

**BEFORE THE HEARING PANEL**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** of an application for a  
proposed Private Plan Change (Private Plan  
Change 28) by CCKV Maitai Dev Co LP and  
Bayview Nelson Limited to the Nelson City  
Council associated with the rezoning of  
approximately 287-hectares of land located  
within Kaka Valley, along Botanical Hill and  
Malvern Hill on land at 7 Ralphine Way,  
Maitai Valley and Bayview Road as detailed  
within the application.

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**S42A SUMMARY REPORT TO THE COMMISSIONERS**

**MR GREG HILL (CHAIR), MS SHEENA TEPANIA, MS GILLIAN WRATT, AND MR NIGEL  
MARK-BROWN**

**SECTION 42A SUMMARY REPORT OF GRAEME RIDLEY – EROSION AND SEDIMENT  
CONTROL SPECIALIST, RIDLEY DUNPHY ENVIRONMENTAL LIMITED, ON BEHALF OF  
THE NELSON CITY COUNCIL**

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**21<sup>st</sup> July 2022**

## **Introduction**

1. This summary provides an update for the commissioners based on the evidence heard within this PPC28 hearing to date. It provides a quick reference to the key outstanding matters of concern and should be read in association with:
  - Appendix L - S42A Report of Graeme Ridley dated 20<sup>th</sup> May 2022
  - Appendix H - S42A Addendum Report of Graeme Ridley dated 23<sup>rd</sup> June 2022
2. My conclusions from my original S42A report and addendum remain valid as follows.

## **Extent of earthworks**

3. I agree with Mr Parsonson that best practice erosion and sediment control (ESC) is well established and implemented on many earthwork sites.
4. It is critical however to acknowledge that even with best practice ESC measures in place that there will be sediment discharges. This is accepted within the earthworks industry however for this PPC hearing the extent of these discharges (from a sediment yield and an effects perspective) is the key element that requires understanding.
5. The primary way to ensure that effects are managed to a level that is acceptable is to understand the extent of earthworks, understand the potential sediment yields and from that allow an assessment of suitability or otherwise of the earthworks to occur or be managed in a different way.
6. Limiting earthworks to suitable locations only and then imposing open area limitations on earthworks extents are two recognised key tools that ensure such earthworks are appropriate and can be managed within a best practice envelope. I acknowledge that the NRMP currently contains a matter of discretion associated with the area of land to be cleared at any one time however this is not specifying PPC28 open area limitations with the knowledge of sediment yield risk analysis.
7. These two provisions are of particular importance when working on challenging sites. I note the applicant for PPC28 has confirmed that this site does have challenges.

8. The applicant has helpfully confirmed somewhere between 90ha (Mr Foley) and 100ha (Mr Parsonson) of earthworks is required based on proposed zoning. There remains however no confirmation of these locations, and any other earthworks that will occur (such as for stormwater attenuation areas) and within this no assessment at a high level of the sediment yields and suitability or otherwise for such earthworks. I can assume that the earthworks would, as a minimum, be on the land proposed to be rezoned for urban development.
9. In my opinion, to not undertake these steps for this challenging site at this PPC stage is a significant flaw and will lead to unnecessary and potentially significant sediment yields.
10. Mr Harley in oral evidence (Wednesday 13<sup>th</sup> July 2022) noted that there had been an assessment, and subsequent exclusion of land from development based on various technical disciplines including geotechnical, engineering, views and access. I can however find no evidence that this process included assessment of earthworks and erosion and sediment control aspects. While I agree that such a process of development suitability assessment is a key, the step of consideration of erosion and sediment control must occur within this same process and can only occur in any informed way with an assessment of sediment yields.
11. Importantly this process of inclusion of erosion and sediment control at this stage of the PPC28 should be, and is no different, from the inclusion of the other technical disciplines as described.
12. I remain strongly of the view that to achieve the certainty and allow for an informed assessment of the suitability of the earthworks and erosion and sediment control, the following information must be provided:
  - expected earthworks locations and extent.
  - sediment yield assessment, comparative analysis with current land use yields and identification of the areas of higher sediment yield risk.

