

**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

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**STATEMENT OF REPLY EVIDENCE OF MICHAEL JOHN  
PARSONSON**

**EROSION AND SEDIMENT CONTROL**

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## Introduction

[1] This statement addresses responses provided to the panel by submitter’s legal counsel and expert, and the Council expert, and to panel questions, in relation to erosion and sediment control (ESC). It is based on the most recent version of the proposed PPC28 provisions, referred to in the applicant’s reply as “V4 – PPC28”.

## Summary of Responses to Submissions

[2] In her opening submissions, Ms Gepp referenced the *Li vs Auckland Council*<sup>1</sup> (also known as the Okura Holdings Limited appeal). I clarified my role in that hearing, as being required to assess and respond to the information presented by the appellants. That included extensive sediment and hydrodynamic modelling, and proposed staging, in line with previous plan change proposals within the Okura / Long Bat catchments. I stated to Commissioner Hill that I could not comment on what my response would have been in that matter if modelling had not been undertaken, but that I did not consider sediment management to be a determinative issue in that case. The Court agreed.

[3] In her oral submissions, Ms Gepp queried my adherence to the expert Code of Conduct in my assessment and conclusions. While not offended by that inference, I can confirm that my conclusions are soundly based and clearly expressed. I do not identify any deviation from the Code. I have endeavoured to comply with it strictly and fully.

[4] At paragraph 2.8.a. of her submissions, Ms Gepp noted the Court’s<sup>2</sup> following guidance:

“This description of actual/potential effects is useful in considering whether the plan change is appropriate. Afterall, one should be assured that the rules are detailed enough to properly control activities and their adverse effects.”

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<sup>1</sup> *Li v Auckland Council* [2018] NZEnvC 87

<sup>2</sup> *Boon v Marlborough District Council* [1998] NZRMA305 at 316

[5] For the reasons I have expressed, I consider that the PPC28 proposal meets that guidance. In my opinion, ‘the rules are detailed enough to properly control activities and their adverse effects’; in this case being earthworks and streamworks and corresponding sediment related effects during construction.

[6] In response to questions from Commissioner Wratt, Mr Young indicated his understanding that the Lee Dam (Waimea Dam) project had generally met the anticipated water quality and environmental performance during construction, although there may have been some non-compliances. My company, SouthernSkies Environmental Limited, provided the erosion and sediment control specialist design and advice for that project. The project was a Highly Commended finalist in the 2021 IECA<sup>3</sup> Environmental Excellence Awards. It implements adaptive management.

[7] Commissioner Wratt queried what standards might be appropriate for the monitoring of the performance of development as proposed within PPC28. Mr Young primarily responded in terms of post-development stormwater effects but also referenced some criteria that could be used during construction; suggesting clarity, macroinvertebrate sampling, and measurement of deposited sediment as potentially suitable and mentioning the NPSFM and ANZECC guidelines as useful references. The requirement for an adaptive management plan to be implemented during the earthworks phase can accommodate relevant monitoring procedures and parameters such as these. These would be considered, confirmed and imposed during the consenting phase. This can include upstream and downstream monitoring of turbidity and / or clarity for example, as well as onsite observation and measurement of sediment and ecological values at an appropriate frequency. I described to the Panel, examples of this approach that my company is directly involved in, including the current construction of the Te Ahu a Turanga – Manawatū Tararua Highway and large-scale developments north of Auckland.

[8] Mr Young agreed with my proposition that the flow of the Maitahi River would continue to flush sediment through Dennes Hole.

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<sup>3</sup> *International Erosion Control Association - Australasia*

## Summary of Responses to Council

[9] Mr Ridley's position is unchanged. I retain my position stated in written and oral evidence and limit my comments to the following matters addressed in his summary statement and responses to the Panel.

[10] Commissioner Hill directed Mr Ridley to avoid further reference to existing compliance at the Bayview development, and to changes to the permitted activity standards for earthworks. I provide no further comment other than to observe that Mr Ridley stated that the permitted activity scale earthworks could be "up to 50%" of the earthworks undertaken. This is unsubstantiated and in any event, can be managed via a simple range of erosion and sediment controls (ESCs) e.g. stabilised site entrance, silt fences and maybe small cleanwater diversions on each site.

