

24 January 2023

West Coast Regional Council  
PO Box 66  
Greymouth 7804  
Attn: Chris Hoskins

By email: [chris.hoskins@inovo.nz](mailto:chris.hoskins@inovo.nz)

Dear Chris,

**RE: RC-2022-0032, STOPBANK RASING AND CONSTRUCTION WAIHO RIVER – REQUEST FOR FURTHER INFORMATION**

As you will be aware, Tai Poutini Professional Services Ltd has been engaged by the West Coast Regional Council to independently process the above resource consent application.

Under section 92(1) of the Resource Management Act 1991, further information is required to process your application. The information requested will help determine whether the activity will have or is likely to have adverse effects on the environment that are more than minor. It will also assist in considering which effects can be avoided, remedied or mitigated.

**The further information requested is:**

1. Confirm if any river diversion will occur as part of this proposal. If river diversion is proposed please provide details of how this will be undertaken, and the location of the diversion.
2. It is not clear from the application whether consent is being sought for a gravel take, or whether the material for the stop bank will be sourced from an existing consented gravel take area. Please provide details on the location/ source from which gravels and materials will be taken from for the proposed works, including consent references for any consented gravel takes proposed to be used. For each location provide the volume of material to be taken. If the gravel take forms part of this consent application, please complete the attached Gravel Extraction Form in order to provide sufficient detail about the proposed extraction.
3. If the gravel extraction is occurring within the vicinity of the Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474, please provide a report from a suitably qualified engineer confirming the gravel & material takes referred to in point 2 above can be

undertaken without generating adverse effects to Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474 property.

4. Provide details of a proposed monitoring and maintenance schedule for the proposed works. The schedule should cover all aspects of works including during the works period and following the completion, including any anticipated supervision of works and post-construction monitoring by suitably qualified experts.
5. Please confirm that none of the proposed works will occur within the property owned by Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474; and indicate whether you would accept a condition of consent which requires the boundary of the property to be defined and marked to ensure works do not occur within the property.
6. If the application does include gravel extraction and/or diversion, please provide an updated engineering report or memo specifically addressing the potential effects of the proposed stopbank on the SLHL property.

**Within 15 working days of receiving this letter you may:**

- a) Provide the information that is stated above.
- b) Advise that you agree to provide the information but that it is likely to take more than 15 working days. A reasonable timeframe will then be set in which to provide the information.
- c) Provide written notice that you refuse to provide the information.

In accordance with section 88C(1) of the Resource Management Act 1991, the processing of your application will be postponed until the above information is received.

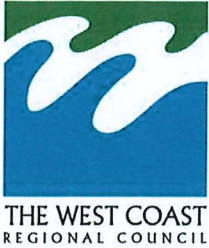
Once satisfied all the relevant information has been provided, a hearing date will be set within the timeframe under s103A.

If you have any questions, please contact me on 027 228 9914 or [selene.kane@tpri.co.nz](mailto:selene.kane@tpri.co.nz).

Yours sincerely,



Selene Kane  
Planner  
**Tai Poutini Resources**



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3 January 2023

Tai Poutini Resources  
100 Mackay Street  
PO Box 183  
Greymouth 7840

Attention: Selene Kane  
By email: [selene.kane@tpri.co.nz](mailto:selene.kane@tpri.co.nz)

Dear Selene,

**RE: RC-2022-0032, Stopbank Raising and Construction Waiho River – Request For Further Information**

Thank you for your letter dated 24 January 2023 requesting Further Information to support our application for the above Resource Consent.

Please find attached our responses to the information requested and associated supporting information.

Yours sincerely,

Scott Hoare  
**Programme Manager**  
**West Coast Regional Council**



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**RC-2022-0032, Stopbank Raising and Construction Waiho River – Request for Further Information dated 24 January 2023:**

**Request For Information Responses**

**1 February 2023**

**Project Background:**

The proposed works are to construct new, and raise existing stop banks, to the predicted water level for a 2,500m<sup>3</sup>/s flow (being the 1% AEP or 1 in 100 year event), allowing for a further 20 years of bed aggradation. The main features of the banks are a bulk fill structure comprised of river gravels sourced from the Waiho River adjacent to the new banks, and new or supplemented rock rip-rap on the river side of the bank. Rock will be carted to site from suitable quarry locations.

The Waiho River is a large and dynamic system that is known for its aggregation and the river bed and water channel locations and flows are constantly changing. Acknowledging that these works will occur in a dynamic river environment and over a period of 12 months requires flexibility in regards to locations and activities.

Responses to the Request for Information queries are provided below.

1. Confirm if any river diversion will occur as part of this proposal. If river diversion is proposed please provide details of how this will be undertaken, and the location of the diversion.

River diversion will be required during the course of the works to facilitate construction and/or gravel extraction away from flowing water and in locations where major channels do not need to be crossed.