13. This process and level of detail expected is not at consent level and will confirm suitability of the proposed earthworks in some areas and may confirm that earthworks in other areas are not suitable and can then be subject to the matters of discretion through a resource consent process.
14. I further note in the evidence of Mr Markham that he mentioned that the sediment yields from the current land use would be higher than that from the development itself. It is unclear if Mr Markham was referencing “during earthworks” or the “final development form”. If in reference to “during earthworks” I am unaware how this conclusion was reached in the absence of any sediment yield analysis.

#### **Existing Bayview development**

15. There has been various mentions of the existing Bayview development and details of what the associated earthworks has achieved for that development with successful erosion and sediment control. While I understand that the general principle is that it should not be assumed that someone will not comply with plan provisions or consent conditions, I consider it relevant to comment on what the applicant has said in respect to erosion and sediment control on the Bayview site and best practice.
16. While I am not directly engaged with this Bayview development, I have viewed it from the neighbouring site. After hearing from the applicant who referred to infringement notices been issued for Bayview, I liaised with Nelson City Council (NCC) compliance officers. The NCC compliance officers have confirmed that the associated earthworks have resulted in several sediment discharges which in recent months has resulted in both infringement notices and abatement notices issued for non-compliance. I can provide the Panel with a synopsis of these, if requested.
17. The Bayview site holds discharge consents which allow sediment discharges but only up to a certain sediment water clarity limit or trigger which is detailed in a CEMP. It appears that the site has breached this limit in the CEMP which resulted in NCC initiating enforcement proceedings.

18. On a specific technical design matter, I further note that the applicant, in verbal evidence of Mr Foley, referred to a specific rain event of 64mm at Bayview and confirmed that there were no issues resulting from this event. The applicant commented that this rain event exceeded the design specifications of the ESC controls implemented. It is important for the commissioners to understand that for the Nelson area this magnitude of rain event equates to a less than a 2year 12hour duration rain event and this is well within ESC design standards as specified in Nelson Tasman Guidelines. It is not these small rain events that create sediment issues and instead it is the larger more intense events that creates concerns and downstream issues.
19. The key assessment from the Bayview development in the context of this PPC28 hearing is:
- I have not reviewed the design of the ESC measures at Bayview but assume these are considered best practice.
  - Bayview has had sediment discharges and has had several enforcement situations as a result.
  - Even with best practice there are sediment discharges – this is a simple fact for any earthworks. These discharges can be quite far reaching.
  - For PPC28 even with best practice measures there will be discharges – these can not be avoided particularly with steep contours, flood plain works, works in Kākā stream and bulk earthworks. In these riskier areas the sediment discharges could be quite large.
  - The only way to minimise these discharges and confirm minimisation of effects is staging and open area limitations (smaller areas equates to smaller risk and to allow quick stabilisation if necessary) and also understanding where the risks are and avoiding, or managing differently, these areas.
20. Sediment yield modelling and understanding risks must apply at the PPC stage to minimise risk and ensure earthworks that seek future consents have been appropriately considered on a development wide basis at this PPC stage.

### **Schedule X.12 – Additional Earthwork Requirements**

21. I acknowledge the inclusion of Schedule X.12 principles and the inclusion of these requirements. This schedule confirms that the *principles shall be adopted during the design, consenting and implementation of earthworks*. Mr Parsonson’s rebuttal evidence refers to “*the proposed provisions will be engaged for resource consent applications for earthworks within the PPC28 area*”.
22. I am unclear on the process for adoption or engagement of these principles.
23. While, with some amendments to the wording to provide more certainty, I am in general agreement with the provisions within Schedule X.12, these provisions must however be matters of discretion, rules or standards.
24. In my opinion, the PPC28 provisions must contain matters of discretion, rules or standards:
- that specify an open area limitation for earthworks that is determined based on the sediment yield modelling.
  - that specifies completed and/or inactive earthwork areas be stabilised as soon as practicable with a specific matter of discretion allowing future consents to specify such a period.
  - that commit to maximising the use of highly efficient chemically treatment sediment retention ponds, over design of dirty and clean water diversions and a detailed adaptive monitoring programme.

