DOC concern	Requests	Response
Visual Simulations (generally)		There are a number of questions that point to the Visual Simulations, and we thought that it would be helpful to provide some general commentary with regards to these. As noted at the end of the Graphic Supplement, the Visual Simulations have been produced in accordance with Tuia Pito Ora New Zealand Institute of Landscape Architects (NZILA) Best Practice Guidelines for Visual Simulations (BPG 10.2) and also adhere to Boffa Miskell's internal Visualisation Guidelines. The aim of the Visual Simulations is to accurately portray, in as realistic manner and context as possible, a proposed activity, modification or change in the viewed landscape. Visual simulations are not "real life views" – they are, however, very useful tools to assist in the assessment and decision-making processes whereby better informed and more transparent judgments on appearance and effects can be made. Visual simulations illustrate a two-dimensional view of a proposed activity from a particular viewpoint as depicted in a photograph – not as it would appear as a three-dimensional image as seen in the field with the human eye[1]. The locations where the Visual Simulations have been determined are where 'most people' would view the project from. For instance, for IN1, this is from the immediate true left margin of the Waitaha River as one would descend from the walking track. IN2 is from the swingbridge and PH1-5 are either following the extent of the walking track (PH1, PH5); just off the track and close to the river's edge (PH2 and PH4); or on the river (to represent a user on the river, for instance a kayaker – PH3). The photograph used represents a snapshot of a given view, taken on a specific day, with the project elements modelled into that image and illustrated how those elements could appear in that image in 10 Years. In the case of the Waitaha Visual Simulations, this is based on photographs taken on an overcast day, where the light appears flat, avoiding deep shadows if it were sunny. Year 10 was illustrated to demonstrate the effectiveness of the mitigation measures and the 'weathering' and 'growth' of vegetation over time. To assist to illustrate the scheme, notably the

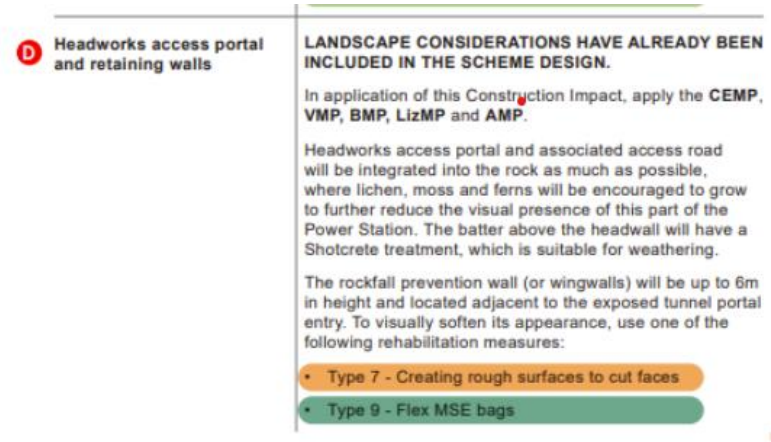
[1] Tuia Pito Ora New Zealand Institute of Landscape Architects Best Practice Guide - Preface/Best Practice Guide - Landscape Assessment and Sustainable Management/Best Practice Guide - Visual Simulations (Executive Summary).

DOC concern	Requests	Response
		Headworks area, a further Visual Simulation has been produced at Year 1, or after one year of operation.
Construction and 'worst case as built' with the access tunnel portal, the river access route, construction laydown area and temporary road	Rationale for why not. Has James considered the worst case?	The landscape, natural character and visual amenity effects have assessed the proposal at the construction stage and at the post construction phase. The effects post construction have been assessed at that stage, and not ultimately at Year 10. The Year 10 simulations are representative of what the proposal will look like after a decade of weathering and natural regeneration. The effects assessment has assumed the effects based on the following: - That inherent within the design of the project, numerous measures have been incorporated to assist in integrating the project into the highly natural landscape. Therefore, the structures, including the portals have been designed to have limited visual presence[2]. - The effects assessment has assumed residual effects to be those post construction, for example, at operation (or Year 1). It is acknowledged that the visual simulations depict an environment 10 years post development, however, and as stated in the Landscape Management Plan (LMP), techniques will be employed during the construction period to carefully implement measures (as outlined in that document). Therefore, the effects have assumed a 'worse case' scenario. Refer also to last bullet point below. - As noted, the assessment of effects table (Table 2) for construction, assumes a high (significant) but temporary and localised effect concerning landscape, natural character and visual amenity. The residual effect (post operation) varies between neutral to moderate-high. Residual effects change depending on the activity. For example, concerning landscape and natural character aspects at the intake, residual effects are assessed to be moderate-high. This is primarily because the project will be inserting artificial structures and disturbance into a highly natural landscape. In those years immediately following construction, whilst much of the landscape mitigation measures will have been applied, the weathering and growth of vegetation will still appear slightly raw. As time moves on, and especially in this dynamic environment, weathering of the infrastructure will further embed the project into the