West Coast Regional Council holds the following resource consents permitting the required diversions:

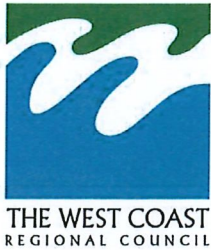
- RC\_2018-0012-01, Land Use Consent. To disturb the bed and banks of the Waiho River to undertake river training and diversion works.
- RC-2018-0012-02, Water Permit. To temporarily and permanently divert water into a new channel of the Waiho River.

A variation to these consents may be sought in the future to support gravel extraction from the true left side of the river which would be prohibited if diversion works are limited to the very center of the channel. A new Water Permit Consent will be applied for to allow for the temporary diversion of small additional river braids during the construction period to aid stopbank construction activities.

2. It is not clear from the application whether consent is being sought for a gravel take, or whether the material for the stop bank will be sourced from an existing consented gravel take area. Please provide details on the location/ source from which gravels and materials will be taken from for the proposed works, including consent references for any consented gravel takes proposed to be used. For each location provide the volume of material to be taken. If the gravel take forms part of this consent application, please complete the attached Gravel Extraction Form in order to provide sufficient detail about the proposed extraction.

Gravel for the stop bank construction will be sourced from the bed of the Waiho River generally adjacent to the proposed stop banks. The volume of bulk fill in the new and raised stopbanks is approximately 208,000 m<sup>3</sup>. An abstraction volume of up to 250,000 m<sup>3</sup> is sought to allow for compaction in the bank and tolerance in survey and construction.

A new Consent application will be submitted for gravel extraction.



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Gravel will be abstracted in accordance with the proposed condition below, with specific location being determined on site to account for the location of major river braids, proximity to flood protection structures and proximity to the work site. Prior to extraction, the location of excavation, any diversions for access and haul roads will be agreed with an independent river engineer. The following condition is proposed for inclusion in the consent:

*“Prior to any bulk excavation of gravel, sand and natural material the proposed area shall be inspected and approved by a qualified independent river engineer and shall not be excavated within 100 meters of the banks of the river or any flood protection works. The proposed location of excavation shall be inspected and approved (in writing) by a qualified and independent river engineer to assess that the excavation will have no reasonably foreseeable adverse impact on or endanger any existing flood protection works, property and maintenance of established river channels other than the enhancement/diversion of river channels in the course of the stop bank construction.”*

3. If the gravel extraction is occurring within the vicinity of the Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474, please provide a report from a suitably qualified engineer confirming the gravel & material takes referred to in point 2 above can be undertaken without generating adverse effects to Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474 property.

Gravel extraction will occur greater than 150m from the boundary of Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474 and more likely greater than 250m away. Any excavation sites will be inspected and agreed by a suitably qualified engineer prior to commencement to assess the risk of any adverse effects. A report detailing the inspection undertaken and agreed gravel extraction location will be provided

4. Provide details of a proposed monitoring and maintenance schedule for the proposed works. The schedule should cover all aspects of works including during the works period and following the completion, including any anticipated supervision of works and post construction monitoring by suitably qualified experts.

Stage	Responsible	Frequency
Construction	Engineer's Representative	Weekly
Gravel Extraction	Suitably qualified and independent engineer – could be Engineers Rep, Council Engineer or any independent,	Prior to extraction and ongoing as part of construction monitoring
2 years from completion	Suitably qualified and independent engineer – could be Engineers Rep, Council Engineer or any independent,	6-monthly from the issue of Practical Completion Certificate
After 2 years or following any significant flood event	Suitably qualified river engineer to complete an annual maintenance report in accordance with the Franz Josef Rating District Asset Management Plan (2021-2024).	Annual condition assessment.

The following is an extract from the 2021-2024 Franz Josef Asset Management Plan (AMP) and confirms



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the requirements and obligations of WCRC in respect of inspections and maintenance:

## 6.2 Maintenance Programme

An annual maintenance report is prepared each year in consultation with the Franz Josef Rating District to adoption by the Council for inclusion in its annual budgets.

In preparing the annual maintenance report the following will be considered:

- An inspection to identify works requiring immediate repair.
- Works anticipated as being required given a 'normal' season.
- Flexibility to meet unbudgeted damages.

An annual report will be presented to the Rating District outlining the condition of the scheme assets and maintenance works and expenditure required for the coming financial year.

5. Please confirm that none of the proposed works will occur within the property owned by Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474; and indicate whether you would accept a condition of consent which requires the boundary of the property to be defined and marked to ensure works do not occur within the property.

There will be no works within Section 1 Survey Office Plan 11504 and Lot 1 Deposited Plan 1474 and it is acceptable for a condition requiring demarcation of the boundary to be included.

6. If the application does include gravel extraction and/or diversion, please provide an updated engineering report or memo specifically addressing the potential effects of the proposed stopbank on the SLHL property.

Refer attached memo confirming a large gravel supply is available from the river in the vicinity of the proposed works and extraction can be undertaken in a manner which will mitigate any potential risks to the flood protection structures along the river, including those adjacent to SCHL.



## Overall River Environment & Gravel Supply

Within the area of assessment, the Waiho River is an aggrading riverbed with an average bed level increase of 180mm per year (Land River Sea, October 2021). Over the area of interest (3,000,000 m<sup>2</sup>) this equates to 540,000m<sup>3</sup> gravel per year. The impacts of this aggrading river bed have been observed and managed in this reach of river for decades, including relocation of buildings, flooding, raising of the bridge and the current proposed stopbank works.