### **Permitted secondary earthwork activities**

25. In paragraph 58 of his evidence Mr Parsonson notes “*I also agree with his suggestion that provisions could be added to strengthen the identification of best practice erosion and sediment control for these secondary earthworks that do not require a resource consent*”.

26. I am not aware of any provisions that the applicant has drafted in this regard and the applicant has now changed their position with respect to this aspect and no longer wishes to strengthen this aspect in the provisions.
27. The applicant confirmed in evidence that permitted activity earthworks (secondary earthworks) would be minimised through the establishment of flat sites at the bulk earthworks phase and therefore would be largely managed through a consenting process. Mr Foley however noted that for many of the steeper areas such bulk earthworks would be difficult to achieve and as such would be left for individual lots to manage, assumed to be as a permitted activity.
28. While therefore I acknowledge that some of the secondary earthworks will be incorporated into the bulk earthworks consenting phase, there will be significant secondary earthworks that will be undertaken as permitted activities. My experience in other regions is that this secondary earthwork activity in residential developments can equate to a very similar aerial extent of works as the bulk earthworks activity with lesser erosion and sediment controls implemented.
29. I assess that PPC28 cannot ignore such earthworks activities and must embrace the same principles as bulk earthworks. The key principles must be expanded to include reference to erosion and sediment control for secondary earthworks.

#### **Effects of sediment**

30. I wish to clarify that I have not made any comment, or provided assessment of, the effects of sediment downstream. This is not my area of expertise, and I will leave this for those with that specific expertise.
31. Importantly however I do note that sediment has recognised far reaching effects. It is important that there not be just a focus on immediate receiving environments, such as Dennes Hole, but also the wider freshwater and marine environments. I can also comment that flushing of sediment downstream is not a solution and simply transfers deposited and suspended sediment further downstream.

### **Stormwater management plan (SMP)**

32. I have not provided any feedback or technical assessment of the SMP through this PPC28 process. This is primarily because the SMP has a sole focus on hydrology and operational stormwater management.
33. Proposed policy RE6.3 requires a SMP at the earliest stage of subdivision and within this, the provisions have been amended to include:
- *Avoiding or minimizing earthworks on steepest slopes, and staging and progressively stabilizing all earthworks to minimize the risk of erosion during development.*
34. The latest draft SMP provided in evidence notes in Section 1.2 the scope of the SMP is to.
- *Summarise proposed stormwater management options for development of the PPC28 area;*
  - *Demonstrate how stormwater management related expectations under the Nelson Resource Management Plan (NRMP) and Nelson Tasman Land Development Manual (NTLDM) have been met; and*
  - *Demonstrate feasibility of design principles for initial approval of concept for stormwater assets to be vested to Council*
35. Clearly the SMP is designed for operational stormwater management and minimal, if any, consideration has been provided to earthworks and erosion and sediment control.



36. The latest draft SMP also notes in Section 4.3.

*The proposed subdivision layout for the PPC28 area will influence the extent and quantity of earthworks for the development. At the plan change stage, this level of detail has not yet been determined. The feasibility and extent of earthworks will be carefully evaluated as part of specific subdivision consent applications and will be informed by the physical constraints in particular areas, for example topography and stability, and the relevant rules in the NRMP. The methodology around how the earthworks are managed will be covered through the regulatory process at future stages of the consenting process.*

37. My previous assessment remains that to amend the SMP to account for earthworks as a policy provision, will not achieve the outcomes intended. Section 4.3 specifies topography and stability as constraints that must be considered, and as previously assessed these aspects must be considered as part of the PPC process itself and not left for a future consenting framework.

**DATED** this 21<sup>st</sup> day of July 2022



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**Graeme Ridley**