15 October 2026

Lower Hutt City Council
Proposed District Plan
Hearing Stream 7 – Subdivision

Submission to Hearings Commissioners

1. Submitters Details

Name: David Gibson
For Survey & Spatial New Zealand, Wellington Branch (S+SNZ)
Submitter #466

Address: PO Box 588
Wellington 6140

Email: nzisplanning.wgtn@gmail.com
Phone: (021) 976 498

2. Introduction

S+SNZ have submitted on the following standards for the Subdivision chapter:

- Standard SUB-S4 (water supply);
- Standard SUB-S5 (wastewater);
- Standard SUB-S6 (stormwater).

Subdivision Standards: References to "Regional Standard for Water Services 2021"

S+SNZ sought that the proposed references within the subdivision standards to compliance with the Regional Standard for Water Service 2021 (RSWS) should be removed. Instead, the standards should refer to a new proposed Appendix, which would include a list of the specific requirements for new service connections (water supply, wastewater and stormwater) to new allotments that are based on the RSWS.

The S+SNZ submission expressed a view that the new Appendix would be the same as the Appendix 17 proposed by WCC under their Plan Change 1, which was the result of a joint witness statement prepared by WCC, Tiaki Wai and S+SNZ.

I note that Wellington Water (Tiaki Wai) did not make a primary submission on the Subdivision Chapter and did not make a further submission opposing or supporting the S+SNZ submission.

FENZ (#374) supports standard SUB-S4 (water supply) in respect of the reference to compliance with SNZ PAS 4509:2008. Laura Skilton (#314) submitted on SUB-S4, SUB-S5 and SUB-S6 seeking that the standards refer to the relevant water board rather than the RSWS. Go Architecture Ltd (#331) also submitted seeking the addition of a provision that would include any revisions of the external documents referenced in the subdivision chapter.

The rebuttal evidence of Hamish Wesney now supports the S+SNZ submission to adopt a similar Appendix to the proposed Three Waters Appendix for Hearing Stream 6, and make the necessary editing changes to standards SUB-S4, SUB-S5 and SUB-S6.

Three Waters Chapter – Joint Witness Statement (Hearing Stream #6)

S+SNZ made similar submissions on the Three Waters rules to replace the references to the RSWS with a specific appendix to the Proposed District Plan. The panel for Hearing Stream #6 asked that S+SNZ and Tiaki Wai conference together with HCC Officers with the intention of preparing a joint witness statement to agree on the provisions that would be contained within the appendix.

During the conferencing, it became apparent that there were differences between the wording and structure of the WCC three waters rules compared to the HCC rules. The differences meant that the WCC Appendix 17 could not be adopted verbatim for use as the proposed appendix for the HCC Proposed District Plan. Accordingly, a new (and somewhat streamlined) version of the Appendix has been agreed for the Three Waters Chapter.

Subdivision Appendix for Three Waters Compliance

From my recent experience with the appendix for the Three Waters Chapter, it appears likely that the Three Waters Appendix would not be completely suitable for use for the

Subdivision Chapter. Thus an additional Appendix would be needed for the Subdivision Chapter.

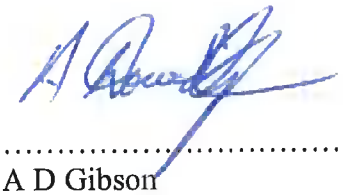
As the HCC proposed rules (i.e. SUB-R1, SUB-R2, SUB-R3 & SUB-R4) that require compliance with standards SUB-S4, SUB-S5 and SUB-S6 are very similar to the WCC rules and standards, then it would be appropriate to use the WCC Appendix 17 as the relevant compliance document, rather than the proposed HCC Three Waters Appendix.

I have attached a version of the proposed subdivision appendix.

Accordingly, the changes recommended by Mr Wesney in his rebuttal evidence would need to be amended to refer to a specific subdivision appendix, such as Appendix SUB-APP1.

I am happy to answer any questions.

Signature of person making submission.