Given the large quantity of gravel being deposited in the river, the proposed extraction of gravel, provided it is undertaken appropriately, will be a sustainable activity so long as the supply of gravel continues to be greater than the volume extracted. Any extraction greater than 500,000m<sup>3</sup> per year should be more thoroughly assessed to confirm there would not be any significant impacts downstream of the assessment area, including gravel supply to the river mouth.

To consider the potential impacts specifically in the vicinity of the Scenic Hotel property, the 2019 LIDAR data has been checked as a cross section at the 55kph corner on State Highway 6. Figure 2 below shows the 2019 elevation along this cross section (also marked as line A-B in Figure 1).

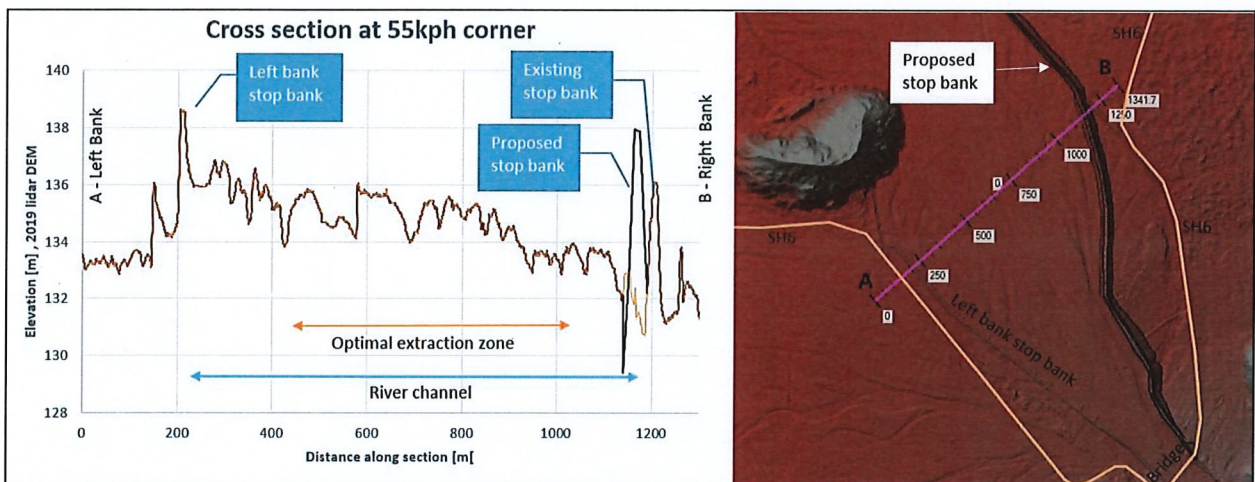


Figure 2: Cross Section at 55kph Corner

Reviewing Figure 2 cross section data, and other sectional data shows that the mid-channel bed level is perched above surrounding ground levels and extraction from the central part of the river will be beneficial to keeping river flow within the current active riverbed.

Any consent granted for large volume gravel extraction over an extended period should include a condition requiring survey and analysis of cross section data to assess Mean Bed Level (MBL) conditions to ensure the extraction is not causing a reduction in riverbed that might pose a risk to river banks and flood protection structures.

The proposed stopbank construction and upgrade works detailed in the design drawing attached indicates a volume of 208,420m<sup>3</sup> material required to build the banks. The volume of material to be extracted from the river to supply this is likely to be greater due to the effect of construction compaction, however even allowing a very conservative 20% bulking factor, the volume required is 250,000m<sup>3</sup> or approximately 50% of the gravel volume aggrading in this area of riverbed.

There are no known existing large gravel abstractions (greater than 10,000m<sup>3</sup> per year) on this stretch of river, so the cumulative effects of extractions has not be considered.



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## Extraction Location and Constraints

Key factors influencing appropriate locations for gravel extraction on the Waiho River will be:

- Location of flowing channels impacting accessibility will impact accessibility
- Proximity to flood protection works (stopbanks and rock groynes)
- Proximity to infrastructure (roads, bridge, wastewater treatment ponds)
- Potential for impacts to downstream flow paths.
- Quality of gravel deposits distributed over the river
- Accessibility for construction machinery