[2] Such as those listed in paragraph 2.3 of the Landscape Management Plan

DOC concern	Requests	Response
		landscape, having the potential to further reduce primarily perceptual or experiential aspects of landscape and natural character effects, however the primary incursion of the project will remain. - We have supplied an additional Visual Simulation of the Headworks (IN1) at Year 1. We have used the 3D model to align with the photograph and have simulated how the intake will appear after a year of operation. We have assumed a clean incursion into the landscape with minimal disturbance. Only the project elements have been simulated with the surrounding landscape appearing as it does in the photograph. In reality, the surrounding landscape will also change. The Year 1 Visual Simulation shows that the temporary access route will have been removed and gradually the vegetation will recolonise and start to regrow in this area. Rock placement and subtle landform manipulation (as outlined in the Type 5 Option in the LMP), along with native rehabilitation will ensure that, in time, the area will become more integrated with the natural environment. The Visual Simulation illustrates that much of the rock placement and cuts may appear more apparent in this first year, before ferns, lichens and other vegetation colonise these areas. The portal and its 'wings' will also appear more prominent; however, natural regeneration over time will ensure that the infrastructure post construction is less visually as it matures. The LMP outlines a range if options and scenarios for integrating the proposal into this highly dynamic West Coast landscape.
Is it correct that the access tunnel portal at Kiwi Flat will have wingwalls around it	Clarification Has Mr Bentley considered?	Yes, section 3.4 page 72 of the substantive application lists concrete wingwalls at both ends of the access tunnel. The model has it in it (see image below of the model):

DOC concern	Requests	Response
		 *Image of the 3D model* The Visual Simulation at Year 1 clearly illustrates this, with the Visual Simulation at Year 10 demonstrating how the effectiveness of the LMP can apply to this part of the project to ensure that it meets the landscape objectives that are outlined within **Appendix 1, paragraph 5.1** of the Landscape Effects Assessment. Particularly: *Consideration will be given where practical to implement measures that continue to reduce the visual impact of the intake structures and help blend this area in with its local setting. For example, there may be opportunities to further refine the design of the intake structures, (refer to Visual Simulation IN1) by, for example, rounding of corners, faceting and texturing of surfaces or aligning exposed faces to match the profile of rock on each side.* *The intake portal will get completely submerged with big floods and on each event will get coated with rock flour and silt from the river, and decorated with driftwood, as does the cliff and banks on either side. Moss and lichen will grow; within a short time, it is likely to show quite a weathered surface.* *It is also proposed to minimise disturbance around the intake interface with the river rock. There is likely to be some stabilization required above the intake structure. While shotcreting is commonly used as a stabilisation treatment (and has been used for the portal area at the Amethyst Scheme), alternative treatments may be used within this sensitive location.*

