

Wairoa Wastewater Treatment Plant and Reticulation Network Discharge Resource Consent Applications

Applicant's Responses to HBRC's Requests for Further Information Dated 26 March 2019

Following the site visit with both HBRC and WDC representatives on 8 February 2019, a number of matters were raised by HBRC staff and technical experts. A table of questions was sent on 22 February 2019 and the Applicant responded on 19 March 2019. A number of responses did not satisfy HBRC's experts and required further clarification, so HBRC issued a formal s92 request for further information on 26 March 2019 as presented in the table below. The Applicant's responses to the s92 request are presented in the table below. These responses were initially provided on 19 May 2019 but were amended and resubmitted to HBRC on 25 June 2019 to address further issues raised by HBRC.

HBRC's Question(s) to the Applicant on 22 February 2019	The Applicant's Responses on 19 March 2019	HBRC's s92 Requests for Further Information on 26 March 2019	The Applicant's Responses to HBRC's s92 Requests on 19 May and 25 June 2019
<p>1a) Please confirm how sensitive are the model results likely to be to changes in the geomorphology of the river mouth or position of the outfall (given it is proposed this structure can be moved).</p>	<p>We don't consider this to be an issue, as the primary control for dispersion of the discharge plume is the nearby river channel flow, not the location of the river mouth. Changes in the river mouth location will not affect the initial rapid dispersion within 100 m of the discharge to an extent that requires changes to methods used for managing or avoiding adverse effects in the estuary. The intention is for the outfall to be able to be moved to a location that is no further away from (and preferably much closer to) the active river channel so that the rate of dispersion and extent of the plume before 100-fold dilution is at least as good as currently achieved and modelled.</p> <p>The discharge is set back some 500 m from the coastal dune/mouth/bar while the primary mixing zone is within 100 m of the discharge. At the time of eCoast's modelling the river mouth was about 500 m from the discharge, but at the time of our February site visit it was about 1 km away, between Rangihoua and Whakamahi Lagoon.</p> <p>The modelling was based on the measured channel morphology and river flows, so any</p>	<p>The response received suggests the model sensitivity to the geomorphology of the river mouth and position of the outfall is not an issue. In contrast the modelling report concludes "The morphology of the river mouth regularly changes over time and this will have some influence over hydrodynamics of the area which will in turn influence the pattern of dilution of the outfall". Therefore more information is required to support the response provided. That should take into account the wide and rapid variation in mouth position (including occasional closures), the fact that fishing activities are carried out in the area that may be affected by the plume, and that, modelling was used to support the development of the discharge regime and the design of the proposed benthic monitoring programme (and potentially other decisions).</p>	<p>Although there is initial rapid dilution at the outfall, as noted in the modelling report, <i>"The morphology of the river mouth regularly changes over time and this will have some influence over hydrodynamics of the area which will in turn influence the pattern of dilution of the outfall."</i></p> <p>Considered in simple terms, when the river mouth is in line with the main river channel (that is, close to the Whakamahi lagoon to the western end of the barrier spit), discharge/dilution is less effected in comparison to when the river mouth is further to the east (towards the Ngamotu lagoon), which is less effected than when the river mouth is closed. This is because an anti-clockwise eddy is formed in the western part of the estuary at the entrance to the Whakamahi lagoon when the river entrance is more offset to the east. This is shown in Figures 3.14 and 3.15 of the modelling report. The extent of the eddy will increase as the river entrance moves further to the east. This means direct dilution is reduced and retention time is increased when the river entrance is orientated further to the east.</p>

changes in the river mouth location will alter the flows near the coastal dune/bar. It will also affect the eddies and mixing zones on each side of the river mouth. However, the eCoast information suggests the discharge will have already diluted 250 times before encountering these eddy zones.

To put this into context with respect to effects on the plume, the best-case scenario with respect to entrance location (western entrance) and the worst-case scenario (eastern entrance) can be considered by reviewing the historical aerial and satellite images which show how often they occur and how far west the entrance meanders.

Images from 1939 to 2012 indicate that the configuration modelled is similar to the most eastern in the records (comparable to 1983), and so may be considered the worst-case scenario for the river entrance location. This is especially due to the small sand island present on the western side of the entrance during field data collection that further compounds plume retention in the western part of the lower estuary (i.e. the modelling was conservative). Relocation of the outfall so that it remains near the edge of the main river channel will help maintain optimum plume dispersion regardless of river mouth location.

A situation with the entrance closed was not modelled; it is understood that should the entrance be closed for more than a few days, it is mechanically opened (and of course no discharge occurs for at least part of the time when the river entrance is closed).