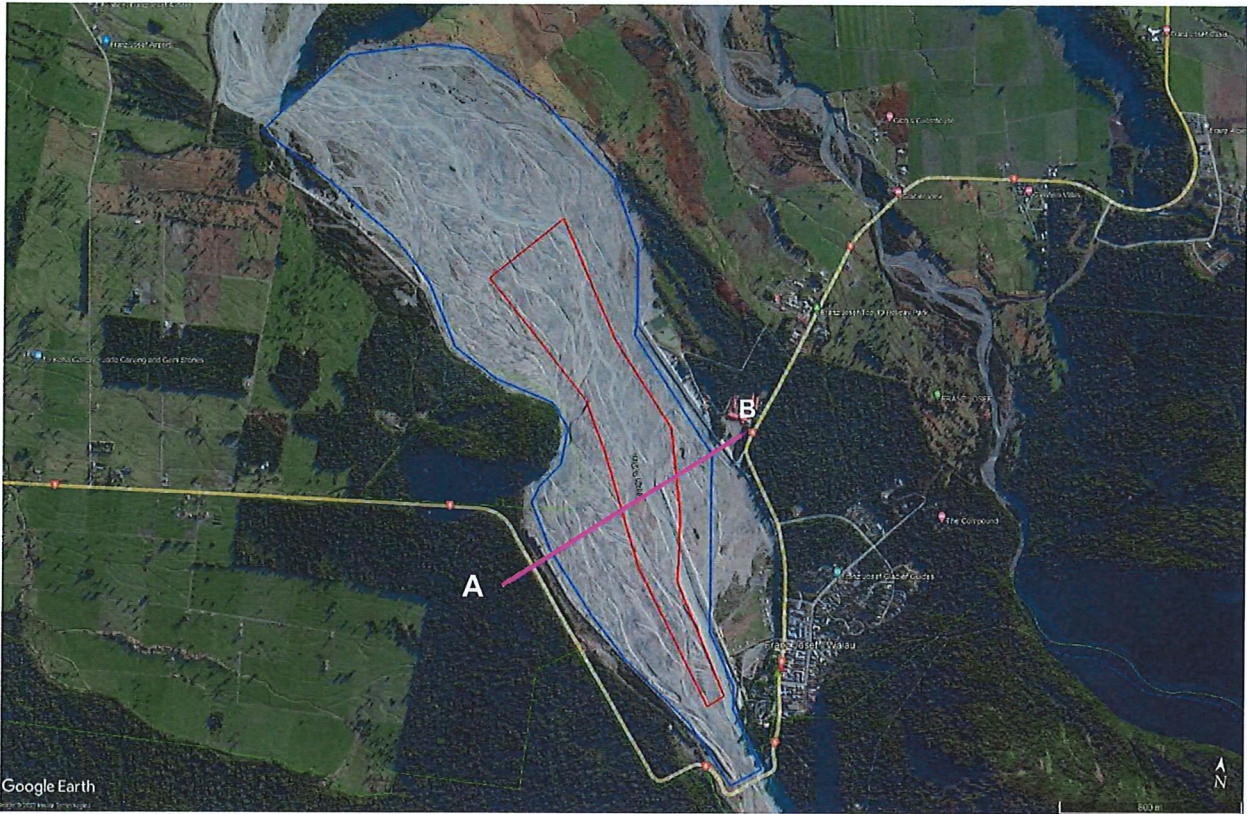
In practice, these factors will be assessed on site by experienced river engineer(s) and/or contractors at the time of establishing a gravel extraction location and should be addressed through the inclusion of consent conditions which ensure the following:

- Appropriate off-sets from stopbanks and river vegetation to minimise the risk of erosion
- Appropriate alignment and depth of excavations to minimise the risk of water being inadvertently diverted in such a way that causes issues downstream
- Management of sediment discharges
- Management of stockpiles to avoid mis-directing flows downstream or creating excessive sedimentation.
- Management of crossing points and/or river diversions
- Appropriate controls to minimise impacts on nesting birds or other aquatic or terrestrial species
- Controls on construction access, noise, dust, refuelling etc.

An offset from the right bank of 100m is considered more than sufficient to ensure any excavation will not be a risk to flood protection structures. The excavations should be aligned parallel with the Havill Bank stopbank, more or less perpendicular to cross section A-B shown in Figure 1. This is to ensure any water entering an excavated hole is not directed towards flood protection structures.

Appropriate offset from the left bank is more complex due to the presence of the large moraine deposit opposite the wastewater treatment ponds. Large scale excavation along the left bank has the potential to draw the main channel along this route, for it to then be directed back across the riverbed to the wastewater treatment ponds. Furthermore, for the proposed stopbank upgrade, this side of the river is far less practicable to access. It would not be appropriate for large construction machinery to use the SH6 bridge or cross the main river channel.

Given these limitations, the optimal extraction area will likely be centrally located as generally indicated by the area bounded in red in Figure 3 below.