DOC concern	Requests	Response
		Any vegetation clearance associated with the intake structure will be associated with the access road and Construction Staging Area 1 and will be contained to defined areas. Natural contours will be used in the alignment of the road to avoid excessive cuts and areas of fill. Rehabilitation of vegetation of these areas will be undertaken with natural (or passive) recolonisation can be expected to occur relatively quickly after construction particularly following treatment such as scarification, which will assist in softening the works to some degree, notably any cut faces. *The Headworks may therefore look different (i.e. greater integration with terrain) from the Visual Simulations once the various features to address those issues above are incorporated.* The Landscape Management Plan sets out the construction impacts and rehabilitation options in each Rehabilitation Area (from page 14) including on page 15, Area 2A Power Station Area D Headworks access portal and retaining walls: Appendix-40-landscape-management-plan.pdf:  D Headworks access portal and retaining walls **LANDSCAPE CONSIDERATIONS HAVE ALREADY BEEN INCLUDED IN THE SCHEME DESIGN.** In application of this Construction Impact, apply the **CEMP, VMP, BMP, LizMP** and **AMP**. Headworks access portal and associated access road will be integrated into the rock as much as possible, where lichen, moss and ferns will be encouraged to grow to further reduce the visual presence of this part of the Power Station. The batter above the headwall will have a Shotcrete treatment, which is suitable for weathering. The rockfall prevention wall (or wingwalls) will be up to 6m in height and located adjacent to the exposed tunnel portal entry. To visually soften its appearance, use one of the following rehabilitation measures: • Type 7 - Creating rough surfaces to cut faces • Type 9 - Flex MSE bags
Intake	Is it visible and does it have wingwalls?	It's underwater, so the wingwalls at the intake are not visible above the water. Within the Visual Simulations, it does not extend above the water level.

DOC concern	Requests	Response
Will there be a security gate on the access tunnel?	Clarification Visible?	Yes, the access tunnel will have gates at either end of the tunnel for public safety. It is understood that the security gates will be located within the inside of the tunnel, approximately 1-2 metres from its portal face, therefore it would be generally difficult to see due to the gates' recessed location within the dark tunnel.
Is there an in-river bund upstream of the weir?	Clarification Has Mr Bentley considered?	Section 3.7.2 of the application refers to in-stream maintenance works. During construction, there will be temporary in-river works, as noted in the Assessment: *Construction effects will affect landscape values, notably those remote, wildness and naturalness values. These values will be affected by the presence of machinery, helicopter noise, blasting and stockpiling. Natural character effects will be adversely affected, through the temporary in-river works and construction of the tunnels and weir/ intake structures. Visually, this will appear as a local node of industrial-type activity.* Following construction, the river upstream of the intake will be sculpted to encourage the river to flow toward the true right of the gorge. This would affect natural character (in river) effects and overall, at the headworks, this residual effect has been assessed as moderate-high. This is covered on page 'ix': *Due to the dynamic nature of this river and the influence the river has had on sculpting the landscape, the physical effect of the weir and intake structures on the natural character will be localised. Periods of freshes and floods will continue to occur at reasonably regular intervals, meaning that water will quickly accumulate for short periods at the entrance to the Gorge, often submerging the entire intake structure. Sedimentation and river transportation of sediments will continue to occur through the gorge. Natural aggradation of sediment would occur relatively quickly behind the weir and a new equilibrium reached. However, after that time the weir would have little, if any effect on water flows or sediment transport. The processes that formed Kiwi Flat will continue to occur. Ongoing maintenance work in the river will involve an excavator clearing boulders and river gravel to ensure that river flows towards the intake and sluice gate.* This is explained further in 'xi':

DOC concern	Requests	Response
		During operation, there will also be the need for maintenance work to occasionally clear gravel and boulders within the river at the intake/ sluice gates. This will involve an excavator within the riverbed removing debris that has washed down from the catchment, and not involve full channel reprofiling. Materials extracted from the intake/ sluice gate areas will remain in the riverbed, moved over to the true left, where they may remain or be re-entrained by large flows and passed over the weir The natural character of this part of the Upper Waitaha Catchment will be modified from its natural state by the introduction of these structures and roads and change the river's local morphology. Visual Simulation IN2 has not illustrated the bund, due to the existing alignment of river gravels in the image. As with the nature of visual simulations, they represent a 'moment in time' where the project elements have been placed into a static image.
Confirm what simulations the route from access tunnel portal to riverbed is included in	Clarification (and rationale for why not). Supply any images if included	Intake Simulation VS1:IN1 and VS2:IN2 in Appendix 27[3] includes the access to the riverbed on the left-hand side of the image. The access is formed using in-situ river gravels and we anticipate that this access will need to be reformed following significant flood events. These are labelled in the Graphic Supplement at the end of Appendix 27. As outlined in the Visual Simulation discussion, the Visual Simulations represent a fixed, single shot view based on a horizontal field of view of 40º (65º for IN1) with a reading distance of 50cm at A3 size (and 28cm for IN1). The reason that IN1 is different from the other Visual Simulations is due to its closeness to the subject enabling a slightly wider view to be obtained of the surrounding area. It is acknowledged that a wider panorama of the same view would be captured when standing in that spot. Therefore, only the elements in the 40º view (or the Visual Simulation visual extent) are depicted in that view. VS1:IN1 includes the access road, however it is mostly obscured from view primarily by the angle of the view and also partly by rocks and boulders in the foreground. VS2: IN2 includes the access route to the riverbed and is depicted in the left-hand part of the image.

