

Before the Selwyn District Council

Under the Resource Management Act 1991 (**RMA**)

In the matter of Plan Change 60 to the Selwyn District Plan [Kirwee]

**Brief of evidence of Perri Nicole Unthank on behalf of Fire and
Emergency New Zealand submitter #6**

Date: 23 July 2020

Qualifications and experience

- 1 My full name is Perri Nicole Unthank. I am a Planner and hold the position of Senior Planner at Beca Limited (Beca). I hold a Bachelor of Planning (honours) from the University of Auckland obtained in 2009. I am a Member the New Zealand Planning Institute.
- 2 I have practised as a planner for 10 years. During that period I have undertaken a wide range of planning projects including whole District Plan reviews as well as plan changes, land use and development consenting, designations and public notification processes.
- 3 I have been engaged by Fire and Emergency New Zealand ("Fire and Emergency") since 2010 to provide a resource management monitoring service and planning advice on resource management applications including notified consents and Plan Changes. I am providing planning evidence on behalf of Fire and Emergency for Plan Change 60 in relation to the rezoning of land in Kirwee.
- 4 I confirm that I have read the submission by Fire and Emergency in relation to Plan Change 60 (District Plan).

Executive summary

- 5 In summary, the key points addressed in my evidence are:
 - 5.1 That water supply for firefighting purposes in areas where the reticulated supply is insufficient should be provided for within the District Plan provisions and that these should apply when subdivision creates sites capable of containing a building and new buildings are constructed.
 - 5.2 The New Zealand Fire Service Firefighting Water Supplies Code of Practice: SNZ PAS 4509:2008 (Code

of Practice) is the New Zealand Standard that sets out the requirements for firefighting water supply and therefore, it is appropriate to refer to this standard.

Code of conduct

- 6 Whilst this is a first instance hearing, I have read the code of conduct for expert witnesses in the Environment Court practice note. I agree to comply with this code. The evidence in my statement is within my area of expertise, except where I state that I am relying on the evidence of another person. I have not omitted to consider material facts known to me that might also detract from the opinions I express.

Scope of Evidence

- 7 My evidence deals with:
- 7.1 Fire and Emergency's submission in relation to Plan Change 60; and
- 7.2 Evidence provided by the Selwyn District Council and its technical experts on Plan Change 60.

Fire and Emergency's Submission

- 8 Fire and Emergency's interest in Plan Change 60 is underpinned by its principal objectives to reduce the incidence of unwanted fire, the associated risk to life and property and to prevent or limit damage to property, land and the environment as provided by the Fire and Emergency New Zealand Act .
- 9 To achieve this, Fire and Emergency requires an appropriate water supply and access to the water supply to enable efficient and effective responses to fire emergencies. Without an adequate firefighting water supply and access to it, firefighters may not be able to effectively protect life and property, including those beyond the subject site's boundaries.

- 10 In summary, Fire and Emergency's submission points addressed in this brief of evidence are:
- 10.1 There are no requirements within the District Plan to provide a firefighting water supply;
 - 10.2 There is no certainty provided that the Plan Change area will have a sufficient water supply for firefighting purposes;
 - 10.3 Why from a planning perspective the inclusion of provisions in the Plan relating to water supply for firefighting and the Code of Practice should be required in addition to the reticulated supply; and
 - 10.4 The inclusion of the Code of Practice within the District Plan does not impose a third party approval requirement.

New Zealand Fire Service Firefighting Water Supplies Code of Practice

- 11 The Code of Practice was published in accordance with section 30(3) of the Fire Service Act, which required the National Commander of the Fire Service to publish a Code of Practice specifying standards for water supply, volume and pressure which are required for firefighting in urban districts. The Code of Practice continues to apply in accordance with Clause 33, Schedule 1 of the Fire and Emergency New Zealand Act 2017. The Code of Practice is publicly available, free of charge.
- 12 As set out in section 30(3) of the Fire Service Act the purpose of the Code of Practice is to provide direction on what constitutes a sufficient supply of water for firefighting in urban districts and it is intended for use by territorial authorities, water supply authorities, developers and Fire and Emergency.