[11] Mr Ridley stated that there is a "fundamental" gap in the information required to limit earthworks to "suitable locations". 'Suitable' was not defined. Proposed policy RE6.5 (previously the Schedule X.12 list), now explicitly imposes provisions to be considered as matters of discretion by Schedule X.12, and to be addressed in a report and erosion and sediment control plan required by Schedule X.17. Accordingly, earthworks consent applications would be required to incorporate design that demonstrates how the outcomes of the policy would be achieved within the context of all PPC28 provisions, including:

- *Avoid to the greatest extent practicable, and otherwise minimise, earthworks on steepest slopes; and*
- *Minimise the overall cumulative extent of earthworks to the greatest extent practicable.*

[12] Defining "suitable" must require a balanced consideration all relevant matters addressed in the plan change, including urban and landscape design, access, ecology, open space, housing typology, flooding etc. The initial cut of that has already be completed and is reflected in the revised Structure Plan. This is akin to the MCA process that Mr Ridley referenced later, and I comment on in paragraph 16 below.

[13] Mr Ridley also implied that the wider downstream environment had not been assessed in the consideration of construction sediment effects, and in particular the coastal environment. I have recognised and addressed the Nelson Haven and potential sediment effects throughout my primary Statement of Evidence, including at paragraph 28 of that statement, where I consider the New Zealand Coastal Policy Statement (NZCPS) to be a relevant instrument when assessing potential effects of earthworks within the Kākā Valley.

[14] Mr Ridley read down the relevance of the Stormwater Management Plan (SMP) to managing earthworks effects. I accept that it is not a primary planning and management tool for earthworks. However, I have expressed the opinion that it is part of the suite of tools that will be engaged and will inform earthworks design as a result of being required to adopt Water Sensitive Design (WSD) principles, which include minimisation of earthworks to the extent practicable.

[15] Commissioner Mark-Brown queried why Mr Ridley did not accept the proposition that the current state of technical methods, knowledge and experience could not be relied on to appropriately control and minimise earthworks effects through the consent process. His response was that technology hadn't changed much in the past 5 – 10 years, but management systems had, providing examples of a team approach, weather management, winter restrictions and sequencing. I consider all these measures to have been evolving over many years but are now supported by consistent adoption and outcomes on large-scale projects, as well as more detailed measurement and confidence in the performance of controls.

[16] Mr Ridley referenced the Puhoi and Mt Messenger Waka Kotahi projects as examples of how a multi-criteria analysis (MCA) approach had been adopted as part of project refinement before consent applications were lodged. I was a member of the panel that heard the resource consent applications and notices of requirement for the Puhoi project, and SouthernSkies provided expert ESC assessment and evidence for Taranaki Regional Council on the resource consent applications for the Mt Messenger project. SouthernSkies is now engaged to provide technical and compliance support to that council during the construction phase.

[17] Mr Ridley stated that ESC was taken account of in those MCA processes to inform various aspects such as the location of fill sites. He did not indicate what weighting has been attributed to ESC, or whether sediment yield modelling had been undertaken to inform those MCA processes. It has been my observation that MCA processes give the most significant weight to factors such as project geometry and gradient, freshwater and terrestrial habitat and biodiversity, cultural values, landscape values and consentability (the likelihood of obtaining consent under the relevant rule and policy framework). The MCA processes I have observed adopt a somewhat subjective approach to factors such as ESC, relying on expert weighting and scoring rather than modelling and specific design. Later, those matters are refined once the preferred project alignment has been selected for consenting. Mr Ridley did not elaborate on this aspect of those MCA processes.

[18] I also reiterate that ESC design in those projects was to support the resource consent process that ran concurrently with the notices of requirement. That same type of assessment and refinement is proposed under PPC28. In my opinion, the conceptual equivalent of an MCA process, being the development of the Structure Plan through multiple constraint and opportunity layers, has been undertaken for PPC28. The detailed design, assessment and management of development will occur through the resource consent process.

[19] Finally, it is worth noting that regardless of the process, the preferred and consented alignments of the Puhoi and Mt Messenger projects both pass through steep and challenging terrain with sensitive receiving environments. In both cases Waka Kotahi, through its experts, expressed a high level of confidence that sediment related effects would be appropriately minimised.