[3] fasttrack.govt.nz/__data/assets/pdf_file/0017/11087/Appendix-27-landscape-report.pdf

DOC concern	Requests	Response
		It is also worth stating that the Waitaha River retains dynamic river flows, as outlined in Section 2.3.4 of the Landscape Assessment, where the flow is highly weather dependent and the river can change its characteristics dramatically. Floods occur every 8.6 days.
Presence of 12 – 20 tonne excavator at Kiwi Flat	(1) How often does Westpower anticipate the 12 – 20 tonne excavator would be in use in the riverbed? (2) Has the presence of the excavator in the riverbed for maintenance work been taking into account in Mr Bentley's assessment?	Westpower expects that the numbers vary from year to year. It is estimated that the excavator will be required approximately 5 times in a good year, and 15 times in a volatile year. (1) The excavator will be stored in the tunnel and will not be visible unless working for a short period. It will be stored sufficiently far enough up the tunnel to avoid it being affected during periods of floods, when the portal may be underwater. (2) This has been taken into account within the natural character and landscape effects assessment. Refer to page (ix) of the Landscape Assessment noting that residual natural character effects will be generally moderate-high and the digger will form part of those effects, when required. The moderate-high natural character effects will be in those locations and during the time where in-river modification is required, and is expected to decrease slightly, to moderate, when the digger is not in operation. Refer also to the LMP, page 6. Due to the volatility of the river, it is considered impractical to 'sculpt' the riverbed into natural forms, as this will occur naturally due to the dynamic nature of the river.
Tailbay and tailrace at Power station site excluded from simulations	Supply images or explain rationale for why excluded	These aspects have not been excluded; they are labelled in the accompanying Graphic Supplement. In all respects, the reason these elements are not highly visible is the angle of view, coupled with the in-place mitigation that is implemented as part of the construction of the Powerhouse area. Powerhouse Simulation VS3:PH1 shows the proposed view from beyond where the DOC track will be diverted away from the powerhouse. From this vantage point, the tailrace and tailbay will be largely obscured by vegetation. VS4:PH2 is taken from the river and shows the water leaving the tailrace and the fence excluding the public from the tailrace area.

DOC concern	Requests	Response
		From upriver, (VS6:PH4) the tailrace is obscured from view by the flood barrier which is constructed of large river boulders.
ESCP error	Wrong arrow	Noted. The arrow on the first box text box of sheet 16, page 44 of the draft Erosion and Sediment Control Plan should point to the shorter, permanent access track, not the longer, temporary construction track.

Email 17 November Emma Fahey to Jon Bright

In considering the effects of the Waitaha hydro scheme in preparation of DOC's section 51 reports, and in discussion with our technical experts, a few issues have come up that we seek clarification from Westpower on. We imagine that the Panel may also have similar queries as it gets more into the detail. We have set these out below, with references to the information in the application documents to explain where we are coming from where relevant. We would appreciate a response to these issues asap.

