Job Ref: 25255

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Response To Request For Further Information Pursuant To Section 92 of the RMA

Application References:	LR-2026-113441-00, LV-2026-113442-00, LL-2026-113442-00 & WS-2026-113444-00
Applicant:	Gisborne District Council – Rivers and Land Drainage
Site Address:	Te Karaka – Various Locations

Thank you for your request for further (RFI) information dated 26 May 2026. Please find below our collated response to the matters raised.

Planning

1. **RFI**

Please provide more conclusive evidence for whether the tests under s106A are met (Section 8 of the AEE).

Response:

Further evidence regarding s106A (RMA) is provided in **Table 1** below. It is considered that the proposal meets the tests of s106a (RMA) and consent can be granted subject to consent conditions.

Table 1: s106A RMA Further Assessment

S106A Reference	Description	Assessment
1	A consent authority may refuse to grant a land use consent, or may grant the consent subject to conditions, if it	"Significant risk" is further defined in the NPS:NH as being natural hazard risk assessed as "medium", "high" and "very high" using the risk matrix. As

	considers that there is a significant risk from natural hazards	discussed in the resource consent application, a limited number of properties will fall within the "significant risk" category as a result of the proposed works. However, mitigation is proposed through the Public Works Act 1981 (PWA) process (being run in parallel) and the proposed resource condition conditions which include proffered risk mitigation measures. The PWA process is ongoing and any outcomes from this process that need to be reflected in new or updated consent conditions will be provided in due course. In general terms, the overall benefits of the project in terms of natural hazards significantly outweigh the increase in risk and we therefore consider it appropriate for consent authority may exercise its discretion to approve the land use consent.
2	For the purposes of subsection (1), an assessment of the risk from natural hazards requires a combined assessment of all of the following taken together:	
2a	The likelihood of natural hazards occurring (whether individually or in combination).	The principal natural hazard at Te Karaka is flooding from the Waipaoa River. The likelihood of flood events affecting the township is well documented through the 2023 Cyclone Gabrielle event and prior flood records. The hydrological inputs adopted for the project represent the 1% Annual Exceedance Probability (AEP) flood event, with allowance for climate change as undertaken in 2017 to align with the Waipaoa River Flood Protection Control Scheme. Liquefaction and seismic ground-shaking hazards have been considered through the geotechnical assessment. Likelihood has been quantified for both the Serviceability Limit State (SLS) and Ultimate Limit State (ULS) seismic events as 1/25 and 1/500 year return periods. It is considered that the natural hazard likelihood, including the combined likelihood of flood and seismic events, has been characterised in sufficient detail.
2b	The material damage to land in respect of which the consent is sought, other land, or structures that would result from natural hazards.	The 'land in respect of which the consent is sought' comprises the stopbank footprint, the borrow pit areas, and the Rangatira Road and SH2 raising. Each element has been designed to perform under the design flood and seismic loadings: • The stopbank crest level has been set with appropriate freeboard above the 1% AEP design flood, and the embankment geometry has been designed against slope-stability ULS and SLS criteria; • Borrow pit reinstatement and contouring will ensure the excavated areas do not concentrate flow or compromise stopbank stability post-construction;

		Material damage to other land and structures (i.e. land outside the stopbank alignment, including the true left bank of the Waipaoa River) has been assessed through the Consequential Flood Risk Assessment. The works result in a net reduction in flood damage to the protected township area. Localised increases in flood level on land outside the scheme have been identified and are the subject of further assessment in response to RFI Questions 17 and 18 and Stantec 'issues' 1, 5 and 10. The Applicant therefore considers that material damage from the design event will be substantially reduced relative to the 'do-nothing' baseline, and that residual material damage to third-party land has been quantified and is the subject of ongoing consultation and proposed consent conditions.
2c	Whether the proposed use of the land would accelerate, worsen, or result in material damage of the kind referred to in paragraph (b).	The subsequent use of the land is the ongoing operation, inspection and maintenance of the stopbank and associated infrastructure by GDC (Rivers and Land Drainage) as asset owner. This use is itself a flood-risk management activity and does not accelerate, worsen or result in material damage of the kind contemplated by s106A(2)(b). Borrow pit areas will be reinstated to pasture or equivalent low-intensity land use following construction. No subsequent intensification or development (increased impervious surface etc) of land use is anticipated by the proposal that would accelerate, worsen or result in material damage of other land. The Applicant confirms that no part of the proposal enables development on land newly exposed to flood hazard. Any change in land use on land outside the scheme footprint (e.g. potential land-use change from horticulture to pasture following increased flooding extent, as raised at Council Question 18) is a third-party matter and is being managed primarily through PWA agreements and proposed consent conditions (where required noting that additional conditions may be proffered once the PWA process ha been completed).
2d	Whether the proposed use of the land would result in adverse effects on the health or safety of people.	The proposed use of the land is the upgrade of existing stopbanks and construction of new stopbanks and the ongoing operation and maintenance of an upgraded flood resilience scheme. The purpose of the proposal is to reduce the overall risk to the health and safety of people within the Te Karaka community by providing improved flood protection for the township and surrounding areas.

		The Applicant's assessment is that the proposal will not result in unacceptable adverse effects on the health or safety of people as compensation and mitigation measures are being proffered. Rather, it will result in a substantial net benefit. Specifically: • The scheme materially reduces the residual flood hazard to people and property within the protected area, including avoidance of life-safety risks associated with deep or fast-flowing floodwaters in inhabited areas; • The stopbank design provides defined freeboard above the 1% AEP design event and has been designed to maintain its intended function following the design ULS seismic event (refer Response to Q10); • Construction-phase risks to the health and safety of people will be managed through the CEMP, construction traffic management plan, and a construction-phase flood contingency plan to ensure that Te Karaka remains protected during the works (refer Response to Q19); Localised increases in flood depth and velocity on land outside the scheme have been quantified through the Consequential Flood Risk Assessment. It has been identified that the proposal would expose some people to an increased hazard, on the basis of the current modelling. This matter is the subject of further assessment in response to Q17, Q18 and Stantec Items 1, 5 and 10. Residual risks are being addressed through the proposed conditions through the updates to the Civil Defence and Emergency Management Plan and where risks cannot be adequately mitigated, addressed via the PWA process.
3	Conditions imposed under subsection (1) must be - (a) for the purposes of avoiding or mitigating the effects referred to in subsection (1); and (b) of a type that could be imposed under section 108.	It is considered that the proposed consent conditions (or any required amendments) that seek to avoid or mitigate adverse effects meet s108 RMA requirements.
4	This section does not apply to land use consents if the use of the land for which the consent is sought is - (a) construction, upgrade, maintenance, or operation of infrastructure; or (b) primary production activities, as described in the national planning standards.	As noted in the consent application the project is for specified infrastructure and not infrastructure *per se* as defined in the RMA therefore it is considered that s106A is applicable.