**Figure 3: Optimal Gravel Extraction Zone (red boundary)**

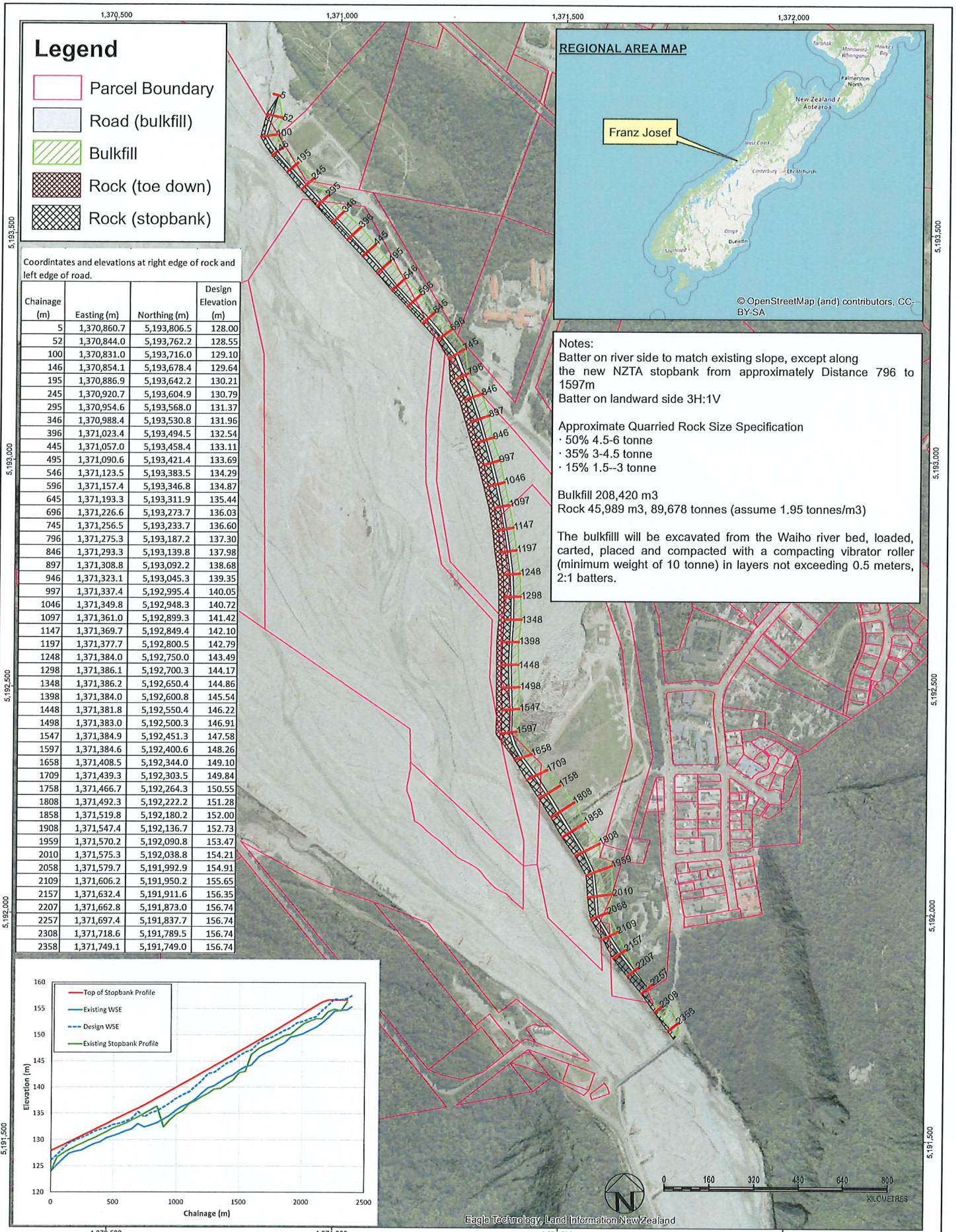
Provided the issues noted above are addressed during gravel extraction, and appropriately managed throughout the work, then the removal of gravel from the bed of the Waiho River can be carried out without exacerbating risk to the existing stopbanks or adjacent property. Moreover, excavation and removal of gravel from the riverbed, when appropriately located and managed is likely to have a beneficial impact on the overall flood hazard in the area.

**Ben Pasco**  
BE, CMENZ

**Tetra Tech Coffey (NZ)**

References: Franz Josef Stopbanks Preliminary Design Report, Land River Sea Consulting, 26 October 2021

Attachments: Franz Josef Stopbanks – Proposed Stopbank Design drawings Figure A1



### Legend

- Parcel Boundary
- Road (bulkfill)
- Bulkfill
- Rock (toe down)
- Rock (stopbank)

### REGIONAL AREA MAP

© OpenStreetMap (and) contributors. CC-BY-SA

Coordinates and elevations at right edge of rock and left edge of road.