It should be noted that while the river mouth might be physically blocked for navigation, river water can flow through the foreshore, albeit slowly, causing the river level to increase.

In early November 1995 a dye testing study of the discharge plume dispersion was undertaken while the river mouth was closed. It clearly showed that the discharge dispersed much more slowly and took a longer time to

			<p>travel across the enclosed lagoon area, through the foreshore gravels, to the coastal bar. WDC, the community, and HBRC have all acknowledged this adverse effect since at least the 1990's, and this is the primary reason why the discharge is required to cease for as long as possible when the river mouth is closed, and then to issue public health warnings when the discharge needs to resume despite the river mouth remaining closed.</p> <p>WDC intend to continue avoiding discharges to the river, for as long as possible, when the river mouth is closed. WDC will be able to extend the duration of zero discharges once additional storage has been installed and/or irrigation is available. WDC's reticulation works that are reducing I & I flows will also help extend the number of days of inflows that can be retained by the storage capacity. River mouth closures occur most often during low summer river flow conditions, and this coincides with reduced I & I flows and favourable irrigation conditions.</p> <p>WDC note that the proposed filtration and UV treatment will also dramatically reduce public health risks when discharges can no longer be avoided while the river mouth is closed (which should be rare in future years). Opening the river mouth is outside WDC's control, as this is a function of HBRC's river management and flood control team.</p> <p>It should also be noted that fishing is less likely to occur during closed river mouth conditions because fish are unable to enter the estuary from the sea. Also, when the river mouth is open, fishing is less likely during overnight out-going tides than during daylight hours. Further, the strong currents close to the river mouth are too fast and dangerous for safe fishing.</p>
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<p>1b) Please confirm what, if any, key decisions were predicated on the model outputs and if so, what, if any, contingencies have been put in place to manage uncertainties.</p>	<p>Section 5.3.4 of the Conceptual Design report summarises the development of the discharge regime. There was some circular decision-making and checking of effects from possible discharge regimes for model scenarios and the conceptual design. The scale of uncertainties and environmental effects were conservatively calculated by using the worst-case upper limits on daily discharge volumes into lower limits on river flows plus upper ranges of discharged contaminant concentrations. The 99th percentile plumes predicted by the model were also used to represent the worst-case events. The typical plumes and concentrations will be less than the 99th percentiles so this approach allows plenty of room for contingencies and uncertainties.</p>	<p>The response provided answers the question, however further information sought under Point 1a (above) is required to determine if the response is reasonable.</p>	<p>The Applicant trusts that the response to 1a above demonstrates that their earlier response to 1b is reasonable; i.e. modelling with the river entrance in its current location is considered conservative.</p>
<p>1c) Please provide confirmation of how the dispersal and dilution patterns should be interpreted for different types of contaminants.</p>	<p>All contaminant concentrations at any location within the plume can be simply estimated by multiplying the initial contaminant concentration by the dilution factor predicted by the hydrodynamic model at a specific location.</p> <p>After filtration and disinfection systems have been installed at the WWTP, the discharged contaminants will all be largely soluble and unlikely to bind to the riverbed sediments or settle out within the estuary, so the modelled plumes will fairly represent the behaviour of all of these contaminants. The assessment is also conservative because it assumes no attenuation or transformation effects upon entering the river. In reality, any remaining <i>E. coli</i> (and most pathogens) will die off rapidly due to contact with seawater and sunlight UV, and some chemical reactions in the river environment may transform some of the discharged contaminants into other compounds (which may be more inert and less environmentally concerning).</p>	<p>The response received suggests discharged contaminants will be largely soluble and unlikely to bind to the riverbed sediments or settle out within the estuary, so the modelled plumes will fairly represent the behaviour of all of these contaminants. Yet the assessment of effects is largely based on benthic sediments and communities, which suggests eCoast (and earlier science providers) believed there is potential for benthic impacts. This discrepancy needs to be addressed.</p>	<p>The benthic effects mostly relate to chronic exposure of benthic organisms to pathogens and some nutrient enrichment (ammonia and/or DRP) and perhaps, in the immediate vicinity of the outfall, toxic effects of ammonia. The treated wastewater discharge's contributions of suspended solids and turbulence from the flow into the river also have potential to affect sedimentation patterns and benthic sediment stability around the outfall, which can have consequential effects on the compositions and sustainability of benthic communities in the immediate area of the outfall.</p> <p>With respect to the dilution and dispersion patterns of soluble materials in the discharge, as found with the modelling, these are diluted relatively quickly and mostly within 100 m of the outfall. As a result, there is the potential for impacts on the benthic community close to the outfall which have been indicated in the results of the biological investigations. eCoast's AEE recommended that monitoring at sites closer than 100 m from the discharge are</p>