2. RFI

Please confirm that the flood gate application is not intended to be bundled with the substantive application and if so, please provide further justification for why these applications should not be assessed together. I note that on P133 of the AEE, there is reference to the flood gate within conditions for this consent, in what I presume is a single set of conditions.

Response:

The Applicant confirms that the flood gate component is not intended to be bundled with the substantive application for the culvert and wider stopbank works.

The approach taken in the application is a deliberate one, reflecting the differing activity status and planning considerations that apply to the respective components, as follows:

- The culvert (without a flood gate) is assessed as a discretionary activity under the relevant provisions of the TRMP.
- The installation of a flood gate is understood to trigger a more restrictive activity status (non-complying) under the NES-FW framework.

In this context, the application has been structured so that the flood gate component can be considered on its own merits, rather than determining the overall activity status of the broader proposal.

The rationale for this approach is:

- **Avoiding unnecessary bundling effects:**
  Bundling the flood gate with the wider proposal would elevate the activity status of the entire application to non-complying, despite the flood gate representing a minor and discrete element that is not integral to the overall stopbank function.

- **Maintaining decision-making flexibility:**
  Decoupling enables the consent authority to assess the flood gate independently. This ensures that, if the flood gate is not supported, this does not preclude granting consent for the culvert (without a flood gate) or the wider flood protection works.

- **Proportionate effects-based assessment:**
  The approach aligns the level of scrutiny with the scale and effects of each component, recognising that the culvert itself can operate independently of the flood gate and does not rely on it to achieve the primary flood protection outcomes of the project.

In relation to the reference on page 133 of the AEE, the inclusion of the flood gate within a single draft set of conditions was not intended to signal that the activities must be assessed together. Rather, this reflects a practical, consolidated drafting approach at the time of lodgement.

The Applicant remains comfortable with a single integrated set of conditions.

3. RFI

Based on the Rules Assessment, please provide further detail around the aspects of the rural and residential rules that won't be completed with (1.6.1(11). Will yard infringements be related to temporary activities only (and not permanent structures)?

Response:

Yard infringements only apply to the proposed temporary activities that are set out in the consent application i.e. construction worker temporary office buildings / 'portacoms'. In the TRMP, the definition of "Yard" is "*a part of a site unoccupied and unobstructed by buildings above ground level*" and building is defined as "an enclosed or partially enclosed structure built with a roof…". Therefore, it is considered that the yard infringement rules for the relevant zones are not applicable for the proposed permanent structures.

4. RFI

Please complete the title for Figure 30.

Response:

The complete title for Figure 30 is: *Depth differences in the design event, comparing the alternate alignment (post-upgrade) to the proposed alignment (post-upgrade)*.

5. RFI

Please provide an updated list of conditions as referred to in an email from Sven Exeter to Jo Michalakis dated 5.5.26.

Response:

Updated proposed consent conditions are provided in **Appendix 1.** A tracked change version is provided as well as a clean version. Note that the Applicant will provide another updated set of proposed consent conditions once the PWA process has reached certain milestones or finished.

Development Engineering & Roading

6. RFI

A drawing of the Rangatira Rd site is included in the report but it is silent on the design criteria used for the road raising. The design & drawing need to take account of the limited stopping sight distance due the crest height over the stop bank. The proposed lane width is for one lane of traffic, but road shoulders are very narrow, with no provision for pedestrians. The estimated traffic count of 100 vehicles per day includes 6% Heavy Vehicles. Vehicle entrances that require raising due to the earthworks for road raising will require detailed design to ensure safe sight distances and safe entry to the road as per the GDC Engineering Code of Practice. Road safety could be compromised by a lack of safe stopping distances. Please review the Road Raising Concept Design Report and reconfirm whether, in principle, the road raising can be carried out in a way that will not negatively impact on road safety.

Response

The proposed road raising and accessways design has considered the *GDC Engineering Code of Practice* and TRMP sight line requirements. A 'Safe System Audit' has recently been completed on the design and a recommendation has been raised that requires a review the proposed cross-section and verge treatment to ensure that vehicles can safely manoeuvre when encountering opposing traffic on the approach to the bridge. Through the detailed design process further reviews will be undertaken to ensure alignment with the *GDC Engineering Code of Practice* and TRMP sight line requirements. During detailed design and before the 'issued for construction' drawings are completed and post-construction, another 'Safe System Audit' will be undertaken to confirm compliance with the *GDC Engineering Code of Practice*. If any issues arise during the detailed design process and the GDC Engineering Code of Practice cannot be complied with, other options will be investigated including but not limited to an expanded PWA purchase arrangement, minor road width adjustments or changes to vehicle access points.

Cultural Impact Assessment

7. RFI

Please confirm when the CIA will be available and provide this information. Please also provide any consequential updates to conditions resulting from the CIA.

Response

The project is being progressed in partnership with the mana whenua group Te Aitanga a Mahaki iwi and the relevant cultural representatives have indicated their support for the proposal (refer to the email to GDF staff and planners from Willie Te Aho dated 4 May 2026). The Cultural Impact Assessment (CIA) is currently underway, however, the timing of its completion is outside the

Applicant's control. The Applicant therefore requests that assessment of the application proceed, on the basis that the CIA will be provided once available and that any consequential updates to the proposed conditions arising from the CIA can be incorporated at that time.

Other consultation

8. RFI

Please provide an update on landowner consultation prior to notification. Have any written approvals been obtained to date? Were the land requirement plans available to assist with identifying specific effects on persons (notwithstanding the application will be publicly notified)?

Response

Consultation with all affected landowners has been undertaken and is ongoing. Valuations are currently underway to confirm the compensation payable under the PWA. While no written approvals have been obtained to date, the intent is to secure these once the valuations have been reviewed by the landowners, with priority given to those most affected.

Construction effects

9. RFI

Please indicate where sediment retention ponds would be located?

Response

The exact location of the sediment retention ponds will be determined by the construction contractor, and indicative locations and the approach is outlined below.

Borrow pit as primary sediment treatment device:

The proposed excavated borrow pit area (used as the source of fill material for stopbank construction) will be designed and operated to function as a temporary sediment retention basin during construction. Runoff from active earthworks areas will be directed to the borrow pit, allowing sediment to settle prior to controlled discharge. The size and depth of the borrow area provides inherent storage capacity suitable for sediment detention and treatment.