- 13 While section 30(3) of the Fire Service Act contemplated a Code of Practice applying to urban fire districts, the Code of Practice can apply to water supply systems outside urban fire districts, i.e. rural townships. The Code of Practice states:

“Where this code identifies fire fighting water supply requirements for any of the three water supply systems above, these requirements can be used to provide advice for similar systems outside fire districts, that is, in rural areas.”¹

- 14 The Code of Practice contemplates reticulated water systems, rural water supply systems feeding supply tanks; and standalone tank supply using rainwater or a local well or bore.
- 15 The Code of Practice provides techniques to define a sufficient firefighting water supply that may vary according to the circumstances. It is based on an assessment of the minimum water supply needed to fight a fire and to limit fire spread according to different buildings fire hazards.
- 16 The Code of Practice is specifically designed to advise building owners on the level of water required so a sufficient firefighting water supply is available and accessible to enable an efficient and effective response by FENZ in emergency situations. The Code of Practice is flexible in how this is achieved so can be adapted to each site’s situation. Whilst the Code of Practice provides flexibility in available methods for compliance, it also provides prescriptive tables which can be used to easily interpret firefighting water supply requirements.

¹New Zealand Fire Service FireFighting Code of Practice SNZ PAS 4509:2008, Page 1.

- 17 The Code of Practice incorporates the requirements for the location, connections, markings and access to fire hydrants to enable water supply to be used.
- 18 The Code of Practice is non-mandatory in all circumstances. There is also no basis for distinguishing between reticulated and non-reticulated sites². The Code of Practice does not attribute different weight to its guidance depending on the presence of a reticulated water supply nor does it apply in a different way to different zones in a district plan. It is primarily for urban areas on a reticulated supply but applies equally to non-reticulated areas.
- 19 Given the above it is my opinion that it is appropriate to apply the Code of Practice to reticulated areas to achieve the purpose of ensuring the health and safety of communities and minimisation of damage to life and property as a result of fire.

Proposed Plan Change 60

- 20 The applicant proposes to supply water to the Plan Change area via a new bore on a lot that has been vested in Council. Drilling and testing for the bore have occurred however no resource consent application has yet been lodged for the abstraction of water³. The applicant expects the new network will comply with the New Zealand Fire Service Firefighting Water Supplies Code of Practice⁴.

² New Zealand Fire Service Firefighting Code of Practice: SNZ PAS 4509:2008 - refer section 1.2 "Legal Context" at Page 11.

³ Paragraph 7.28 of the s42A Report

⁴ Section 5.3 of the Engineering Servicing Report for Kirwee Plan Change

- 21 In the evidence of Murray England (Asset Manager Water Services), Mr England confirms that not all areas within the existing Kirwee network will comply with the Code of Practice. Mr England identifies⁵ there is insufficient capacity to meet the likely [residential] demand from the plan change area if an 'on demand connection' is provided. Mr England considers a 'restricted water connection' would be able to service the site by limiting each site to 3,000 litres per day.
- 22 Should resource consent to abstract water from the new bore be approved the new reticulated network will be required to comply with the Selwyn District Council's Engineering Code of Practice. This is also confirmed by Ms Lewes in paragraph 7.32 of the Section 42A.

Kirwee Water Supply

- 23 There is no requirement in Section C12 *Living Zone Subdivision* of the Selwyn District Plan to provide a reticulated water supply network. Rule 12.1.3.3 requires reticulated water to be supplied to specific areas, however Kirwee is not an identified area. It is therefore possible for a subdivision to occur in the Kirwee Living zones without providing a reticulated network.
- 24 There are no standards requiring firefighting water supplies within or outside of reticulated areas. The "*provision of water for firefighting*" is identified as a matter over which Council has restricted its discretion⁶.

