trucks and/or utes. There are also residual concerns regarding the reverse sensitivity of the pump station, however I am confident that these can be resolved through conditions of consent.

Two connection points shall be provided to allow for operational flexibility and network maintenance downstream of the development, where flows to be diverted between the existing pressure main and existing gravity wastewater network.

Water

A dwelling occupancy of 1.25 has been used for the water demand calculations for the stages 2-8. No justification has been provided for using this rate which is lower than the 2.5 dwelling occupancy rate in the code of practice.

Connection of the development shall be from the local bulk main (existing and proposed) DN200 PVC water main on the eastern side of Eriksen Road. Modelling of the water network by consultants Stantec has indicated this this connection location is suitable along with other upgrades in the network.

If water assets are private, property backflow and flow metering will be required at the boundary for the whole development in accordance with the CoP. This would require

backflow and flow metering arrangement at or near the entrances into the development. Water use will be monitored by the flowmeter and be billed to the residents/property association based on the amount used and current fees and charges set by NCC.

The existing water bores (could be up to 4 bores) shall be decommissioned in accordance with requirements and as accepted by HBRC. This is to minimise the risk of cross contamination with the Napier water supply network.

Stormwater

Stormwater drains into the open drain at various connection locations along the existing stormwater designation bounded by the property with the development and properties fronting Eriksen Road draining towards Eriksen Road. This maintains the catchment boundary between public and private areas.

Stormwater secondary flow paths (or overland flow paths) shall be protected by easements in gross in favour of NCC where they are outside drainage or road reserves. This assists to ensure that the original design function of the secondary flow path is not compromised with the passing of time.

No finished floor or finished ground levels are provided to demonstrate the flooding risk has been managed. However, I am confident that this can be resolved through conditions of consent.

The application does not offer any stormwater treatment for the long term other than (assumed) in road stormwater sumps. Stormwater treatment to treat and capture at least the first flush and gross pollutants would be appropriate for residential subdivision.

Recommended Conditions

I have provided conditions for Stage 1 due to the lots being serviced through connections to council infrastructure.

I have not been able to provide full conditions for stages 2-8 due to not being able to accept the ownership structure and access arrangements. The stormwater conditions provided are resultant of not being located under a privately owned transport corridor.

Stage 1

General Infrastructure

- 4.1 All new infrastructure for water, wastewater, stormwater, roads and access is to be designed and constructed in accordance with the requirements of the current Code of Practice for Subdivision and Land Development and the Te Awa Structure Plan, except where a specific dispensation has been granted as part of this Resource Consent.

*Advice Note: The current resource consent is located within Stage 5 of the Te Awa Structure Plan area, which represents 'out of stage' development. In accordance with Design Outcome 5 (Appendix 29A) the developer is required to fund the full cost of infrastructure where **additional cost** would be imposed on Council through provision of services in advance of anticipated staged development. This 'funding' is referenced by Council as a*

'capital contribution' and is additional to any financial contributions payable under Design Outcome 18 and Chapter 65 of the District Plan.

The Capital Contribution can be undertaken by either:

- i) Monetary payment to Council to allow completion of the works in advance; or*
- ii) Physically undertaking the required works (where the value of such works is agreed with Council in advance of said works being undertaken)*

*Noting such 'capital contributions' represent provision of standard 'Council services' but **in advance**, such payments are subject to reimbursement from Council at the time when such works would have been required had the development occurred in the anticipated staged manner.*

4.2 All works shall be subject to specific detailed design.

4.3 The full development stages 1-8 shall be designed and allowed for at Stage 1.

4.4 The consent holder is required to obtain Engineering Approval for any new Council services and/or formation of assets (i.e. road frontage upgrades) required to service each Stage of the subdivision. The Engineering Approval shall be obtained prior to commencement of physical works.

Advice Note: The consent holder is advised that a detailed Master Services Plan is in the process of being developed as a joint effort between Council's Infrastructure Services Team and developers within the Te Awa Structure Plan area. To this end, it is recommended that the consent holder liaise with the Infrastructure Services Team prior to commencing detailed Engineering Approval design works.

4.5 Clash detection between proposed and existing services needs to be undertaken to identify any issues.

4.6 That as-built plans and documents (including RAMM information) showing the construction of all road engineering works associated with the frontage upgrades, including street lighting, street planting, road markings and signage, in accordance with the requirements the Napier City Council Engineering Code of Practice, shall be submitted to Council once construction is completed and shall be certified as a complete and correct record by a Chartered Professional Engineer prior to the issue of the 224 Certification for each stage of the subdivision.

- 4.7 Any infrastructure that impacts the typical service layout within the road corridor for example, but not limited to, electrical transformers, water main backflow preventers and flow meters, shall be inset into a property footprint, but designated as road reserve with suitable space provided for construction, operations and maintenance.