Grassed berm as filtration margin:

The wide grassed berm adjacent to the upgraded stopbank will act as a secondary treatment and filtration zone. This area will slow overland flow, promote sediment deposition, and provide a vegetated buffer prior to runoff entering the river system.

Supplementary controls (as required):

Localised measures such as silt fences, decanting earth bunds, and temporary sediment traps will be implemented where needed to manage runoff from discrete work fronts and ensure compliance with consent conditions. An experienced and capable contractor (yet to be procured) will need to consider and implement such mitigations through the development of an Erosion and Sediment Control Plan as per the proposed consent conditions.

Groundwater/Geotechnical

10. RFI

Please provide further justification for acceptance of the ULS seismic cases where the target FoS is not achieved (Tables 6 and 7), including an assessment of anticipated deformation/displacement (e.g. empirical or analytical assessment) and confirmation that the stopbank would maintain its intended function following the design ULS event, or provide proposed mitigation/design refinement where required.

Response

The probability of a ULS earthquake event coinciding with a 1% AEP flood event is extremely low. The applicant considers that designing for a ULS earthquake event would be prohibitive from a cost perspective and is unnecessary. This risk can be mitigated by post event inspections and repair work.

11. RFI

Please provide further justification for the conclusion that liquefaction risk can be accepted without mitigation, including assessment of potential seismic-induced settlement/deformation effects on stopbank performance and functionality.

Response

The GHD report liquefaction hazard has been assessed as part of the geotechnical investigation undertaken by GHD. That assessment concludes that the liquefaction susceptibility of the foundation soils along the stopbank alignment is low, having regard to the soil profile, density and groundwater conditions encountered during the investigation.

In terms of effects on stopbank performance and functionality, any seismic-induced settlement or deformation arising from the low residual liquefaction potential is expected to be minor and localised, and would not compromise the intended flood-protection function of the embankment. Consistent with the position taken in respect of the ULS seismic case (refer Response to Q10), the probability of a significant seismic event coinciding with a 1% AEP flood event is very low, such that the combined-hazard risk does not warrant specific liquefaction mitigation. Moreover, the district has been subject to numerous earthquakes over the past decade and no significant damage has been reported through stopbank inspections.

On this basis, the Applicant considers that the residual liquefaction risk can be appropriately accepted and managed through routine post-event inspection and any necessary repair or reinstatement of the embankment, rather than through additional ground-improvement or design mitigation.

Water Take/Allocation

12. RFI

Council's Science Advisor – Consents, has stated: "Effects of breaching allocation limits (including low flow restrictions) are unlikely to be acceptable, given that significant effects of abstraction from the river are already thought to occur. Allocation from the A-block is already subject to a 'waitlist' and potential priority of those proposed takes." Please consider refinement of the water take proposal or any other options.

Response

Based on the Waipaoa River allocation not being over-allocated on a 'litres per second / instantaneous' basis it is considered that the proposed temporary water take for construction purposes could be accommodated without having a significant adverse effect as not all of the resource consent in the catchment would be exercised at the same time (i.e. as different 'crops' have different temporal irrigation requirements). The Applicant is also open to options around allocation under the B-block and/or a 'cut-off' under the A-block should the minimum flow be reached provided that other water can be secured should it be needed.

As discussed in the resource consent application (page 114):

"The only other key alternative that the Applicant has to consider would be to use the public water supply for Te Karaka which draws water from the Waipaoa River. The public water supply water is treated to drinking water standards. The primary need for water for the project is for dust suppression which does not need to be treated. Overall, the proposed water take is considered a more sustainable option as less materials (dosing chemicals etc) would be required."

Other water source options would include:

1. Use of the Gisborne public water supply which utilises water captured the Mangapoike River dams (Williams, Clapcott and Sang) and the Te Arai Bush Catchment.
2. Temporary transfer of water from a nearby consented well or surface water take.
3. Use of nearby private farm dam water or similar.

Option 1 would require trucking water in from Gisborne (at least 25km away). This would be an expensive option and would generate additional carbon emissions.

Option 2 would suggest that the water allocated to other users is not actually required to be used therefore the net effect would be the same or similar as granting a temporary water take to this proposal.

Option 3 would require an extensive investigation, additional trucking and there is no guarantee that water would be available.

It is considered that above alternative water sources are holistically less sustainable than the proposed water take. Given that the Waipaoa River catchment water take resource consents process and allocation status is still pending and more water may become available, we request that this matter is revisited in due course.

13. **RFI**

In addition, please provide an update on the allocation status of the Waipaoa River as it relates to the water take. I understand that there may be some more up to date data being published about the allocation status since lodgement.

Response

We have contacted the GDC Freshwater team and they have confirmed that are no updates or changes to the allocation since the consent application was lodged.

14. RFI

Please provide reasoning for the 1,000 cubic meter per day limitation in proposed condition 58? The application states that 30,000-50,000 L per day would be required. 1,000 cubic metres is equivalent to 1,000,000L.

Response

The 30,000 – 50,000 L per day dust suppression water needs figure was based on per property or site (i.e. with multiple sites on the project, more dust suppression water was considered needed) and based on preliminary data from the downstream Waipaoa River stopbank scheme water use records. The 1,000 cubic metres per day water needs figure was rationalised based on a recent stopbank project in Hawke's Bay that suggested that dust suppression water carts needed 810 m^3 of water per day and the other construction water uses as listed in the consent application.

Additional calculations have now been undertaken and rationalised against recent water take data for the downstream Waipaoa River stopbank scheme which suggest that less water is likely to be needed for construction. **Table 2** below summarises the estimated peak daily water demand for each construction activity. Peak demand represents the scenario where all activities are occurring simultaneously at maximum rate, this is a conservative upper bound and is unlikely to persist for extended periods.

Table 2 — Summary of Peak Daily Construction Water Demand

Use / Activity	Average Daily (m^3/day)	Peak Daily (m^3/day)	Notes
Compaction moisture conditioning	15.5	31.0	Peak during intensive fill placement
Dust suppression — haul roads	57.6	96.0	Dry/windy conditions only
Dust suppression — earthworks/borrow	7.5	12.5	25% active area, dry conditions
Concrete works (peak 3-month window)	23.0	30.0	Includes mixing, curing, washdown
Wheel wash	3.0	3.0	Recirculating system top-up only
Potable / site amenities	1.5	1.5	50 persons peak, 30 L/person/day
Landscaping / planting irrigation	40.0 (summer establishment only)	40.0	20 mm/week over 1.0 ha - 14-week summer window based on the high-level planting requirements for Rangatira Road visual impact mitigation
TOTAL	**148 m^3/day**	**214 m^3/day**	

It is requested that should allocation be available, 1,000 m^3/day is consented however if there are still water allocation restrictions at end of the catchment resource consents process, 250 m^3/day (i.e. factors in a small buffer for calculation uncertainty, construction scope changes and weather conditions) is requested as a minimum under A Block and/or B Block. It is also requested that consent conditions would not restrict the water take at or below the minimum flow. However, minimum flow cut off resource consent conditions under the A or B Block allocation would be acceptable by the Applicant provided that the catchment is indeed over-allocated and it is demonstrated that such a conditions is required to manage unacceptable adverse effects.