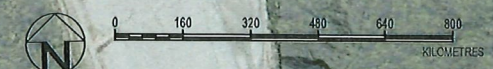
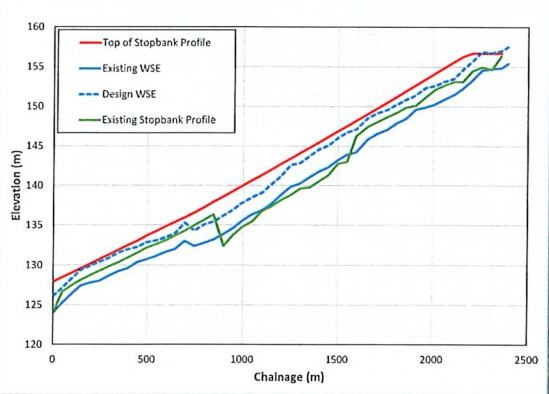
Chainage (m)	Easting (m)	Northing (m)	Design Elevation (m)
5	1,370,860.7	5,193,806.5	128.00
52	1,370,844.0	5,193,762.2	128.55
100	1,370,831.0	5,193,716.0	129.10
146	1,370,854.1	5,193,678.4	129.64
195	1,370,886.9	5,193,642.2	130.21
245	1,370,920.7	5,193,604.9	130.79
295	1,370,954.6	5,193,568.0	131.37
346	1,370,988.4	5,193,530.8	131.96
396	1,371,023.4	5,193,494.5	132.54
445	1,371,057.0	5,193,458.4	133.11
495	1,371,090.6	5,193,421.4	133.69
546	1,371,123.5	5,193,383.5	134.29
596	1,371,157.4	5,193,346.8	134.87
645	1,371,193.3	5,193,311.9	135.44
696	1,371,226.6	5,193,273.7	136.03
745	1,371,256.5	5,193,233.7	136.60
796	1,371,275.3	5,193,187.2	137.30
846	1,371,293.3	5,193,139.8	137.98
897	1,371,308.8	5,193,092.2	138.68
946	1,371,323.1	5,193,045.3	139.35
997	1,371,337.4	5,192,995.4	140.05
1046	1,371,349.8	5,192,948.3	140.72
1097	1,371,361.0	5,192,899.3	141.42
1147	1,371,369.7	5,192,849.4	142.10
1197	1,371,377.7	5,192,800.5	142.79
1248	1,371,384.0	5,192,750.0	143.49
1298	1,371,386.1	5,192,700.3	144.17
1348	1,371,386.2	5,192,650.4	144.86
1398	1,371,384.0	5,192,600.8	145.54
1448	1,371,381.8	5,192,550.4	146.22
1498	1,371,383.0	5,192,500.3	146.91
1547	1,371,384.9	5,192,451.3	147.58
1597	1,371,384.6	5,192,400.6	148.26
1658	1,371,408.5	5,192,344.0	149.10
1709	1,371,439.3	5,192,303.5	149.84
1758	1,371,466.7	5,192,264.3	150.55
1808	1,371,492.3	5,192,222.2	151.28
1858	1,371,519.8	5,192,180.2	152.00
1908	1,371,547.4	5,192,136.7	152.73
1959	1,371,570.2	5,192,090.8	153.47
2010	1,371,575.3	5,192,038.8	154.21
2058	1,371,579.7	5,191,992.9	154.91
2109	1,371,606.2	5,191,950.2	155.65
2157	1,371,632.4	5,191,911.6	156.35
2207	1,371,662.8	5,191,873.0	156.74
2257	1,371,697.4	5,191,837.7	156.74
2308	1,371,718.6	5,191,789.5	156.74
2358	1,371,749.1	5,191,749.0	156.74

**Notes:**  
 Batter on river side to match existing slope, except along the new NZTA stopbank from approximately Distance 796 to 1597m  
 Batter on landward side 3H:1V

**Approximate Quarried Rock Size Specification**  
 · 50% 4.5-6 tonne  
 · 35% 3-4.5 tonne  
 · 15% 1.5-3 tonne

**Bulkfill 208,420 m<sup>3</sup>**  
**Rock 45,989 m<sup>3</sup>, 89,678 tonnes (assume 1.95 tonnes/m<sup>3</sup>)**

The bulkfill will be excavated from the Waiho river bed, loaded, carted, placed and compacted with a compacting vibrator roller (minimum weight of 10 tonne) in layers not exceeding 0.5 meters, 2:1 batters.



no.	description	drawn	appr.	date	drawn	DBT	NZGD 2000 NEW ZEALAND TRANSVERSE MERCATOR	client:	LAND RIVER SEA CONSULTING					
					approved	DBT		project:	FRANZ JOSEF STOPBANKS					
					date	19.10.2021		title:	SITE LOCATION MAP					
					scale	AS SHOWN		project no:	773-AKLWT290497		figure no:	A.1	rev:	B
					original size	A3								
A	ORIGINAL ISSUE	DBT	DBT	8 OCT 2021										

LOD Template Reference: Franz Josef Design: RPL 1

08 February 2023

West Coast Regional Council  
PO Box 66  
Greymouth 7804  
Attn: Chris Hoskins

By email: [chris.hoskins@inovo.nz](mailto:chris.hoskins@inovo.nz)

Dear Chris,

**RE: RC-2022-0032, STOPBANK RAISING AND CONSTRUCTION WAIHO RIVER**

Thank you for the further information received on Friday the 3<sup>rd</sup> of February 2023.

The information you have provided has been assessed and we provide the following information in response.

Point 1

River diversion is expected to occur within the Waiho riverbed.

The response states these river diversions will occur under resource consent RC 2018-0012-01 and RC 2018-0012-02 with a variation made to allow for diversion outside of the area specified within the consent. It is our understanding that it would not be possible to authorise the diversion works by making a variation to this consent and a new resource consent application would be required.

Further to this, the river diversion does not fit within the scope of the current application, and as a notification decision has been made the scope cannot be altered at this time. The best course of action is for a new resource consent application be lodged relating to these works. As the diversion works are inextricably linked to the construction of the stopbank, the current application (RC-2022-0032) will be placed on hold pursuant to section 91 of the Resource Management Act 1991 pending the receipt of a further application for the river diversion works.