[20] Mr Ridley agreed that the USLE typically over-estimates sediment yield. However, he considers that a USLE process is necessary for the assessment of the plan change to “identify where the risks are”. The PPC28 applicant has already identified the higher risks, being the steeper slopes<sup>4</sup> and works in or adjacent to streams. Those have been addressed at a high level through the revised Structure Plan, including the retention, partial realignment and restoration of the Kākā

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<sup>4</sup> Noting Mr Foley’s proviso that some of the steeper slopes express shallow soils and near-surface rock that has low erosion potential.

Stream, and the additional provisions that will ensure that the appropriate level of assessment and control is placed on the earthwork phase of development. How those risks are refined and appropriately minimised will occur at the consent stage.

[21] Mr Ridley commented on soil types and fine silts. I leave any response to that to Mr Foley.

### **Summary of Responses to Panel**



[22] Panel Issues

Panel Issue	Expectations for environmental outcomes given during the hearing	Place where these are now delivered in V4 – PPC 28
Modelling required now?	No. Parts of the site are challenging but not unique. Steepest areas to be avoided to the greatest extent practical. Where works are required on steeper areas, along with all earthworks areas, they will adopt ESC techniques that are proven on equally steep land elsewhere. USLE-type sediment yield estimates will be undertaken and can be required by Council at the consenting phase. Doing it now would be speculative and unnecessary. No point in doing it twice.	Mr Maassen to respond.
The influence of soil and geology on the acceptability of the proposed approach.	Mr Foley described the geology and soil of the Kākā Valley and explained how it differs from Bayview. That information adds further confidence that the erosion potential is less than	Factual.

	other, more typical soils (and particularly clay soils). But again, my conclusions are not dependent on that and I have not specifically relied on that in my assessment.	
What is 'appropriate' in terms of reduction of sediment effects?	Minimising effects to the extent that is acceptable to the downstream environment based on water quality, habitat, biodiversity, cultural and community values.	<ul style="list-style-type: none"> <li>• Best practice ESC through the Nelson Tasman Guideline.</li> <li>• REr.61, OSr.49 and RUr.27 rules.</li> <li>• Policy RE6.5 that is engaged as matters of discretion through Schedule X.12 and required to be demonstrated via the information requirements of Schedule X.17.</li> <li>• Schedule X.8 Cultural Values and Engagement with Te Tau Ihu Iwi.</li> <li>• Schedule X.9 Ecological outcomes and freshwater.</li> <li>• Policy RE6.2 Cultural Values – Mana Whenua.</li> <li>• Policy RE6.3 Integrated Catchment Management Tools and Principles.</li> </ul> <p>Schedule X.12 - full discretionary status for earthworks in the <i>Residential Green Overlay</i>'.</p>

Ability to construct the proposed road in a manner that appropriately minimises sediment discharges and risk.	Challenging but not unusual. Well proven techniques to achieve this. Similar to other steep projects including roading, windfarms and rural residential sites.	Nelson Tasman Guideline (as a minimum approach) and proven construction practices engaged through the proposed provisions.  As above regarding proposed provisions to be addressed through earthworks consent applications.
Ability to construct on-line stormwater devices in a manner that appropriately minimises sediment discharges and risk.	As above and discussed in terms of co-location with culverts etc. Standard construction techniques. Will require temporary diversion of flows, which is also a standard and well-proven practice at a range of scales from small one-day culvert installations to projects such as the Waimea Dam.	As above.
Need for staging to be assessed and specified now?	No. Would only be speculative. The provisions will ensure that staging is carefully considered and required / adopted during consenting.	<ul style="list-style-type: none"> <li>• Best practice ESC through the Nelson Tasman Guideline.</li> <li>• REr.61, OSr.49 and RUr.27 rules.</li> <li>• Policy RE6.5 that is engaged as matters of discretion through Schedule X.12 and required to be demonstrated via the information requirements of Schedule X.17.</li> </ul>