Freshwater / Flooding

15. RFI

Please provide confirmation of whether the southwest stream passing under SH2, for which the culvert extension and floodgate is proposed, supports fish (or could support fish with provision for fish passage).

Response

Given the existing barrier of the twin culvert, it is likely that only native eels would be present upstream of the culvert. The stream is likely to be dry most of the year however as proposed in the consent application, the approach to the culvert design is to provide a net benefit to ecology

through providing fish passage in the form of the ramp and/or other design measures (e.g. baffles) as identified through the detailed design process. A passive open hanging gate is proposed to provide passage through the downstream end of the culvert. This approach has been discussed and agreed in principle with Michael Killick (GDC Science Advisor).

16. RFI

Please provide culvert floodgate designs for the proposed culvert extension and a second culvert in a different stream passing through the eastern stopbank. (If the southwest stream passing under SH2 does not support fish it may not be necessary to provide for fish passage; see item 15).

Response

Culvert floodgate design will be provided through the proposed consent conditions framework. It is likely that this stream would support fish (albeit the species diversity would be limited due to barriers) therefore the ecological net benefit approach to the design would also be applied to this culvert (with floodgate). The 'south-east stream' at the existing eastern stopbank where the upgrade is proposed already has a culvert with a floodgate (see **Figure 1**) which provides some fish passage, but it is also a partial barrier. Likewise, this approach has been discussed and agreed in principle with Michael Killick (GDC Science Advisor).

Figure 1: Existing culvert with floodgate at eastern stopbank

Resource consent is sought for this culvert with flood gate under the following rules:

- TRMP: C6.3.2(18), C6.3.2(19) C6.3.2(20)
- NES-FW: regulation / clauses 71(1) and 74(1).

Overall, the approach to improving fish passage meets the intent of the TRMP and NES-FW.

17. RFI

Please provide an assessment of the effects of all levels of flooding (not the maximum design limit only) on land outside the flood protection scheme.

Response

Please refer to the Consequential Flood Risk Assessment which was appended to the consent application. It is considered that this matter has already been adequately assessed.

18. RFI

Please provide further consideration of the effects on the river for an increased extent of flooding, potential erosion and discharges from riverside land. For example, it appears part of the land to be flooded is currently in permanent horticulture, so as short rotation pasture it could produce more discharges, not less, or may be used for intensive grazing. And some of the land, including some which would be newly exposed to flooding, is to be excavated as borrow pits of 1m depth or more, which would further increase its susceptibility to flooding.

Response

The extent of flooding and erosion has been assessed, refer to the High Level Geomorphic Assessment in **Appendix 2**.

The future use of the land riverside of the proposed stopbank is subject to future lease arrangements. It is considered that any difference in water quality run off from different permutations of land use would be insignificant during flood events when compared to the wider river catchment contribution, and any such adverse effects are considered less than minor.

The Consequential Flood Risk Assessment included the borrow pit in the modelling for the preferred and alternate alignments. The already estimated change in flood levels from the borrow pit will be managed through compensation with individual landowners through the PWA process.

19. RFI

What is the contingency plan for maintaining flood protection during construction? In particular, what is the proposed timing for removal of any sections of the existing stopbank that are not being built over (if any)?

Given the duration of the works, there is a possibility that a flood event affecting the town could occur during construction if the stopbanks are not fully functional. Council's Science Advisor considers that contingency measures will be required to ensure Te Karaka remains protected from flooding throughout the construction period. Please confirm whether it is proposed to retain the existing stopbank during construction. If not, has the option of retaining it been considered? If the existing stopbank were retained, what would be the anticipated impact on flow velocities in the area between the existing and proposed stopbanks?

Response

The existing stopbanks will remain in place until the new stopbank has been constructed to an equivalent height or greater thus there will be no increase in risk during construction.

Biodiversity

20. RFI

Would the Applicant consider the use of appropriate indigenous species for the planting at the new roading embankment at Rangatira Road? Indigenous species are preferred by Council from a biodiversity standpoint (unless willows are required for bank stabilisation, in which case they should be a non-invasive species).

Response

Yes, indigenous vegetation will be used. The proposed planting plan consent conditions have been updated to reflect this.

Rivers and Land Drainage / Flooding / Scour

21. RFI

Please refer to the attached pdf in Appendix A with s92 questions from Stantec.

Please refer to the response below.

Issue 1

The Applicant is requested to expand Section 6.10 to explicitly address these matters and to demonstrate why the identified effects and risks are considered acceptable.

Response

The report "High-Level Geomorphic Assessment – Te Karaka Flood Management Optioneering" (September 2025) was not included with the AEE and is attached to this response (see **Appendix 2**). It specifically considers river behaviour, sediment regime, geomorphic change detection, velocity and bed shear stress implications for the Waipaoa River at Te Karaka.

The Geomorphic Assessment took place during the optioneering phase of the project, when multiple options were still under consideration. It focussed on two options (1A and 4A) which represented the two extremes, in terms of a full retreat or an upgrade on the existing alignment. Option 4A is slightly more retreated than the eventual confirmed alignment, but the results from that scenario are still useful to inform consideration of geomorphic impacts.

In summary, the change in depth and velocity mapping available at the time of the Geomorphic Assessment indicates that the proposed stopbank is likely to result in localised changes to scour and erosion potential, rather than a uniform increase across the reach. In general, flood depths increase upstream of and adjacent to the stopbank, particularly around the Te Karaka bend and toward the Waihora River confluence. Velocity increases are more localised, mainly on berms and floodplain areas adjacent to the stopbank and around the meander bend. These areas are therefore the key locations where increased scour or erosion potential could occur. This is balanced by the impacts of retreating the stopbank, which are expected to result in increased deposition in the expanded floodplain area.

The attached report notes that the Waipaoa River is a highly dynamic, sediment-laden system, where both scour/erosion and deposition occur episodically during large flood events. The geomorphic assessment also considered bed shear stress, identifying that increased velocity and shear stress can increase sediment mobilisation and local erosion risk, while lower-velocity flow expansion areas are more likely to promote deposition.

T+T also carried out a high-level assessment on potential impacts at the bridges within the reach. At the bridges, a preliminary scour assessment indicated that the proposed stopbank may increase scour depths under the design flow by up to approximately 0.7 m at Rangatira Road Bridge and 0.8 m at Kanakanaia Road Bridge.