Point 2

The response states a new resource consent application is to be lodged relating to gravel extraction. Pursuant to rule 33 of the West Coast Regional Land and Water Plan this application

does not need to be notified, excluding where the applicant requests public notification or the processing officer considers there to be special circumstances.

It is our view that the proposed works can be carried out with gravel sourced from elsewhere under existing resource consents, i.e. gravel can be purchased from suppliers. Therefore, it is considered appropriate that a new resource consent for gravel extraction can be processed independently to the current application.

#### Point 3

The gravel extraction and all works will not occur within the boundaries of Section 1 Survey Office Plan 11504 and Lot 1 DP 1474. The memo attached covers the proposed gravel extraction and concludes the works can be undertaken without exacerbating risk to the existing stopbanks and adjoining properties. This request for further information has been addressed satisfactorily.

#### Point 4

The response provided a table of works and condition 6.2 extracted from the 2021-2024 Franz Josef Asset Management Plan.

The table provides differing expert inputs throughout the various stages of the project. The monitoring and maintenance actions to be carried out at each stage by the experts are not clear. Please provide a monitoring and maintenance schedule which shows what actions proposed to be carried out at each stage by any suitably qualified experts.

The context of condition 6.2 is not clear, please provide a copy of the 2021-2024 Franz Josef Asset Management Plan. Condition 6.2 provides for an annual maintenance programme only, which the table depicts more frequent monitoring and maintenance actions.

#### Point 5

The response satisfies the further information requested. The acceptance of the condition is noted, it will be recommended that this condition be included as part of the decision if consent is granted.

#### Point 6

The Tetra Tech Coffey memo provided only addresses the effects of the gravel extraction. There is no assessment of the proposed river diversion. It is recommended that a separate report be prepared and provided as part of the river diversion resource consent application.

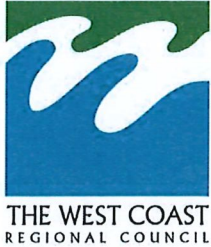
At this time, the consent application will remain on hold under section 92 of the Resource Management Act 1991 until such time as the further information request is satisfied, and under section 91 of the Act until a resource consent application to authorise the necessary river diversion works is undertaken.

If you have any questions, please contact me on 027 228 9914 or [selene.kane@tpri.co.nz](mailto:selene.kane@tpri.co.nz).

Yours sincerely,



Selene Kane  
Planner  
**Tai Poutini Resources**



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8 March 2023

Tai Poutini Resources  
100 Mackay Street  
PO Box 183  
Greymouth 7840

Attention: Selene Kane  
By email: [selene.kane@tpri.co.nz](mailto:selene.kane@tpri.co.nz)

Dear Selene,

**RE: RC-2022-0032, Stopbank Raising and Construction Waiho River – Request for Further Information**

Thank you for your letter dated 8 February 2023 requesting Further Information to support our application for the above Resource Consent.

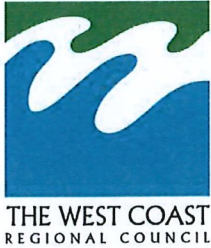
Please find attached our responses to the information requested and associated supporting information.

Yours sincerely,

Scott Hoare

**Programme Manager**

**West Coast Regional Council**



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**RC-2022-0032, Stopbank Raising and Construction Waiho River – Request for Further Information dated 8 February 2023:**

**Request for Information Responses**

**8 March 2023**

1. “River diversion is expected to occur within the Waiho riverbed. The best course of action is for a new resource consent application be lodged relating to these works.”

[Description abridged]

A separate Resource Consent application for River Diversion has been prepared and was lodged on 3 March 2023.

2. “The response states that a new resource consent application is to be lodged relating to gravel extraction.”

[Description abridged]

A separate Resource Consent application for Gravel Extraction has been prepared and was lodged on 13 February 2023.

3. The previous information provided has been accepted as satisfactory.

4. “The response provided a table of works and condition 6.2 extracted from the 2021-2024 Franz Josef Asset Management Plan.

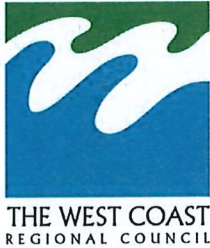
Please provide a monitoring and maintenance schedule which shows what actions proposed to be carried out at each stage by any suitably qualified experts.

The context of condition 6.2 is not clear, please provide a copy of the 2021-2024 Franz Josef Asset Management Plan.”

[Description abridged]

The Franz Josef Asset Management Plan has previously been provided as requested. On review of the full document we agree that the use of this document to support the intent of this table of inspections, maintenance etc is not appropriate and we wish to redact its inclusion.