⁵ Par 17-18

⁶ Matter of discretion 12.1.4.3

- 25 Within the Engineering Code of Practice design consideration for water supply networks include requirements of the Fire Service Code of Practice.
- 26 The Engineering Code of Practice states that *on-demand water supply systems, without fire-fighting capacity to Fire Service requirements, will not be approved within living zones*⁷. However it also allows for a restricted supply without firefighting provision to be granted at the discretion of Council and conditions may apply.
- 27 The Engineering Code of Practice states that reticulated networks should comply with the Fire Service Code of Practice. It specifies “*the reticulation must meet the requirements for firefighting flows, residual fire pressure and the spacing of hydrants*”⁸. It further outlines the location of hydrants should comply with SNZ PAS 4509:2008 with minimum hydrants spacing of 135m.
- 28 Mr England identifies a restricted reticulated supply is feasible for the Plan Change area. In accordance with the Engineering Code of Practice it is possible for a restricted supply to be developed without a firefighting water supply.
- 29 I understand from FENZ that they have experience in Kirwee, notably at the Kirwee Tavern, where the limited flow in the reticulated network hampered firefighting efforts.
- 30 Currently there is no certainty that a resource consent application will be approved for the proposed water abstraction. In addition, there is confirmation of timeframes for the abstraction application or the provision of water supply in relation to the development of the Plan Change area.

⁷ Section 7.2.3

⁸ Section 7.5.4

31 This means it is not guaranteed the proposed Plan Change area and future reticulated network will provide enough water for firefighting purposes or that an alternative supply will be provided should the reticulated network be insufficient.

32 Section 3 of the RMA, in its definition of “effect” clearly contemplates probability and consequence:

“(3) In this Act, unless the context otherwise requires, the term effect includes—
(a) any positive or adverse effect; and
(b) any temporary or permanent effect; and
(c) any past, present, or future effect; and
(d) any cumulative effect which arises over time or in combination with other effects—
regardless of the scale, intensity, duration, or frequency of the effect, and also includes—
(e) any potential effect of high probability; and
(f) any potential effect of low probability which has a high potential impact.”

33 Fire and the effects resulting from this occurring is in my opinion an effect that is covered by the definition of effect as set out in the paragraph above. It is an effect in my opinion that is of low probability, but which has a high potential impact – the potential loss of life and / or property.

34 In order to efficiently fight a fire to protect life and property sufficient water supply is essential.

35 In my opinion the inclusion of firefighting water supply in the provisions of the Living zone is enabling a preventative mitigation measure to be implemented. The Code of Practice provides flexibility in what level of firefighting water supply is required for each development. Similar to a resource consent application it is assessed on a case by case basis.

- 36 The District Plan includes rules and standards applying to specific locations within the District. It is recommended that a new Standard be included within Section 12.1.3 of the District Plan specifically for the Kirwee Living 1 zone as follows:

In relation to the Living 1 Zone at Kirwee new lots must be provided with a water supply that complies with SNZ PAS 4509:2008. Where a reticulated water supply cannot provide adequate quantities and pressure for firefighting as set out in SNZ PAS 4509:2008, an alternative firefighting water supply must be provided in accordance with SNZ PAS 4509:2008.

- 37 I consider the inclusion of the proposed standard would provide more certainty for Fire and Emergency that an appropriate firefighting water supply will be provided. Should the abstraction consent be approved, and the network demonstrates sufficient flows, pressures and hydrants are available no further supplies will be required, and the standard would be met. However, in advance of an abstraction consent being approved, if the abstraction consent is not approved or the new network cannot meet the Code of Practice requirements, guarantees for Fire and Emergency that an appropriate alternative firefighting water supply will be provided. Should an alternative supply meet the requirements of the Code of Practice it is deemed to meet the standards and no consent will be required.