1. **Visual simulations of headworks 10 years post-construction** - As we have already raised with you, the visual simulation IN1 (Headworks) appears to show the headworks structures 10 years post-construction after which time it is expected they will have become weathered, with mosses and lichen taken hold around the access tunnel portal entrance which will soften its appearance. After this time it is expected to appear as a "natural hole in the rock". This softening over time is noted on page 45 of the Boffa Miskell Landscape Report prepared by Mr Bentley, but the 10 year time lag time is not noted on the simulation sheet itself. The 10 year time lag raises a few issues:

    a. We query why an "as constructed" (i.e. worst case) visual simulation hasn't also been provided to sit alongside the "at 10 years" visual simulation, which could then be used to show the progression from how the structure is expected to appear immediately upon completion of construction to how the area is expected to appear over time. An "as-built" simulation would usefully include the access tunnel portal, the river access route (including the effects of tree and other vegetation clearance and earthworks to form the route noted in his report – further discussed below), and the construction laydown area and temporary road to it which will take some time to revegetate. If this has not been prepared, we would like to understand the rationale for that.

    b. We would like to know if Mr Bentley has assessed the landscape, natural character and visual amenity values of these structures and works immediately upon completion of constructed, i.e. without taking into account the benefit of the 10 year time lag. If it has, could you please provide it to us. It such an assessment has not been undertaken, we would also like to understand the rationale for that.

2. **Wingwalls or other strengthening needed for access tunnel portal** – Is it correct that the access tunnel portal at Kiwi Flat will have wingwalls around it? There is discussion in the Project Overview Report Part 1 (POR) that there will be, but the design images and simulations, and Mr Bentley's Report and the draft Landscape Management Plan don't show or mention them for the access tunnel portal. Please could you clarify whether wingwalls are going to be constructed here?
   References:

    a. POR page 17 3.57(c) notes "*leaving the entrance to the portals as uncovered rock and designed to blend in with the natural lines of the surrounding schist, rather than strengthening the outer facing edges of the entrance with concrete and geometrically shaping the entrance. This gave the portals*

a more naturalistic cave-like appearance and further reduced the level of effect on natural character. (It has since been determined that concrete wingwalls will need to be added to each side of the portal for safety reasons, but the natural look will be preserved as far as reasonably practical)"

b. POR page 73 notes that the access tunnel portal will have small wingwalls on both sides.

c. The draft Landscape Management Plan notes at paragraph 2.3(c) that:

"*The entrance to the portals will be left as uncovered rock and designed to blend in with the natural lines of the surrounding schist, rather than strengthening the outer facing edges of the entrance with concrete and geometrically shaping the entrance. This gives the portals a more naturalistic cave-like appearance and further reduces the level of effect on natural character*."

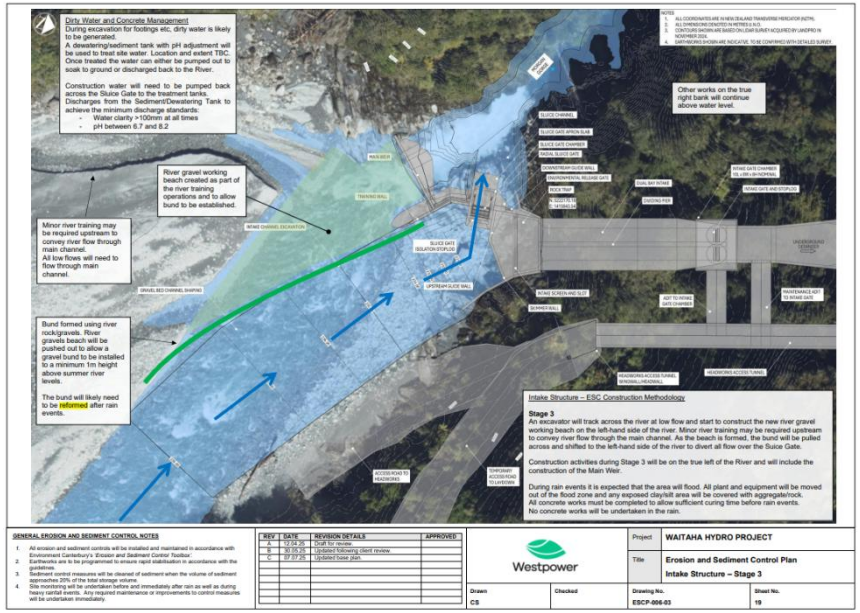
d. Mr Bentley's Report states at page 66 regarding the headworks:

"It is also proposed to minimise disturbance around the intake interface with the river rock. There is likely to be some stabilization required above the intake structure. While shotcreting is commonly used as a stabilisation treatment (and has been used for the portal area at the Amethyst Scheme), alternative treatments may be used within this sensitive location." [Note - It is not clear whether this statement is referring to the water intake of the access tunnel portal. We application documents state that there will be wingwalls around the water intake. We also understand from the application documents that the water intake will not always be submerged.]