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We submit the following clauses provided by West Coast Regional Council in response to the original question and to support the details included in the table, particularly with reference to the post construction completion periods:

**“Asset inspections will be carried out annually, and after each significant weather event, by a suitably qualified river engineer professional.**

**For a period of 2 years after completion of the works, engineering staff will monitor the condition of the assets at least once every four months. “**

The original table has been amended to reflect the above clauses :

Stage	Responsible	Frequency
Construction	Engineer’s Representative	Weekly
Gravel Extraction	Suitably qualified and independent engineer	Prior to extraction and ongoing as part of construction monitoring
2 years from completion	Suitably qualified and independent engineer – Council Engineer or any independent	4-monthly from the issue of Practical Completion Certificate
After 2 years or following any significant flood event	Suitably qualified river engineer to complete an annual maintenance report	Annual condition assessment.

5. The previous information provided has been accepted as satisfactory.
6. “It is recommended that a separate report be prepared and provided as part of the river diversion resource consent application.”

[Description abridged]

In support of the original Tetra Tech Coffey memo, and in response to the question, information has been provided in the River Diversion application documentation.

## Selene Kane

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**From:** Chris Hoskins <chris.hoskins@inovo.nz>  
**Sent:** Thursday, 16 March 2023 3:02 pm  
**To:** Selene Kane  
**Subject:** WCRC RC-2022-0032 Stopbank Raising and Construction Waiho River

Hi Selene,

I am writing in response to your e-mail dated 9 March 2023 seeking additional information to support the previously forwarded RFI response item 4 dated 8 March 2023.

The responses to your request for additional information is as follows:

- Methodology of an asset inspection and annual condition report;

Site walkover to view the river protecting structures looking for signs of erosion, slumping, rock movement, scour or significant changes in river behaviour which might be impacting the expected performance of the structure. A site inspection record should be made including details of the person completing the inspection, site photographs and details of river conditions at the time of inspection. The annual condition report will assimilate each site inspection report for the scheme and summarise the overall condition and key issues or risk areas.

- What actions will be taken following these inspections/ reports;

Records of all inspections will be maintained with the asset management plan files and any changes to asset condition scores or notes made in the asset register. In accordance with the Franz Josef Asset Management Plan, works may be undertaken immediately if necessary, or as per the annual maintenance report after consideration of budgetary constraints or priorities elsewhere within the scheme.

- If damage, degradation or change to any part of the stopbanks (existing or proposed) is discovered what actions could be undertaken by the applicant;

The asset register should be updated and appropriate maintenance works considered, planned and executed as per the Asset Management Plan. Where critical faults are identified these should be resolved as soon as practicably possible following assessment and recommendation of works. Not all observations of change will necessitate work, and changing river conditions or level of service requirements may also impact the appropriate remedial works.

- If any maintenance works will be done on a regular basis;

Regular maintenance may be required to resolve pot-holes or minor settlement where vehicle traffic is crossing the stopbank. Vegetation management may also be required from time to time to prevent trees or weeds from compromising the stopbank integrity.

The above inspection and monitoring regimes will need to be accompanied by a series of protocols developed by Council and intended to be included as part of their Asset Management practices. Unfortunately Council do not currently have that degree of detail available but acknowledge that this is required to be implemented by them. In

discussions with Council on this matter, and to provide indications of their support for the above procedural statements, Council have provided the following undertaking:

“Chris ,

**I refer to our discussions on this matter and confirm support for the proposal to include a resource consent condition requiring the Council to prepare an asset monitoring and inspection plan for the new assets, for approval by the Consent Authority within one month of completion of the physical works. The Council's Asset Management processes and procedures are subject to further development. This will become increasingly important as significant new projects are completed. Additional resources to complete this work are being sought.**

Kind regards  
Colin

**Colin Munn  
Acting Infrastructure Manager”**

To provide context to this requirement in support of the statements above, the following are a selection of the types of operational protocols and guidelines that would apply (acknowledging that some of these are already referred to in a general sense in the above responses):

- How many people would undertake the inspection(s)
- What would be the required qualifications for the people carrying out the inspections
- Description of how issues get escalated
- If maintenance is required does the person carrying out the inspections get that authorised or does this get passed on to another party for action
- Is there a need to gain approval or consult with the rating district to obtain approval with respect to any of these activities
- Who holds the ultimate authority to determine a course of action
- When would a second or more experienced opinion be required
- Will a schedule of inspections/monitoring be established and managed
- How will priorities be determined including timelines for action

This list is not exhaustive but it is intended to identify key functions that are part of the Asset Management Plan to be developed by Council and which supports the inspection activities outlined in the responses above.

I have also suggested, and Council support, that if necessary the requirement to improve the management of their assets by the appointment of a dedicated Asset Manager (as noted in the response from Council above) including the requirement to provide the processes and protocols from an operational point of view, would be acceptable as a Consent Condition if that is appropriate. Unfortunately Council do not currently have available formal written policy and procedures at the level of detail that would be required to provide any further information or undertakings in response to the request for additional information.

Can you please review the above and let me know if there is any further information you require. I am extremely conscious of the timing of responses and timelines leading up to Hearings and do not want to push these out any more than we have to, but I also want to make sure that you have the information you require.

I look forward to hearing from you.

Regards,

**Chris Hoskins** | Senior Project Manager



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