

**BEFORE A HEARINGS PANEL
APPOINTED BY NELSON CITY COUNCIL**

IN THE MATTER of Private Plan Change 28 – Maitahi Bayview

**AND IN THE MATTER of Clause 21 of the First Schedule of the Resource
Management Act 1991**

STATEMENT OF DALI SULJIC TO PCC28 HEARING PANEL

DATED 18 JULY 2022

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INTRODUCTION

1. I have prepared a summary of my position which I will now read out. I note that I have been listening to the hearing to this point and I will refer and respond to some of the relevant matters discussed throughout my summary.
2. In my view, the assessments and the Stormwater Management Plan supporting Proposed Plan Change 28 have not adequately assessed the sensitivity of the receiving environment particularly with regards the effects from the changes in the quality and quantity of stormwater runoff that will result from the proposed urban development. I do not agree that the proposed stormwater management provisions have been developed in accordance with best practice Water Sensitive Design approach and I question the appropriateness of some of the proposed stormwater management requirements and whether they can be practically achieved through the resource consent stages.

HYDROLOGY MITIGATION

3. In my evidence I have discussed the effects of earthworks on the natural movement of water also referred to as hydrology. I would like to emphasise that my evidence focuses on the long-term effects that include reduction in the ability for soils to infiltrate and retain water and changes to the natural catchment boundaries. This is somewhat different to the short-term effects that predominantly include the management of sediment runoff during construction and that has been covered by Mr Parsonson and Mr Ridley.
4. There was no assessment provided on the permeability of the existing soils that cover the floodplain, the bottom of the gullies and the valley slopes. I recognise here that Mr Foley has subsequently submitted his rebuttal evidence and discussed the permeability of the floodplain itself and the potential fill management practices that can be implemented to maintain the hydraulic connectivity of the floodplain following earthworks. However, this assessment, including the hydrologic response mechanisms, have not been considered in the stormwater management plan nor included in the proposed Schedule X provisions. I also note that the effects of the elevated floodplain level on the hydrology of the connecting watercourses have not been discussed.
5. I remain of the opinion that the effects of earthworks in the context of soil permeability were not adequately considered. Earthworks form a very important

aspect of water sensitive design as they increase the frequency and volume of surface water runoff once topsoil is removed, soils are compacted, natural infiltration limited and, in some cases, precluded. The inability to mimic the natural soil permeability through engineering interventions generally increases with the steepness of the land due to elevated geotechnical constraints on surface water infiltration. In his rebuttal evidence Mr Mills discusses that the development has been restricted to, quote “flat, gently inclined, and moderately inclined slopes”. I would like to point to Figure 2 of my evidence which clearly shows a large proportion of the development extending into areas exceeding 20%. For context the Nelson Land Development Manual limits public roads to a maximum gradient of 16.7%.

6. Nevertheless, to mitigate the effects of development on hydrology the stormwater management plan proposes minimum retention and detention requirements based on the Nelson Land Development Manual and revegetation. Given the topography of the existing land and the use of the word "where feasible" there is a high likelihood that the implementation of hydrology mitigation and in particular retention will be very limited. Furthermore, as the permeability of existing soils has not been assessed and there was no hydrological modelling carried out for small and frequent rainfall events, there is a high level of concern that the proposed hydrology mitigation requirements and provisions are not adequate to achieve a hydrological balance. I note here that both Mr Mills and Mr Farrant acknowledge that further work is required on this matter, however it is not clear who will carry out this work, when, and how it will be implemented at a catchment-wide scale. In my view the proposed stormwater management plan and the Schedule X provisions do not demonstrate that a post-development balance in hydrology can be achieved in a way that will ensure the protection and enhancement of the receiving environment. There is a high likelihood that development under proposed plan change will adversely change the existing catchment hydrology and elevate the erosion of Kaka Stream.

WATER QUALITY TREATMENT

7. The applicant has proposed water quality treatment measures which are over and above the minimum Nelson Land Development Manual requirements.

However, it is not clear how the proposed water quality treatment criteria were developed and whether they will achieve an adequate level of treatment that will ensure the long-term protection of the receiving environment and the community values. For context, this includes swimming holes, recreational walkways, freshwater, and ultimately marine ecosystems. In my evidence I have highlighted several concerns around the proposed level of treatment. As no specific assessments were carried out, such as a contaminant load model, there is a high likelihood that the existing freshwater systems and their amenity values will not be protected and enhanced under the proposed plan change.

8. I would like to comment on the position of Mr Farrant that the proposed urban development will improve the water quality of Kaka Stream with the removal of stock from the catchment and the implementation of the proposed treatment measures on urban stormwater discharges. I recognise that Kaka Stream currently has poor water quality due to existing agricultural uses but I note here that there are currently national regulations in place that require and will require stock exclusion from streams. There are also existing nationally recognised best management practices for agricultural land, which include planting of riparian margins. As such, it is likely that the water quality of Kaka Stream will improve in the near future, irrespective of the proposed plan change, as these regulations and practices are being implemented.
9. Mr Farrant and Mr Markham have also discussed the appropriateness to locate stormwater management devices within the proposed riparian margins. It is important to note that particularly water quality treatment devices require regular maintenance. This generally also includes machinery access to remove sediment and replace planting media. Furthermore, locating water quality treatment devices within active floodplains can result in captured sediment resuspension and increased maintenance clean-up costs following rainfall events that trigger the flooding of these devices. I would also like to highlight the effects if increased level of erosion protection and elevated velocities through culverts in the operation of online detention devices. In my view, best practice water sensitive design would incorporate stormwater management devices so that they complement riparian margins but are located outside of the intended riparian ecological corridor.

STORMWATER MANAGEMENT PLAN

10. In my opinion, a catchment wide Stormwater Management Plan is required to support the approval of the proposed plan change, and it is not appropriate to rely on the provisions to develop a catchment wide stormwater management plan after approval of the plan change. The catchment wide stormwater management needs to clearly set out the stormwater management principles and requirements, how they were developed, what they will achieve relative to the sensitivity of the receiving environment and how will they be practically implemented for future developments at resource consent stage. In my view, the proposed stormwater management plan has not demonstrated this.
11. I would also like to note that in my opinion it is not appropriate to assume that the delivery of catchment wide provisions can be more easily achieved at the resource consent stages because there is currently only one dominant landowner. There is nothing precluding a fragmentation of this land in the early stages of future development. For example, it is entirely possible to construct and earthwork the main road, install the bulk infrastructure and subdivide parts of the land into vacant super lots which get sold to different parties for further development.

CONCLUSION

12. In my view the development of the proposed stormwater management framework has not followed that hierarchy of obligations of Te Mana o te Wai which positions the health of the water and people above all other uses. In other words, the proposed zoning and density should be based on the environmental capacity of the existing environment to support the proposed changes in land use. There is high likelihood that the proposed development will cause adverse stormwater related environmental effects that will not be adequately identified and controlled through subsequent resource consent processes.

Dali Suljic

18 July 2022