3. **Access tunnel portal security gate?** – Query: Will the portal be open or will there be a security gate? – We note the visual simulation does not show a security gate across the portal. Will this not be needed for security and to prevent tampering with the excavator that will be housed in the tunnel when not in use?

4. **In-river bund upstream of the weir** – The Appn/AEE and the draft Erosion and Sediment Control Plan show a "bund" in the river shortly upstream from the weir and intake. The Appn/AEE states that the bund will be a minimum of 1m above summer river level. However, there is no bund shown in the visual simulations, and Mr Bentley's Report does not refer to any bund at this location. Could you please clarify what the *maximum* height above the river level will be, and what that river level is.
   References:

   - The green structure shown on Sheet 19 (page 47) of the draft Erosion and Sediment Control Plan is described as a "bund", but there is no bund shown in the relevant simulation IN2 below:



- The bund structure is described as: "*Bund formed using river rock/gravels. River gravels beach will be pushed out to allow a gravel bund to be installed to a minimum 1m height above summer river levels. The bund will likely need to be reformed after rain events*."
- The Appn/AEE 3.7.2 page 103 notes:

"In-stream Maintenance Works

Remedial work involving excavators will be required following large floods if gravel has filled the intake area restricting flow into the water intake tunnel. This will involve the use of a hydraulic digger (between 12 to 20 tonnes in size) with the riverbed to recreate the channel and help flush accumulated sediment through the sluice channel. These works may also involve the creation of river training bunds above the weir to encourage the river to flow toward the true right of the gorge where the water intake structure is situated"

- The POR at 8.5 page 40 notes:

"While general weekly visits to the intake will involve personnel only, it is likely that additional remedial work involving excavators will be required following large floods if gravel has filled the intake area, restricting flow into the tunnel. This will involve a hydraulic digger within the range of 12 to 20 tons working in the riverbed to recreate the channel and to help to flush the sediment through the sluice channel. It may also involve some river training work by digging out, no

more than 100 m above the weir, riverbed gravels along the channel and move this material to the sides to form a bund to encourage the river to flow toward the true right of the gorge where the intake is situated."

- The POR at page 50 notes:

"Maintenance work in the river will involve an excavator (~12-20t), clearing gravel/boulders to ensure that the river flows toward the intake and sluice gate. It is not envisaged that the full intake channel profile would be recreated, but rather the channel 'trained', and larger boulders/debris moved so that it can flow in the desired direction and sluicing flows can do the bulk of the work of moving gravels."

5. **Route from access tunnel portal to riverbed** – While Mr Bentley's Report refers to it, the visual simulation of the intake structures (IN1) does not include the 60m long x 12m wide access route to the riverbed from the access tunnel portal needed for the 12 – 20 tonne excavator to get down to riverbed level to do maintenance work in the river and at the intake. The access route is however referenced in the documents and shown on various plans. It will be visible from at least some locations, given the comment in Mr Bentley's Report noted below. Please could you clarify why the access route is not shown in the simulations. If you do have any images, please could you supply them to us.
   References:
   - POR page 73 notes: "The final portal location is subject to further geotechnical work, however it is estimated that it will be approximately 10 m distance (horizontally) from the water portal, with *the floor approximately 6 m higher than the top of the water portal*"
   - Figure 2 at para 4.21 on page 21 of the POR show this access route as (A) (and the construction road and laydown areas as (B) and (C), as does Figure 22 in the Appn/AEE shown above. But the relevant simulation (IN1) does not show any of these works, and this is the only simulation for this area looking towards Kiwi Flat:

4.21 At the Headworks a short access route will provide vehicular access from the access portal down to the riverbed (A) and, during construction, alongside the river terrace (B) up to Construction Staging Area 1 (C) area above the river as shown in **Figure 2** below.