Overall, the geomorphic assessment indicates that the proposal is likely to result in localised changes to erosion and deposition patterns, primarily in areas of increased velocity such as channel margins, meander bends and adjacent floodplain pockets. These changes are consistent with the existing behaviour of the Waipaoa River, which is characterised by episodic and spatially variable sediment transport and reworking during large flood events. Aggradation within the river and on the floodplain is expected to continue in this reach regardless of the proposed stopbank works because of the high sediment load in the Waipaoa River. The floodplain in this part of the river system has shown episodic, but progressive, accretion since the middle of last century[1] and this is expected to

[1] Gomez, B., Eden, D. N., Peacock, D. H., & Pinkney, E. J. (1998). Floodplain construction by recent, rapid vertical accretion: Waipaoa River, New Zealand. *Earth Surface Processes and Landforms, 23*, 405-413.

continue for the foreseeable future[2]. T+T's berm accretion assessment projects floodplain accretion approximating 2.2 m over the next 50 years. The 'Te Karaka stopbank upgrade - Berm sediment accretion assessment' letter report is attached (see **Appendix 3**).

While some increased potential for localised scour or erosion is identified, particularly near structures and along the stopbank alignment, these effects are not uniform across the reach and are offset in part by reduced velocities and increased sediment deposition in areas where the stopbank is set back. The proposal does not fundamentally alter the highly dynamic sediment regime of the Waipaoa River, and the magnitude and spatial extent of predicted changes are considered to fall within the expected range of geomorphic variability for this system.

Accordingly, the identified geomorphic effects are considered acceptable in the context of the existing river behaviour, noting that ongoing sedimentation and channel adjustment will continue irrespective of the proposal and will require adaptive management over time. These processes will likely intensify because of climate change.

In terms of implications for risk, the proposed stopbank will substantially reduce flood risk to people and property within the protected area. For locations beyond the protected area and other third-party assets (aside from the bridges), the localised nature of the geomorphic changes means that any additional risk is considered minor. Because these changes fall within the river's existing baseline of dynamic variability, they are not expected to generate significant new or unacceptable risks to surrounding properties.

The design event, return periods, hydrology basis, hydrological inputs, freeboard and residual risk were outlined in the resource consent application (Section 4.2.1) and Consequential Flood Risk Assessment as summarized below:

- 1% AEP (100-year ARI) analysis undertaken in 2017 including climate change assumptions
- The design event was the equivalent of Cyclone Bola + 25% which is 5,625 cumecs (m^3/s)
- Freeboard of 600mm
- Residual risk – see section 6.9 of the resource consent application

The adopted design event of 5,625 cumecs was derived in 2017 using Intergovernmental Panel on Climate Change guidance available at the time, incorporating projected climate change effects to 2090 (approximately 2.1°C warming). This flow was applied as the design standard for the Waipaoa Stopbank Flood Control Scheme (WRFCS) located several kilometres downstream of Te Karaka. The 5,625 cumec event is equivalent to a current 1% AEP event based on current flood frequency analysis with Cyclone Gabrielle as a data point.

Significant recent historic events (e.g Bola, 1988 & Gabrielle, 2023) have had their peak flow estimated at 4,500 and 4,200 cumec respectively. These significant event assist designers with informing and validating the design flow of 5,625 cumec which is 25% larger than any flood event received in the Waipaoa catchment in the last 100yrs. The reference to historical events was only included as they were used for the flood frequency analysis.

[2] Gomez, B., Cui, Y., Kettner, A. J., Peacock, D. H., & Syvitski, J. P. M. (2009). Simulating changes to the sediment transport regime of the Waipaoa River, New Zealand, driven by climate change in the twenty-first century. *Global and Planetary Change*, *67*, 153-166.

It is the nature of flood frequency statistics that the return period for a given flow event continues to change due to updated event recordings and climate change assumptions. However, we consider that the 1% AEP event today is relevant for effects assessment and is applied consistent across the pre and post upgrade scenarios.

A freeboard of 600mm was applied above the 5625 cumec flood event to account for potential uncertainties of the modelling. This is in line with the freeboard applied to the WRFCS upgrade, is consistent with industry standards and is considered appropriate.

The 3D stopbank design including freeboard was incorporated into the hydraulic model for the overdesign event comparison which is more conservative for the indirectly affected properties than a reduced or no freeboard design.

Further details relating to hydrology are in the Te Karaka Flood Resilience Hydraulic Modelling report from DHI (see **Appendix 4**).

Issue 2

• Explain how scour related stopbank failure or breach has been considered as a potential risk, and how this will be managed.

• Identify the potential effects associated with scour-related stopbank failure or breach on the new and existing assets

Response

The existing willow vegetation provides a well-established erosion and scour protection function along the Waipaoa River margins adjacent to the Te Karaka stopbank. Current channel conditions indicate ongoing aggradation, with gravel bar formation evident near the critical outer bend at the upstream extent of the stopbank. Site observations show no evidence of bank undercutting or significant edge scour in this area.

Comparison of pre- and post-upgrade hydraulic modelling results for the 1% AEP design event indicates a reduction in shear stress along the critical outer bend following the proposed upgrade. This reduction is attributed to the altered flow behaviour, with flow remaining generally parallel to the riverbank rather than overtopping the stopbank and crossing the bank alignment at an oblique angle. In other sections, the upgraded stopbank alignment is generally set back from the river edge and is therefore considered to have a low susceptibility to scour-related effects.

Issue 3

Identify the locations and characteristics of all drains discharging to the river and assess their potential impacts on stop banks and river banks. This should include commentary on backflow prevention, erosion and scour risk, seepage risk, and any proposed mitigation measures.

Response

Other than the State Highway 2 culvert extension, all culvert outlets and receiving drains will be on a like for like basis with the existing outlets including back flow protection. There are no existing issues with scour and the applicant considers that this risks is appropriate to manage through the detailed design phase with standard outlet designs.

Issue 4

Provide an assessment of potential changes to sediment transport and scour resulting from the proposed works. This should include at minimum:

• Evaluation of potential changes in bed load transport and riverbed aggradation or degradation, and lateral migration over time (where applicable)

• Assessment of implications of increased scour for river stability and nearby assets, including bridges and other infrastructure

• Clarify locations and provide evidence behind the assumed changes in aggradation due to the project

Response

As discussed in the response to Issue 1, the Geomorphic Assessment (attached) was not included with the original AEE and provides an overview of the potential changes to sediment transport and scour resulting from proposed works.