..... Date 15 / 10 / 2026

A D Gibson

On behalf of Survey and Spatial New Zealand (Wellington Branch)

SUB1-APP1 – Three Waters Connections

1. *Stormwater*

1.1 Connections

1.1.1 Lateral connections to the existing public stormwater network

The following applies to lateral connections to public mains:

a. Private connections must be a minimum size of 100 mm nominal diameter.

b. A vacant lot must be serviced by a separate connection to the public network.

c. Each proposed residential unit on a lot must be serviced by a separate connection to the public system, except that:

   i. Unit-titled developments are exempt from this criterion and may be serviced by a single, suitably-sized connection.

d. Each connection must be capable, as a minimum, of conveying the design level of service.

e. Industrial and commercial lots must have a minimum nominal diameter of 150 mm and must connect to a public stormwater pipe.

f. Connections provided to lots must be at sufficient depth so that they can be extended to the building platform in a manner compliant with the New Zealand Building Code (NZBC).

g. Where the connection is to an empty lot, the terminal connection must be:

   i. Laid at least 1 m inside and within the boundary of the property.

   ii. End in a method that can accept an approved spigot.

   iii. Pipe colour-coded green, ensuring that if paint is used any rubber ring gap is taped over to protect it from the paint.

   iv. Be blanked off or sealed with a removable cap colour-coded green.

   v. Be marked with a securely embedded H4 treated timber post, with at least 600 mm protruding above ground, and the top 100 mm painted green.

h. Connections larger than 150 mm must be connected to the public system via a manhole only. Connections must be made at angles 90 degrees or less to the direction of the flow.

i. Connections 150 mm or less can be made directly to a stormwater main.

j. Connections must not be made to a public pipe deeper than 3.5 m to the crown

k. A private connection cannot cross an adjacent property without the permission of the adjacent property owner. Where permission is obtained, in writing, an easement must be obtained in favour of the connection's lot.

1.1.2 Lateral connections that require extensions/upgrades to the public stormwater network

In addition to the lateral requirements under 1.1.1, where a private connection to the public stormwater network requires an extension to, or upgrade of, the public stormwater network, the design requirements of 1.2 are also to be complied with.

1.1.3 On-site soakage stormwater disposal

Where an on site soakage system is proposed (i.e. no connection to the public network) the design requirements under section 1.2 are to be complied with.

1.2 Design Requirements for 1.1.2 and 1.1.3

1.2.1 Climate change

All systems must be designed to accommodate the predicted impacts of climate change in terms of hydrology (refer to the Wellington Water Ltd (Tiaki Wai Ltd) Reference Guide for Design Storm Hydrology, which is available on the Tiaki Wai Ltd website) and design sea levels allowing for climate change and predicted land subsidence to 2130 as in Table 1 below.

Table 1 – Design sea levels allowing for climate change

Mean high water springs (NZVD2016) (m)	0.537 m
+ Projected sea level rise (m)	1.23 m
+ Land subsidence (m)	0.47 m (York Bay)
+ Barometric allowance (m)	0.25
= Design sea level (NZVD2016) (m)	**2.49**

1.2.2 Primary system level of service

The primary system typically comprises piped drainage systems, formed drainage channels and soakage systems. Each system is to be designed:

a. To accommodate the design storm to a set level of service as defined by the annual exceedance probabilities (AEPs) listed in Table 2.
b. To the General Catchment Level of Service, and then demonstrate that the roads, sections and other considerations internal to the catchment are not inundated when the general catchment is subjected to the assigned internal event for each consideration.
c. The catchment is the entire drainage area above the design point of concentration.

Table 2 – Primary level of service (AEP)

General catchment level of service	
Residential	10%
Commercial/industrial	10%
Rural/rural residential	10%
Internal level of service for roads	
Primary arterial	1%
Secondary arterial	5%
Local/minor	20%
Bridges	2%
Internal level of service for sections	
Open space/reserve	50%
Private yards	50%
Car parks	20%
Internal level of service for others	
Where no secondary path is available	1%
Key public facilities, hospitals, substations etc.	1%
Wastewater disposal fields	**5%**

1.2.3 Secondary system level of service

The secondary system comprises secondary flow paths typically overland and along carriageway surfaces. The secondary systems must:

a. Follow the required level of service for secondary systems as outlined in **Table 3**.

b. Follow the maximum stormwater flow depths and velocities for access roads as outlined in **Table 4**.

