BEFORE A HEARING PANEL
CONSTITUTED BY NELSON CITY COUNCIL

IN THE MATTER	of an application by **CCKV Maitahi Development Co LP** and **Bayview Nelson Limited** for a change to the Nelson Resource Management Plan (Plan Change 28)
IN THE MATTER	of Part 5 and Schedule 1 of the Resource Management Act 1991

REPLY EVIDENCE OF STUART FARRANT

Applicants' Consultant:

Landmark Lile Limited
PO Box 343
Nelson 7040
Attention: Mark Lile
Email: mark@landmarklile.co.nz
Tel: 027 244 3388

Counsel acting:

John Maassen
BARRISTER

john@johnmaassen.com
johnmaassen.com
04 914 1050
04 473 3179

[1] My name is Stuart Farrant. I am an Ecological Engineer with 15 years experience with the planning, design and delivery of water sensitive design, stream restoration and urban ecology.

[2] I prepared a statement of evidence relating to the potential effects of Proposed Plan Change 28 (PC28) in terms of Water Sensitive Design and potential impacts on downstream receiving environments. This included discussion on stormwater management and works to protect and enhance the Kaka Stream. I also presented a statement of rebuttal evidence on the same topic and presented in person to the hearing panel on Thursday 14th July 2022 including answering of questions.

[3] I was also involved in pre-hearing conferencing discussions on water sensitive design and stormwater with Mr David Wilson, Ms. Kate Purton and Mr. Dali Suljic.

[4] I have followed the hearing remotely (via public YouTube link) and consider myself qualified to provide comment and clarification on statements and responses provided by submitters experts, NCC experts and the Hearing Panel.

[5] In response to the helpful comments and feedback provided by Commissioner Mark-Brown regarding the preliminary Stormwater Management Plan (SMP) I have assisted in the updating of the SMP to improve clarity around matters raised.

[6] Mr. Dali Suljic raised some ongoing concerns with specific aspects of the proposed PPC28. In particular, he emphasised the importance of achieving stormwater retention outcomes through the capture and reuse of rainwater in addition to the proposed infiltration/soakage. It is noted that the use of rainwater reuse has been proposed throughout the application from the outset as a fundamental means of meeting the intended hydrology outcomes. In particular it was noted in evidence (and by myself at the hearing) that the ultimate hydrology measures will need to include an integrated mix of rainwater reuse (which replicates natural evaporative losses from an undeveloped catchment) and soakage (which replicates natural infiltration to groundwater from an undeveloped catchment).

Further clarification on this has been provided in the updated SMP and Schedule X provisions.

[7] Mr. Dali Suljic raised points of disagreement with the ability to co-locate stormwater management devices within the proposed riparian esplanade due to concerns with access for maintenance, conflict with ecology objectives and protection of stormwater devices from flooding. As discussed by myself in the hearing it is my opinion that all these concerns are easily addressed through application of suitable design which facilitates maintenance of key components (inlets/outlets) without the need to disturb riparian margins and designs which respond to site specific flood conditions. In many instances this can be coupled with locations where infrequent inundation of flood plains (which contain treatment devices) enables velocities to be reduced to address the concerns raised by Mr Suljic regarding velocity. These concerns will be addressed through subsequent design but could be further alleviated by setting provisions for minimum stream setbacks (10 m) and/or flood protection (5% AEP) for instance.

[8] Mr. Dali Suljic further expressed some uncertainty on the overall approach to manage stormwater with regards to where on lot and public devices might be deployed. Whilst it is noted that as per my statement to the hearing panel (and subsequent questioning) the solution has always been articulated as a fully integrated mix of on lot rainwater tanks/soakage, consolidated raingardens and larger scale sub catchment wetlands. The precise configuration and 'split' of these devices will need to be carefully developed through subsequent design stages and will be clearly documented in the required comprehensive SMP which will support future consent applications.

[9] In response to the above points and similar comments from David Wilson and Kate Purton the provisional SMP has been revised to clarify the proposed approach to manage stormwater to mitigate adverse impacts. This includes clarification on the structure and content of future SMP amendments to provide confidence in water sensitive design outcomes. In addition, the Schedule X provisions and policy RE6.X have been amended to avoid repetition and provide a clear position on how water sensitive design will support optimised outcomes.

[10] Mr. Dali Suljic further raised suggestions to define quantitative instream water quality targets for typical urban stormwater related contaminants. It is noted that due to the highly variable nature of stormwater (with significant fluctuations in contaminant concentrations during and between rainfall events) it is not considered practical to monitor or enforce such targets with unacceptable risks of unreliable data. This limitation was highlighted by myself during the hearing with respect to the limitations of the existing instream water quality data which was based on only monthly grab samples. It is therefore suggested (in provisions) that performance outcomes are defined by the design of systems which appropriately collect and treat the 'first flush' of stormwater runoff through well designed and maintained water sensitive design solutions.

[11] In response to the lines of discussion through the hearing I agree that the initial proposed provisions and SMP were in some places unclear and contributed to some uncertainty with the proposed approach which will ensure that the freshwater and coastal receiving environments are appropriately protected and enhanced. The provisions related to stormwater and water sensitive design have therefore been refined and updated with input from the s42 officers. The final Schedule X provisions (V4) are considered to provide a robust means of ensuring future development applications are truly integrated and appropriately support the aspirations for the development to be an exemplar of best practice urban water management.

[12] Whilst I have not specifically addressed points related to fresh and terrestrial ecology, I note the comments raised through the hearing on the merits of re-aligning the lower Kaka Stream and the potential to achieve comparable ecological outcomes in the current alignment. As I stated in the hearing, it is my opinion that the realignment provides an opportunity to accelerate the improved freshwater ecological outcomes due to the benefits of shading and riparian processes from the vegetated escarpment on the true right side of the proposed realigned channel. Given that the existing channel is currently in a highly modified condition (including an unnatural alignment) and would require extensive works to support the intended ecological and hydraulic functions it is considered that comparable ecological outcomes would take substantially longer to achieve. Given the current modified condition of the stream.

[13] In summary, it is my opinion that all points raised through the hearing and prior evidence with regards to stormwater management and water sensitive design are well understood by the integrated design team and are readily able to be mitigated through future design development. The provision of updated and comprehensive SMP's to clearly communicate specific stormwater measures will support future resource consenting. The current high level SMP and PPC28 provisions have been updated following the hearing to provide clarification on what the future SMP's will cover and the level of information provided to support future evaluation by consent authorities.

Signed; Stuart Farrant

Date; 27th July 2022