The proposed works are expected to result in localised changes to sediment transport, scour and deposition, rather than a fundamental change to the overall behaviour of the Waipaoa River. Based on the existing change in depth, velocity and bed shear stress information, the main areas where increased scour or sediment mobilisation may occur are where flows become deeper or faster, particularly near the proposed stopbank, around the Te Karaka bend, and at bridge locations (localised narrowing). Conversely, aggradation is expected to continue due to the high sediment load in the Waipaoa, and may increase locally, in lower-energy flow expansion areas and on the inside of bends where sediment is likely to settle.

The Geomorphic Assessment identifies historic and recent patterns of sediment deposition, reworking and localised erosion, including following Cyclones Hale and Gabrielle. This supports the expectation that the proposal may alter where sediment is eroded or deposited locally but is unlikely to materially change the broader aggrading character of the reach. Increased accommodation space in the reach is likely to result in more sediment being deposited in the widened active river corridor because out-of-channel velocities are modelled as being lower.

In terms of assets, the key implication is increased local scour risk at bridges and potentially near stopbank/river margins. T+T's preliminary bridge scour assessments indicate possible increases in scour depth of approximately 0.7 m at Rangatira Road Bridge and 0.8 m at Kanakanaia Road Bridge under the design flow.

Issue 5

Please clarify further:

• Any parties that could be potentially affected by the estimated increase in water level.

• Detail any engagement undertaken with affected parties regarding the potential increased flood risk

• Compliance with planning provisions (in terms of engagement undertaken, and the estimated increase in flood risk)

Response

The information requested is summarised in the Consequential Flood Risk Assessment report provided with the consent application. Appendices 8E and 8F of the consent application (detailed spreadsheets of the outputs from the Consequential Flood Risk Assessment) detail flooding impacts at parcels and buildings for the design and overdesign events.

All parties that are potentially affected by the potential increased flood risk have been consulted with by the Applicant. Consultation is ongoing with the landowners that use the local Kanakanaia Road and Rangatira Road Bridges ("bridge beneficiaries") with regard to the proposed mitigation measures i.e. updates to the emergency response plan. Other potential mitigation options (which sits outside of the scope of this consents process as noted in the consent application) are also being discussed with the bridge beneficiaries. The consultation record was provided in the consent application. Moreover, the Applicant has requested public notification of the consent application so that potentially affected persons have the opportunity to submit on the proposal and provide their views.

Issue 6

Provide a more comprehensive description of the hydrology and hydraulic modelling report used for this assessment, consistent with the request made for Issue 1 above. In addition:

• Confirm whether the proximity of inundation extents to the model domain boundary is driven by natural relief or model domain limitations (glasswall? – refer to snippet below).

• Demonstrate full consistency between model runs, scenarios, borrow pit inclusion, geometry, stopbank alignment and the consequence scenarios presented.

Response

The mapped extent should not be interpreted as a model "glass wall" or boundary constraint; it reflects the modelled flood extent relative to local topography.

The black line shown in the Consequential Flood Risk Assessment figures is not the model domain boundary. It represents the extent of flooding in the over-design event, which was used to define the "floodplain" extent shown in the figures. This is also the area that was included in our assessment. The

downstream extent of this area study area corresponds to the transition from a 2-D channel to a 1-D channel in the hydraulic model.

The Consequential Flood Risk Assessment relies on the supporting hydraulic modelling outputs, including depth, velocity and hazard rasters, to assess existing and proposed flood behaviour for design and over-design events. T+T compared the model run including the borrow pit and alternate stopbank alignment with the previous model runs. The differences were found to be localised and negligible for the purposes of the Consequential Flood Risk Assessment, as described in that report.

DHI hydraulic modelling report (**Appendix 4**) outlines the model scenarios assessed and the assumptions adopted for each simulation. The borrow pit excavation assumption was applied consistently across all modelled scenarios, with the exception of the Alternate Alignment scenario. In this scenario, it was assumed that access to a particular land parcel would not be available for construction works, resulting in a modified alignment and associated earthworks configuration.

This variation was intentionally incorporated to enable a direct comparison between the preferred and alternate alignments, consistent with the assessment approach described in the Consequential Flood Risk Assessment.

Issue 7

Clarify if the tunnel protection bund is considered as part of the consequence assessment, and was represented appropriately and consistently in the modelling.

Response

The exit of the historic rail tunnel was on the riverside of the State Highway, however this has been filled in through subsequent earthworks or unknown compaction and thickness. The Tunnel Bund construction is to ensure protection of the township from flooding even in the event of seepage through the tunnel – a 'belt and braces' approach. The Tunnel Bund is shown as 'dry' in the post upgrade scenarios, and it is considered that the modelling and Consequential Flood Risk Assessment effectively represents the conditions.

Issue 8

Clarify in this section how mean flood levels and mean velocities are calculated and extracted from the model results. This should include confirmation of consistency with the Hazard Risk Index methodology applied elsewhere in the assessment.

Response

There is an error in Tables 5.1 to 5.15 in the Consequential Flood Risk Assessment report. The description should state "maximum peak velocity" and "maximum peak hazard" within the building footprint, not "mean peak velocity" and "mean peak hazard". The phrasing in Section 8.2 is correct.

The reported **velocity** and **hazard** values are therefore slightly more conservative than the incorrect table wording implies, although the difference is typically very minor over the scale of an individual building footprint.

For clarity, the reported flood **level** and flood **depth** values are area-weighted averages of the relevant maximum result rasters within each building footprint.

Hazard classification (H1–H6) was not calculated directly from the reported maximum depth and velocity rasters. It was taken from a separate maximum hazard raster provided by DHI, where hazard was calculated as a function of depth and velocity at each timestep.

Issue 9

Include water depth and velocity maps for all assessed scenarios, namely Run ID40 to Run ID45 as described in Table 2.1, to support the interpretation of the consequence assessment across all modelled events. Also, please detail how changes in downstream flows have been considered, for example through comparison of pre and post works hydrographs at the downstream boundary for design and overdesign events.

Response

Water depth and velocity maps for all assessed scenarios (Gabrielle, Design Event, and Overdesign Event) have been generated for Run ID 40 to 45, as requested. These are attached to this response as Figures 12 through 22 (see **Appendix 5**).

DHI has provided the attached Excel spreadsheet of flow hydrographs. A comparison of hydrograph at lines 1 and 4 (immediately upstream and downstream, respectively, of the proposed stopbank upgrade) shows minimal change in flows in the design and overdesign scenarios (see **Appendix 6**).

Issue 10

Provide commentary on the potential consequences of over-design events. This should include identification of any adverse impacts that may exceed those of the base case and discussion of their implications for flood risk, infrastructure performance and overall project outcomes including transparent management of residual risk.