			<p>included going forwards to determine if the proposed reductions are having a localised positive effect.</p> <p>Once disinfection has been implemented at the WWTP, and when irrigation reduces the frequency and volume of discharges, these possible effects on benthic communities will reduce.</p> <p>In terms of effects due to the settlement of suspended sediments from the discharge, although these were not modelled directly, settlement can only occur where shear stress is low and water currents are <0.1 m/s (this is why there is a correlation between low current speeds/shear stress and high fine silt content in sediment samples). This is confirmed in the recent monitoring at the sites close to the outfall (i.e. 100 m) that show signs of impacts from the outfall that may be associated with settlement of fines discharged. However, it is also due to the outfall being currently located in a deposition zone (i.e. low shear stress). It should be noted that the deposition sites are continually shifting due to the changes to the estuary entrance location and the positions of various moving sand banks (e.g. the sand island on the western side of the entrance during the field data collection).</p> <p>It is noted that the Wairoa Estuary mud content (and not just around the WWTP discharge) is classified to be broadly in the “sensitive species are likely being lost” (as found in the sampling), with a positive trend to less fine silt contents as stated in HBRC’s 2014-2015 State of the Environment Report. But it should be noted there is a trend of increasing silt/turbidity in the HBRC 2016 report (HBRC Report No. RM16-12 – 4793). Either way, Wairoa River and Estuary have some of the</p>
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			<p>highest silt content and turbidity levels in the Hawke’s Bay Region due to its soft sedimentary geology, a phenomenon which is unrelated to the WWTP discharge.</p> <p>It should also be noted that all of the previous benthic studies were concerned with the current/historic discharge which has potential for causing adverse benthic effects. These studies were not intended to indicate how the future discharges may affect the estuary; instead they provide a baseline for future comparisons, and WDC expects future benthic surveys to show that the proposed regime will have a more positive impact.</p>
<p>1d) Please provide bubble plots of silt values overlaid on the shear stress plots. This will assist with interpreting the relationship between these parameters given there are a number of anomalies that do not make intuitive sense.</p>	<p>Note that the river mouth migrates randomly and frequently so the sediment layers and compositions that have accumulated over long timeframes don’t necessarily reflect the river mouth location at the times of surveys. Also, the river mouth locations and rates of silt accumulation between surveys are not monitored, so it’s difficult to correlate sediment compositions with changes in shear stress and river mouth location.</p>	<p>The response received seems to imply that the modelling is not a good predictor of physical benthic processes in the lower river. If so, should related modelling results related to shear stress be disregarded? Please confirm.</p>	<p>No, the modelling results related to shear stress should not be disregarded, as they are informative to indicate how the river channel and mouth contribute to shear stress patterns across the estuary, including near the outfall.</p> <p>The results of the modelling of shear stress and silt content at the locations of sediment samples compare well i.e. the model is a good predictor of the physical benthic processes of the lower river. As stated in the eCoast modelling report <i>“When the results of the sediment grain size analysis are compared to the modelled shear stress, it can be seen that the samples with the highest percentage of fine sediment are located where the shear stress is lowest, and vice versa. For example, shear stress at Site G remains at or around zero throughout the tidal cycle and so is a deposition zone for fine sediments and has high silt content, while Site J experiences high shear stress throughout most of the tidal cycle and consequently has the lowest silt fraction”</i>.</p> <p>Also, as described in the modelling report, the apparent anomalies of site B and the overflow are due to high shear stress at site B (i.e. it is</p>