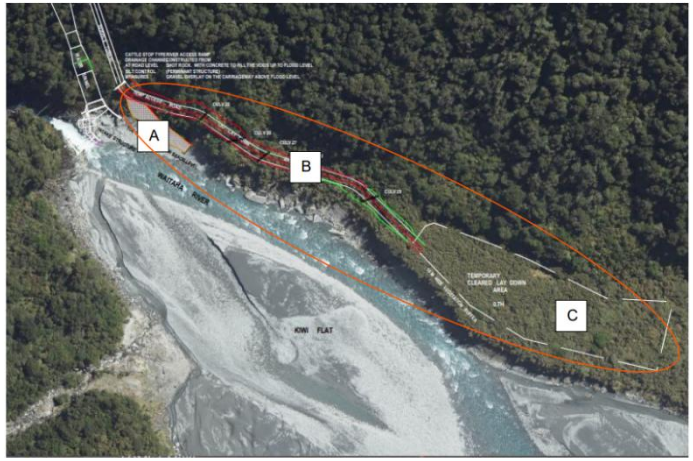


Figure 2 - Access Road and Construction Staging Area 1 at Intake

- The POR page 66 also notes the access as follows:

"There will be a semi-permanent accessway between the access portal and the riverbed. This will comprise a path benched into the rock slope approximately 60 m long down to the riverbank terrace, and a gravel track to the riverbed, rebuilt after major flood events"

- Mr Bentley's Report in assessing the operational effects of the headworks structures comments at the top of page 43:

"*Linking the Headworks access portal to the river, will be a short access road (approximately 60 m in length), of approximately 12 m in width and unsealed. The access road will require tree removal and some earthworks (i.e. cuts and batters no greater than 2 m) to gain alignment over the steep terrain and will be no steeper than 1 in 6. The road will be capable of transporting a maintenance vehicle to the intake structure, which will be stored inside the upper portal. The actual alignment will be agreed on site following a detailed survey and will avoid, where practicable, large trees and rocks*."

- Mr Bentley's Report also comments at page 44:

"*The proposed insertions will be designed carefully, to respond the highly natural landscape. The weir will appear low across the river during normal and low flows and be almost submerged during high flows. The headworks access portal and associated access road will appear as the most visible, however will be integrated into the rock as much as possible, where lichen, moss and ferns will be encouraged to grow to further reduce the visual presence of the Scheme*."

- We are also confused by what is shown on the Draft Erosion and Sediment Control Management Plan Sheet 16 at page 44. Below is a snip of the relevant part of Sheet 16 with an orange ellipse and green and yellow highlighting added:

  - We assume the1st comment box at the top "Permanent maintenance accessway…" (as highlighted in yellow) relates to the red/brown river access, and the arrow should be pointing to that, rather than the (grey) construction access road. We understand from the other application

documents that the dimensions noted there (60m long x 12m wide) relate to the permanent river access, rather than the construction staging access road – which we note is described as being 140m long and 9m wide in the 3rd comment box and with an arrow pointing to that road.

- The permanent "River access ramp" (green highlighted comment box and arrow) notes the use of shot rock and concrete to fill voids down to river level, with river rock/gravel on the section above flood level. (This description aligns with the description of the river access on the last orthorectified photograph in the Preliminary Access Road drawings (Appendix 43 to Application.)