Table 3 – Secondary system level of service

Building floors	***Design Storm Event (AEP)***
Housing and communal residential and communal non-residential	1%
Commercial	1%
Industrial	1%
Rural residential	1%
Roads	***Design Storm Event (AEP)***
Primary arterial*	1%
Secondary arterial*	5%
Local/minor*	20%
Bridges and major culverts	1%

* Flooding is allowed at these levels of service, but the road must be passable by light vehicles. The table below indicates acceptable depths and flow velocities as measured at the road centreline.

Table 4 – Maximum stormwater flow depths and velocities for access roads

	Max depth	**Max velocity**
Primary/secondary arterial road	0.1 m	2 m/s
Local/minor road	0.2 m	2 m/s
Steep local/minor roads	0.1 m	3 m/s
Walkways only	0.4 m	1 m/s

1.2.4 Secondary flow path

A secondary flow path is the path the stormwater would take if the primary drain was rendered inoperable or is overwhelmed by a flow exceeding the drain's design capacity. The secondary flow path must:

a. Be shown on the submitted design and subsequent as-built plans, including demonstrating that existing and proposed residential units are not affected by the secondary flow during the design secondary storm event.

b. Include a secondary inlet (if required by Tiaki Wai Ltd) where the primary drain's capacity is large and the consequence of overflow is great (primary flow is greater than secondary flow path capacity).

c. Convey the secondary system level of service event, less the design capacity of the primary system, regardless of secondary intakes.

2. *Wastewater*

2.1 Connections

2.1.1 Lateral connections to the existing wastewater network

The following applies to lateral connections to the wastewater network:

a. A vacant lot must be serviced by a separate connection to the public network

b. Each proposed residential unit on a lot must be serviced by a separate connection to the public main, except that:

    i. Unit titled developments are exempt from this criterion and may be serviced by a single, suitably sized connection.

c. Connections provided to the lot boundary must be at sufficient depth that they can be extended to the building platform in a manner compliant with the NZBC.

d. Minimum grades for private connections up to the property boundary must be as outlined in Clause G13 of the NZBC, but with a minimum grade of 1:60.

e. A minimum nominal diameter for a lateral connection must be 100 mm.

f. Laterals must be no deeper than 600 mm below ground level at the boundary.

g. An inspection eye must be installed near the property boundary (on the public side of the boundary with the lot), comprised of either:

    i. Proprietary inspection chamber with minimum 150 mm riser and screwcap fitting within:

        1. Manifold box with red lid marked 'SS' in non-trafficable areas, or
        2. Ductile iron lamp-hole frame and cover on a concrete footing

    Or:

    ii. On steep property frontages with an exposed lateral pipe, the inspection eye may be replaced with a sealed inspection junction point.

h. Connections must be made at a manhole in the following situations:

    i. Where the lateral connection is 225 mm or greater.

    ii. Where the public main is identified as a trunk main, either on existing GIS network plans or as required by Council.

i. Connections must not be made to a public sewer pipe deeper than 3.5 m to the crown, and instead:

    i. A shallower public branch sewer main must be provided to collect private connections before joining the deeper main at a manhole.

j. Where the connection is to a vacant lot, the terminal connection must be:

    i. Laid at least 1 m inside and within the boundary of the property.

    ii. End in a method that can accept an approved spigot.

    iii. Pipe colour-coded red, ensuring that if paint is used any rubber ring gap is taped over to protect it from the paint.

    iv. Be blanked off or sealed with a proprietary removable cap colour-coded red.

    v. Be marked with a securely embedded treated timber post, with at least 600 mm protruding above ground, and the top 100 mm painted red.

k. A private connection cannot cross an adjacent property without the permission of the adjacent property owner. Where permission is obtained, in writing, an easement must be obtained in favour of the connection's lot.

l. Where four or more lots / residential units or non-residential buildings are proposed. the public wastewater network must be of capacity suitable for carrying peak flows anticipated during the lifetime, without surcharge and with due allowance for ground and surface water infiltration and inflow

2.1.2 Lateral connections that require extensions/upgrades to the public wastewater network

In addition to the lateral requirements under 2.1.1, where a private connection to the public wastewater network requires an extension to, or upgrade of, the public wastewater network, the design requirements of 2.2. are also to be complied with.