Response

The Consequential Flood Risk Assessment did assess an over-design event; however, as noted in the Consequential Flood Risk Assessment report, the assessment primarily focused on the approximately 1% AEP / 100-year design event, which represents the adopted design standard for the proposed works. The over-design event assessed was approximately a 0.2% AEP / 500-year event, including a climate change allowance. This extreme event resulted in a modelled flow almost three times greater than the design event.

Property and building impacts for the over-design event were assessed and tabulated as part of the Consequential Flood Risk Assessment, although they were not reported in detail because the design event was the focus of the effects assessment. These detailed tables were attached as Appendices 8E and 8F of the consent application.

Issue 11

Clarify how the 0.1 m depth change threshold has been applied in urban areas and how smaller depth changes are interpreted, particularly where mapping combines changes between 0 m and 0.1 m and makes it difficult to distinguish minor but potentially relevant effects.

Response

In the design event, flooding within the Te Karaka township (the 'urban area') is eliminated by the proposed stopbank. For the over-design event, detailed township impacts were not reported in the Consequential Flood Risk Assessment because the event is extreme and the overall effect is nonetheless a substantial reduction in flooding across most of the township. As shown in Figure 4.2, most of the township is predicted to experience reduced flood levels in the over-design event. A small area on the eastern side of the township is predicted to experience a flood level increase of up to approximately 0.1 m. This was considered a very minor change in the context of the over-design event and was not reported in detail.

Issue 12

Please provide:

- Drawings index

- General Arrangement with chainages and definition of Eastern and Western sections

- Long profiles

- In some drawings the river name is "Waipaoa" and others is "Waipoa"

Response

The updated drawings and cut/fill quantities reports package is provided in **Appendix 7.**

Issue 13

Review consistency in drawings; for example, where there are duplicate names (like on PDF p264-265) please make sure each drawing has a unique name, and/or remove any drawings that have been superseded. It should be clear which is the latest and correct version for review as part of this application.

Response

The updated drawing package is provided in **Appendix 7**. Note that the alternate stopbank alignment drawings have been labelled 'avoidance'.

Noise

22. RFI

Condition 33 allows a higher level of noise exposure without limits on duration. Please provide further justification for higher limits and consider alternative mitigation methods e.g. for the community to have an extended rest period or a limited duration of the working day during which the higher noise is necessary, e.g. max time of 5 hours. Further, the proposed wording of subsection (c) is confusing and appears to indicate that there is no Lmax limit at 1 m from the facade when higher levels of noise are required.

Response

Styles Group:

Construction noise levels are only expected to exceed 70 dB L_{Aeq} and 85 dB L_{Amax} outside the dwellings nearest to the road raising works on Rangatira Road, Kanakanaia Road, and SH2 at the eastern extent of the project. This is because acoustic screening may not be practicable to use in these areas. The residents at these properties will know when, and for how long, to expect this noise through the proposed communication that is required by the proposed consent conditions. The highest noise levels will be intermittent during the day and over a short duration for each receiver.

It is common for construction work near to occupied dwellings to exceed the guideline limits of NZS 6803:1999 when physical mitigation measures cannot be used effectively. The Standard recommends that construction noise should not generally exceed the applicable limits and that contractors should make every effort to comply with them, but it does not require strict compliance.

When construction noise levels cannot comply, the best practicable options to mitigate the effects include consultation with the neighbours and potential restrictions on the timing, frequency, and duration of the noisiest activities. However, appropriate restrictions cannot be adopted without understanding the specific needs of the receivers who are most exposed to the highest noise levels. This will be investigated through the provisions of the project CNVMP which requires communication with the community before work begin.

In our experience, receivers generally prefer a shorter overall duration for noisy works outside their homes instead of restricted hours during the day (e.g. no more than 5 hours of noisy work per day). Particularly, where residents are at work and school during the day. It is proposed to restrict the hours for noisy works to 7:30 am to 6:00 pm on Monday to Saturday in accordance with NZS 6803:1999 guidelines. If these hours are considerably reduced for road raising works, it would extend the overall duration of the noisiest construction works outside the most exposed properties. This could result in greater overall noise effects on the receivers and cause additional costs and delays for the project. We therefore propose to respond to the needs of the community with appropriate communication and mitigation through the provisions of a project CNVMP that is verified by Council.

23. RFI

Low noise and vibration activity' should be defined to ensure it can be adequately monitored and so that the community can have a clear understanding of what this is.

Response

Styles Group:

For the purposes of the project, low noise and vibration activity is defined as any construction activity that does not generate:

a. Construction noise levels that exceed 45 dB L_{Aeq} and 75 dB L_{Amax} (the night-time construction noise limits recommended by NZS 6803:1999 and prescribed by the District Plan); and

b. Perceptible vibration at any occupied dwelling (i.e. no greater than 0.3 mm/s PPV).

Activities that typically fall within this definition include, but are not limited to:

- Site establishment activities such as fencing and signage installation.
- Surveying.
- Light vehicle movements.
- Routine inspection, monitoring, and maintenance activities.
- Administration activities.
- Toolbox meetings.

We have updated the proposed condition to include a noise limit outside of standard construction hours. This will enable these activities to be monitored and set community expectations:

Construction work may only take place between 7:30 am and 6:00 pm on Monday to Saturday. This condition does not prevent quiet construction activities and meetings from taking place at any time, provided that any noise generated complies with limits of 45 dB L_{Aeq} and 75 dB L_{Amax} at any occupied dwelling.

***Advice Note**: The noise limits outside of 7:30 am and 6:00 pm on Monday to Saturday are based on providing respite from noisy construction activity and avoiding annoyance and sleep disturbance at night.*

Contaminated Land

24. RFI

Section 9 and 10 of the application refers to SH2 and Rangatira Road raising. Will the pavement and sub-surface of the road be disturbed? If so, reference to the MfE Guidelines for Assessing and Managing Coal Tar Contamination in Roading projects needs to be discussed and the options confirmed.

Response

Pavement and sub-surface of the roads may be disturbed. However as detailed below, it is considered that no further consideration of the aforementioned 'coal tar' guidelines is warranted:

- As confirmed by the GDC roading team, Rangatira Road was sealed post 1982, as such we do not consider coal tar being a possible contaminant in this location.
- As confirmed by NZTA, the section and pavement of SH2 at Te Karaka that is planned to be raised as part of stop bank works, appears to have been reconstructed in 1985 and currently has three to four seal layers. The bitumen used for sealing being mostly 80/100 penetration grade binder. Therefore it is highly unlikely that coal tar was used on SH2.