6. **Presence of 12 – 20 tonne excavator at Kiwi Flat** – The highly dynamic nature of the river, the extremely high sediment flow, and the need for this to be managed were noted at the Panel conference on Friday 14th November. Queries: (1) How often does Westpower anticipate the 12 – 20 tonne excavator would be in use in the riverbed? (2) Has the presence of the excavator in the riverbed for maintenance work been taking into account in Mr Bentley's assessment?
   References:
   - The POR (page 45) refers to unplanned/remedial (as well as planned) maintenance, but does not say how often this is expected;
   - The note on Figure 22 in the Appn/AEE snipped above states: "*The bund will likely need to be reformed after rain events".*
7. In respect of the above issues for which consideration by Mr Bentley is not apparent from his report, could you please advise whether the following were in fact taken into account in assessing the effects of the as-built hydro scheme (as opposed to temporary effects during construction) on landscape, natural character and visual amenity values, i.e. the impacts of the following elements being present following the completion of construction:
   - Wingwalls around the access tunnel portal (assuming they are required);
   - The bund(s) in the river immediately upstream of the intake structures; and
   - The excavator periodically working in the head works area during scheme operation.

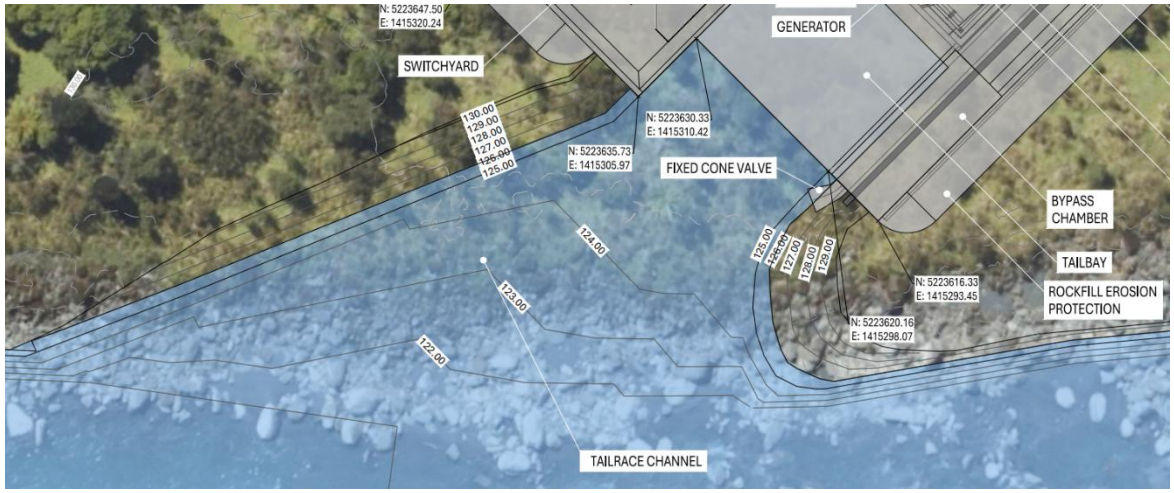
As above, we would also like to be advised of Mr Bentley's assessment of the effects of the structures *before* they are weathered and naturalised as expected (ie immediately upon construction rather than at 10 years post-construction). If this assessment has not be undertaken, we like to know the rationale for the approach, and how the effects of the intervening time (ie years 0 – 9 post-construction) have been taken into account in assessing the landscape, natural character and visual amenity effects of the proposal.

8. **Tailbay and tailrace at Power station site** – while the tailbay and tailrace structures are shown on the Conceptual Scheme Design Drawings and mentioned in the POR, the visual simulations of the Power station and associated infrastructure do not show these structures. Could you please clarify why

not, and if you have any images, please could you supply them to us.

References:

- Drawing WP-WTH-C-400 on page 10 of the Conceptual Scheme Design Drawings as follows:



- The POR page 68 refers to:

▪ Tailbay concrete construction 16 m long by 15 m wide to a depth of approximately 8 m.

▪ Tailrace widening towards the Waitaha River, to discourage fish from entering the tailrace channel.

▪ Natural boulder and rock could be placed here to provide additional protection and improve visual amenity.

- The draft Landscape Management Plan notes at 2.6(c) on page 8:

*"Tailrace: Extending from the Power Station will be the tailrace for approximately 16 m and be approximately 15 m wide, with a depth of 8 m. The establishment of the tailrace will require the rem*oval of a portion of the rocky Waitaha riverbank and riverbed. *Noted as 27 in Figure 4*"

- The POR at page 69 notes that there will be fencing/railing on the sides of the tailbay and adjacent to the tailrace, and warning signs will be installed.