2.2 Design Requirements for 2.1.2

2.2.1 Level of service

The wastewater network must:

a. Consist of an underground piped reticulation system where an adjacent public reticulation is available.

b. Be of capacity suitable for carrying peak flows anticipated during the lifetime, without surcharge and with due allowance for ground and surface water infiltration and inflow.

c. Be designed to minimise blockage and sediment deposition.

g. Adequately convey wastewater to an approved discharge point.

h. Not be connected to the stormwater network. Wastewater systems must be designed and constructed to minimise the risk and extent of stormwater inflow and infiltration.

i. Be designed to prevent floodwaters entering the network where the wastewater network is within a flood plain, or secondary flow path.

j. Allow for gully traps to be installed at a level that:

  i. prevents unwanted wastewater discharge by being a minimum of 150 mm above the nearest opening (e.g. manhole) in the wastewater network; and

  ii. prevents stormwater inflow by being above the 1% AEP flood event level, or at the minimum clearance allowable by the NZBC based on the overflow level of the lowest plumbing fixture.

2.2.2 Population

The following applies to the population for wastewater design:

a. The population to be used for wastewater design in typical residential developments must be based on a people per-residential unit basis.

b. Where the proposed number of-residential units cannot be determined, the minimum density per hectare (ha), outlined in Table 6, must be adopted.

Table 6 – Residential development population density

	Population per residential unit	**Minimum density people per ha***
Outside the City Centre Zone	3.1	General Residential Zone or Medium Density Residential Zone – 140 High Density Residential Zone – 400 Metropolitan Centre Zone, Local Centre Zone or Neighbourhood Centre Zone - 1200
City Centre Zone	3.1	400/ha of floor area**

* Gross area including streets but excluding reserves.

** Assuming 3m between floor levels, the building heights at the height thresholds specified in CCZ-S1, and 80% site coverage. Ninth floors and above can assume 50% occupancy.

3. *Water Supply*

3.1. Private Connections

3.1.1. Residential Service Connections

The following applies to residential service connections:

a. Each residential unit or vacant lot, must be provided with a separate, single potable service connection from the public main up to and including the agreed point of supply.
   i. Unit titled developments are exempt from this requirement in a) and may be serviced by a single suitably sized service connection.
b. Front sections (or residential units with individual street frontage) must have the point of supply located adjacent to the street boundary.
c. For properties supplied from a public main in a right-of-way or private land, the service valves must be located in a shared property.
d. Service valves (or meters) must not be located in driveways or on-site vehicle parking and manoeuvring areas.

3.1.2. Commercial Service Connections

Each commercial property or vacant lot must:

a. be provided with a separate, single suitably sized potable service connection from the public main up to and including the agreed point of supply
b. Include backflow prevention.

3.2. General Requirements

3.2.1. Functionality

The functionality of the water supply system must achieve the following:

a. The network must provide firefighting flows and pressures in compliance with SNZ PAS 4509, and during firefighting scenarios, the pipeline pressure in elevated areas of water distribution zone must remain positive.
b. Private connections must not be directly to a trunk main.
c. Pressure to all customer points of supply, in a reticulated network, must be provided by gravity from a public storage reservoir.

3.2.2. Levels of service

3.2.2.1. Network pressure

Network pressure at the connection point must comply with the following clauses:

a. The maximum pressure in any part of the water supply network must not exceed 90 m head of pressure.
b. The minimum pressure available at the downstream outlet of the point of supply must not be less than 25m head of pressure measured from the bottom water level of the reservoir .
c. The water supply network must be capable of providing the minimum levels of service at peak demand, as calculated in Section 3.3.1 Peak demand.
d. The water pressure must not be less than 10 m head of water at the final level on the building platform.

3.2.2.2. Reservoir volume

The water supply reservoir must have sufficient storage capacity to achieve the storage volume outlined in Table 8.

Table 8 – Mandated levels of service for storage volumes

Method	Storage (L/person)	Scenario
1	700	Where actual consumption is not known such as new developments
2	2 x Average Day Demand	Used when demand statistics are available from Tiaki Wai Ltd. The designer to target the greater of the volume determined by each method. Consult with Tiaki Wai Ltd to determine critical users and their consumption.
3	Maximum Day Demand + 20% + SNZ PAS 4509 firefighting requirements	
4	(20 L/person/day for 23 days + critical users allowance) x 1.43	