		<ul style="list-style-type: none"> <li>• Schedule X.8 Cultural Values and Engagement with Te Tau Ihu Iwi.</li> <li>• Schedule X.9 Ecological outcomes and freshwater.</li> <li>• Policy RE6.2 Cultural Values – Mana Whenua.</li> <li>• Policy RE6.3 Integrated Catchment Management Tools and Principles.</li> <li>• Schedule X.12 - full discretionary status for earthworks in the <i>Residential Green Overlay</i>.</li> </ul>
How does adaptive management work?	Components explained at the hearing. May include baseline monitoring upstream and downstream, ongoing monitoring in response to rainfall trigger events and at an otherwise confirmed frequency, and responses which may include ecological observation and assessment and/or reduction in open areas.	<ul style="list-style-type: none"> <li>• Best practice ESC through the Nelson Tasman Guideline.</li> <li>• REr.61, OSr.49 and RUr.27 rules.</li> <li>• Policy RE6.5 that is engaged as matters of discretion through Schedule X.12 and required to be demonstrated via the information requirements of Schedule X.17.</li> <li>• Schedule X.8 Cultural Values and Engagement with Te Tau Ihu Iwi.</li> <li>• Schedule X.9 Ecological outcomes and freshwater.</li> </ul>

	Does not supplant day to day monitoring and maintenance of ESC measures. Getting that right deals with most issues that are likely to arise.	<ul style="list-style-type: none"> <li>• Policy RE6.2 Cultural Values – Mana Whenua.</li> <li>• Policy RE6.3 Integrated Catchment Management Tools and Principles.</li> <li>• Schedule X.12 - full discretionary status for earthworks in the <i>Residential Green Overlay</i>.</li> </ul>
Should the earthworks have a high activity status that restricted discretionary?	The matters of discretion that incorporate the new schedule and policies will ensure all relevant matters are addressed. The RD status identifies the matters of particular interest to the activity but does not imply a presumption of acceptability of earthworks per se.	I note the change to full discretionary status for earthworks in the <i>Residential Green Overlay</i> .
Dennes Hole	<p>Maitahi River circa 500m<sup>3</sup> per annum.</p> <p>Kākā poor water quality but Dennes Hole is a valued community resource.</p> <p>Important to note that significant rainfall does not equate to significant sediment discharge if earthworks are managed as proposed.</p>	<ul style="list-style-type: none"> <li>• Best practice ESC through the Nelson Tasman Guideline.</li> <li>• REr.61, OSr.49 and RUr.27 rules.</li> <li>• Policy RE6.5 that is engaged as matters of discretion through Schedule X.12 and required to be demonstrated via the information requirements of Schedule X.17.</li> </ul>

	Residual sediment from Kākā Valley will continue to flush through Dennes and other swimming holes. It is anticipated that they will continue to be recreational amenities.	<ul style="list-style-type: none"> <li>• Schedule X.8 Cultural Values and Engagement with Te Tau Ihu.</li> <li>• Schedule X.9 Ecological outcomes and freshwater.</li> <li>• Policy RE6.2 Cultural Values – Mana Whenua.</li> <li>• Policy RE6.3 Integrated Catchment Management Tools and Principles.</li> <li>• Schedule X.12 - full discretionary status for earthworks in the <i>Residential Green Overlay</i>.</li> </ul>
Should the Nelson Tasman Guideline be specifically referenced in the NRMP?	No so much a question raised by the panel but one introduced by Mr Ridley.	<p>Nelson Tasman Guideline is engaged as ‘best-practice’ through the proposed provisions. It will be a minimum requirement. On a case by case basis, some earthworks consent applications may propose additional controls over and above that guideline.</p> <p>When considering a resource consent application, the consent authority is not bound by a particular guideline. It may choose to require the adoption of the relevant best practice guideline or better, for any given proposal. So it is not necessary to specifically reference the guideline to ensure that it is adopted during consenting.</p>

		Better to avoid refence to specific guidelines as the guidelines (best practice), may change on a district-wide basis.
Permitted standards?	Activity	The panel has stated its position. Mr Maassen to respond.

Dated 28 July 2022

A handwritten signature in black ink, appearing to read 'M Parsonson'. The signature is fluid and cursive, with a large 'M' and 'P'.

Michael Parsonson