25. RFI

The PSI and DSI have generally been undertaken in accordance with the CLM guideline No.1 and 5. Although exceedances of predicted background SGV have been identified, none are above the HH guidelines. Soil does need to be managed appropriately and it would be preferable that soil is retained on site if possible. There is a possible further HAIL site that has not been explored at 1 Kipling Rd – the officer has attached the 1971 GDC aerial in which it looks as if rubbish has been dumped at that site. No.7 Kipling Rd is also clearly identifiable and may be a piggery or chicken farm looking at the structures, rather than glasshouses as referred to in the DSI. The resolution of where the stopbank will be realigned to is not sufficient for me to determine if No.1 Kipling Rd would be covered, but the officer would like the SQEP to consider this new information and confirm if further investigation is warranted or if the SMP included in the application is sufficient to cover this. Please see also the 1992 aerial of the same area; and 1992 aerial for the deer shed area which has been identified as HAIL in the application.

Response

LDE have reviewed the historical photos and have made the following assessment on these potential HAIL sites. Both 1 Kipling road and 7 Kipling road already have a stopbank adjacent / running through the property. The proposed stopbank alignment follows the existing alignment in these locations. As such, LDE do not consider there would be significant further disturbance. For the avoidance of doubt, the SMP has been updated to clarify that extra vigilance should be employed when working at these locations. Should any buried material or unexpected discoveries occur, the

unexpected discovery protocol outlined in the SMP shall be followed. See **Appendix 8** for the updated SMP.

Environmental Management/Risk

26. RFI

Please confirm what product/chemical is to be used for binding of the grass seed If hydroseeding – this may trigger a consent if likely to end up in the river

Response

Hydroseeding is no longer proposed and references to this have been removed from the proposed consent conditions. Instead, the seeding will undertaken using the harrow and spread method with no binding. This method was effective on the downstream Waipaoa River flood protection scheme.

27. RFI

What defines a Suitably Qualified and Experienced person for the preparation of a CEMP? This requires further definition

Response

A Suitably Qualified and Experienced Person (SQEP) is typically defined as:

- A person who holds a bachelor's degree or tertiary education in the relevant qualification; and/or
- Is experienced and skilled in the relevant field at a senior level with five (5) years' minimum experience.

The above can be added to the resource consent as a condition or as an advice note or a glossary / definitions section.

To provide flexibility to the contractor the proposed consent conditions has been amended (see underline) as follows: "*…a Construction Environmental Management Plan (CEMP) prepared by a suitably qualified and/or experienced person(s)…*".

28. RFI

Certification of plans: For a consent of this complexity, the certification response would not be possible within 10 working days – Council suggests that 20 working days is more appropriate.

Response

The 20 working days certification requirement is accepted. Please see the updated proposed consent conditions.

29. RFI

Construction season: the construction season closes on 30 April not May (also referred to in condition 55). There is no compelling reason to extend it for another month in the application.

Response

It is considered that there are no relevant policies and rules in the TRMP that restrict earthworks to the 1 October to 30 April period. The construction season restriction is typically required for large earthworks sites to protect surface water bodies, preventing sediment runoff into waterways and as compaction (i.e. of stopbanks) is more difficult when soils are wet. The proposed earthworks can be managed to minimise adverse effects from run-off through robust erosion and sediment control plans and by only undertaking the minimum amount of excavation required to complete the stages of works.

The Waipaoa River flood protection scheme in the catchment is still undertaking stopbank construction works in May and June 2026 and the related consents (LU-2017-107781-00; LL-2017-107782-00;LR-2017-107783-00) earthworks season is 1 October to 30 June. The Applicant now requests that the construction season restrictions are aligned to the Waipaoa River flood protection scheme consents earthworks season so that the works can be completed in a timely manner, noting that the flood protection works are of significant importance to the community.

Erosion and sediment control plans will be developed to accommodate weather events to a certain design level. Works will not occur when soil conditions are 'too wet'. Works during the autumn and winter periods may be required and would only be undertaken when weather and soil conditions are 'dry enough'. It is considered that there is no 'effects based' reason to prevent works from occurring in May and June provided that weather and soil conditions are adequate.

The ecological effects assessment was agnostic to seasonality and concluded "*with these controls implemented, the overall level of effect on all ecological features, in particular the freshwater habitat and fish, by stormwater and sediment runoff would be* ***'low'***". Moreover, much of the road raising construction involves imported fill which is granular and can be worked when there is some wetness without significant run-off.

The proposed consent conditions have been updated to reflect the above.

Landscape and Visual Assessment

30. RFI

Can be dealt with outside of s92 process.

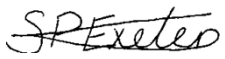
Response

Noted and agreed.

Next Steps

I trust the information provided is sufficient to satisfy the RFI and the application can progress to public notification. Please do not hesitate to contact me if I can be of any further assistance.

Yours Sincerely



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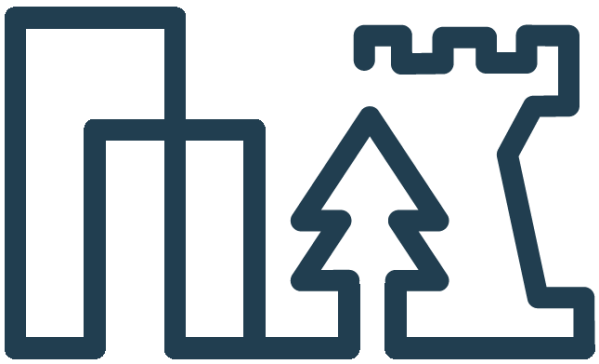
Appendix 1
Updated proposed draft consent conditions

Appendix 2
T+T High Level Geomorphic Assessment

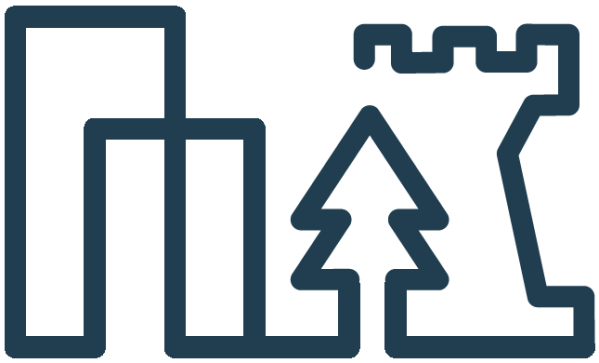
Appendix 3
T+T Berm sediment accretion assessment

Appendix 4
DHI Hydraulic Modelling Report



Appendix 5
T+ T Water depth and velocity maps

Appendix 6
DHI Flow Hydrographs



Appendix 7
Updated Stopbank Drawings

Appendix 8
Updated Site Management Plan (SMP)