Stormwater

- 4.8 An earthworks sediment control plan shall be submitted at every stage of development with a draft plan provided at engineering approval and shall be acknowledged by NCC and to the satisfaction of NCC.
- 4.9 All earthworks and sediment control shall comply with "Erosion and sediment control Guide for Land Disturbing activities in the Auckland Region", June 2016 Guideline document 2016/005.
- 4.10 Stormwater calculations as per the Code of Practice for 10 year and 50 year return period shall be provided to the Napier City Council at Engineering Approval stage, allowing for tail water levels provided by NCC.
- 4.11 The consent holder shall ensure that the design of the stormwater system shows secondary flow paths with levels and floor levels that will protect dwellings from flooding in a 50-year return period event. The secondary flow paths shall be legally protected by easement in gross (where they are not in a road or drainage reserve) and maintained.
- 4.12 All stormwater is to be controlled in terms of the Code of Practice for Subdivision and Land Development and E1 of the Building Code.
- 4.13 The consent holder shall pipe the existing open stormwater drain located in the road reserve immediately to the east of the proposed subdivision in accordance with the Te Awa Structure Plan (*refer Appendix 29D – Te Awa Stormwater Network*). The pipe work shall be designed to cater for the stormwater from the whole development site and any servicing required for the Te Awa Structure Plan area beyond the proposed development. Stormwater calculations shall be provided for the various return periods detailed within the Code of Practice.
- 4.14 The approved point of connection for stormwater is the Cowshed drain branch of the Te Awa detention pond into the proposed west side of Eriksen Road.
- 4.15 Property connections shall be to the kerb and channel and not directly to the stormwater pipeline.

Wastewater

- 4.16 Each lot is to have a separate connection to Councils wastewater main.

- 4.17 The consent holder shall provide wastewater calculations at the Engineering Approval Stage. If the consent holder includes use of the existing sewer network draining to the Hurunui Pump Station catchment at Eriksen Road, evidence will be required that sufficient existing capacity is available to service the 19 lots of this subdivision and Stage 6 of the Te Awa Structure Plan (in conjunction with the existing wider catchment also utilising this pump station).
- 4.18 The full gravity wastewater network shall be checked to ensure that the all areas can be serviced within the proposed catchment and finished ground levels.

Water

- 4.20 The consent holder shall provide a looped water main by:
- Extending the existing DN200 PVC main north along the eastern road berm of Eriksen Road for the extent of the road frontage of the development.
 - Providing a rider main along the western side of Eriksen Road within the berm for the extent of the road frontage of the development, with connections to the DN200 PVC on the eastern side of Eriksen Road at the northern and southern ends, and any intermediate feeds if necessary.
- 4.21 The consent holder shall provide a future connection(s) into the proposed development beyond the sections on the road frontage by providing a suitably sized connection(s) from the DN200 PVC main.
- 4.22 Each lot is to have a separate water connection in accordance with the Code.
- 4.23 Calculations required to confirm pipe sizes need to be checked against predicted demand and firefighting capacity.
- 4.24 Any existing water bores shall be decommissioned in accordance requirements and as accepted by HBRC.
- 4.25 All lots shall have fire protection in accordance with NZS PAS-4509

Advice Note: Napier City Council requires fire protection to FW2.

Stage 2-8

Stormwater

- 4.26 An earthworks sediment control plan shall be submitted at every stage of development with a draft plan provided at engineering approval and shall be acknowledged by NCC and to the satisfaction of NCC.
- 4.27 All earthworks and sediment control shall comply with “Erosion and sediment control Guide for Land Disturbing activities in the Auckland Region”, June 2016 Guideline document 2016/005.
- 4.28 Stormwater treatment shall be provided to allow for the at least the first flush, gross pollutant capture.
- 4.29 Full design calculations shall be completed, with tail water levels provided by Napier City Council.
- 4.30 Secondary flow paths shall be protected by easements in gross in favour of Napier city Council where they are outside drainage reserve or roads.
- 4.31 No obstructions shall be placed in the secondary flow path, unless expressly approved by Napier City Council.
- 4.32 The consent holder shall ensure that the design of the stormwater system shows secondary flow paths with levels and floor levels that will protect dwellings from flooding in a 50-year return period event. The secondary flow paths shall be legally protected by easement in gross (where they are not in a road or drainage reserve) and maintained.
- 4.33 The 40m wide drainage reserve shall be vested as drainage reserve.
- 4.44 The proposed open drain shall have at least the capacity flow and volume noted in the BECA Te Awa Structure Plan report.
- 4.45 Property connections shall be to the kerb and channel and not directly to the stormwater pipeline.



Gary Schofield

TEAM LEADER 3 WATERS STRATEGIC PLANNING