- 38 I understand from my involvement working on behalf of FENZ since 2010 in the RMA area that applying the Code of Practice to a development can mean a range of water tank sizes, or use of other water supplies such as ponds (if accessible by the fire appliance⁹), and that communal water supplies for multiple properties can be provided. I understand from FENZ that water

⁹ I understand this could require a flat hardstand area next to the pond for pumping water from.

sprinklers are highly desirable and offer the fastest and most efficient means of extinguishing a fire due to their fast application and ability to limit spraying to only the affected area. As indicated in the Code of Practice sprinklers also substantially reduce the volume and pressure of water required.

- 39 The Code of Practice (by virtue of being a New Zealand Standard) is a nationally recognised document that guides appropriate water supply for firefighting. I consider it is appropriate to apply a standard where one is relevant.
- 40 With regard to preventative mitigation measures being included within plans these are managing a risk and resultant effect under the RMA.
- 41 As with the other subdivision standards, where the firefighting water supply requirements cannot be met a consent can be applied for and assessed on its merits.

Third Party Approval Process

- 42 In paragraph 7.33 Ms Lewes considers the inclusion of a requirement to comply with the Code of Practice creates a third party approval process. In response to this, I make the following comments.
- 43 Like many other New Zealand Standards, the Code of Practice, is a technically written document which needs to be interpreted by people who have expertise in that subject area. I consider inclusion in the Plan would be the responsibility of the consenting planner to administer, with the guidance of technical experts as required. It is common for a consents planner to seek inputs from a variety of technical experts on effects managed by District Plans. FENZ is willing and able to assist in its interpretation and its practical implementation. However, Council as the consenting authority provides approval and would administer the standard as with other standards.

- 44 In any design process there is a need to engage with utility companies around the connection and / or construction of services. I do not consider the need to engage with Fire and Emergency around firefighting water supply requirements to be any different.
- 45 Fire and Emergency is a government organisation that looks after the greater good of the community, in a similar manner to the Department of Conservation or Heritage New Zealand Pouhere Taonga, and is not a third party approval such as an individual private land owner.
- 46 One purpose of rules within a District Plan is to outline what the Council considers to be appropriate levels of adverse effects when managing resources. As with many adverse effects, the perception of an appropriate level of mitigation is subjective and I am not aware of any other legislation that legislates for this water supply. The risks to property and fire in an emergency can significantly increase if insufficient water supply is provided, for example, insufficient water could result in spread of fire to neighbouring properties. Fire is an adverse effect that can affect one or more properties and therefore can be dealt with under the RMA.
- 47 In this instance, I consider the appropriate amount of water to mitigate potential effects is most effectively defined by the Code of Practice. The inclusion of the Code of Practice provides certainty to owners and also to FENZ in emergency response situations.
- 48 Ms Lewes also comments in paragraph 7.33 that the future District Plan does not intend to reference standards unless absolutely required. The Proposed District Plan and any provisions relating to firefighting water supplies will need to be considered holistically and will be considered by Fire and Emergency once the District Plan is notified. At this stage, there

are examples within the Operative District Plan that include references to the Code of Practice (Rule 12.1.4.96).

Proposed Amendments

49 For the reasons considered above, it is my opinion that the incorporation of a standard requiring water supplies that comply with the Code of Practice into the District Plan is appropriate and the most effective means of managing the potential effects.

50 The following standard is proposed to be included within Rule 12.1.3:

In relation to the Living 1 Zone at Kirwee new lots must be provided with a water supply that complies with SNZ PAS 4509:2008. Where a reticulated water supply cannot provide adequate quantities and pressure for firefighting as set out in SNZ PAS 4509:2008, an alternative firefighting water supply must be provided in accordance with SNZ PAS 4509:2008.

Conclusion

51 I have considered the submission by Fire and Emergency and consider the amendments proposed are appropriate, particularly to recognise the contribution of emergency services in providing for the health, safety and wellbeing of communities.

Date: 23 July 2020

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Perri Unthank