			<p>not an anomaly, it is just counter-intuitive since site B lies between two low shear stress sites). In addition, the overflow is influenced and flushed by the fast flowing stream during overflow and so has mostly gravel (the sediment sampling at this location was mainly to consider geochemistry and contaminants). Site B's location in a high shear stress zone is clear in the attached shear stress outputs with bubble plots overlaid.</p> <p>Only site H may be considered slightly anomalous; as it is in a moderate shear stress zone during out-going tides. Site H is on the edge of a high shear stress area, although the fine sediment content is some 87%. This is likely due to the exact configuration of the entrance during the surveys and how closely that has been replicated in the model domain (no current satellite image was available for digitizing); i.e. the site was just outside the area of higher shear stress at the time of sampling. The main reasons for this are: a) due to the time constraints, the sample collection was done prior to modelling (i.e., we did not have the model outputs to direct us, although these have now been used to identify monitoring sites in the future), and b) we could not get too close to the river entrance during the bathymetry surveying due to the high currents in the area and associated H&S concerns.</p>
<p>1e) Please provide information/advice on the potential influence of changes in the mouth morphology on shear stress, and potential areas of sediment and contaminant accumulation.</p>	<p>Historic Google Earth imagery of the estuary, combined with the benthic ecological studies, show how the sedimentation and river channel patterns have changed in response to changing shear stress patterns. The building out of the mudflats between Fitzroy Street and Rangihoua is obvious over only a few years (5-10 years). Over a much longer time scale, the erosion of Rangihoua is apparent in its receding eastern cliff face and undermining of WWII gun</p>	<p>The response received seems to imply that the modelling is not a good predictor of physical benthic processes in the lower river. If so, should related modelling results related to shear stress be disregarded? Please confirm.</p>	<p>See the response to 1d) above. The potential areas of sedimentation and contaminant accumulation are modified by the entrance location (and to a lesser extent by sand bar locations within the lower estuary), and when the entrance location is more eastward these are increased because the river outflow is not direct and disrupted into an anti-clockwise eddy. Based on the available historical information, the configuration that was modelled is likely conservative.</p>

	bunkers that were originally on hilltops but are now adjacent to or submerged in the estuary.		
2a) Please provide confirmation as to the source(s) of the high sediment concentrations of lead present around the Fitzroy Street pump station overflow.	The source is unknown but clearly is unlikely to be related to the treated wastewater, as lead is not a feature near the main outfall and there are no lead sources in Wairoa. It is most likely that these lead results relate to dumped materials or perhaps some historic stormwater events. The lab results show huge variation of lead over several individual samples and sediment depths at this location, so it is clearly related to a very localised lead deposit, and not on-going lead discharges and general accumulation in the sediments.	This answer satisfies HBRC's information requirement	
2b) Please provide the original laboratory results referenced in report eCoast 2018:C5 – Assessment of Environmental Effects – Marine Ecology.	See attached (originally for eCoast 2018:A3D3).	This answer satisfies HBRC's information requirement	
2c) Please confirm whether nuisance macroalgae blooms are present in the lower Wairoa River and if so please provide information regarding this.	HBRC's 2016 report on river water quality trends at SOE sites upstream of Wairoa indicated that "DIN/DRP ratios indicate that ... most sites in the Wairoa catchment have nutrient ratios indicative of co-limited conditions. Given that concentrations of both DIN and DRP are low to moderate at these sites, this means that both nutrients are likely to partially limit periphyton growth." and "Periphyton biomass levels across the catchment are generally low, and ... are below both the 120 mg/m ³ 'recreational' and 50 mg/m ³ 'biodiversity' thresholds."	The response received seems to be focussed on freshwater blooms, whereas we were primarily seeking information on whether nuisance macroalgae blooms are present in the lower Wairoa River (perhaps the question should have been more specific and said the estuarine section around the outfall). Please provide a response to suit.	No periphyton growth was observed during field data collection and HBRC (2016) states " <i>It should also be noted that periphyton require hard substrate to attach to, which means that excessive periphyton growth is unlikely to develop in soft-bottomed rivers such as the lower Wairoa River, regardless of dissolved nutrient concentrations.</i> " This in combination with the occasionally high water flow rates and poor water quality in terms of light penetration (very turbid), indicate that periphyton blooms are unlikely to occur in the Wairoa estuary.
2d) Please provide information regarding the potential effects on the benthic macrofauna and sediment quality as a result of the re-positioning of the WWTP outfall.	Relocating the outfall will potentially relocate the localised area of organic enrichment of the sediment and any effects on macrofauna. The reductions in discharge events and modified discharge regimes resulting from potential irrigation and storage expansion will ensure that future outfall locations will have negligible adverse effects on sediment quality and	We agree that relocating the outfall is likely to relocate the localised area of organic enrichment of the sediment and any effects on macrofauna. What we don't know is whether the benthic values are the same across the proposed outfall site. For instance, are there any shellfish beds that should be avoided?	The estuary has not been studied to this level of detail. eCoast's 2018 benthic survey is the first study that WDC is aware of that sampled a wide range of sites within the estuary. WDC considers that eCoast's data can be used to indicate the likely extent, health, and diversity of benthic communities in the estuary. The outfall is likely to be relocated well within 100-200 m of its current location to match river

	<p>macrofauna within ever-smaller zones around the outfall.</p>		<p>channel migrations, and the types of benthic communities have consistently been similar within 100 m of the outfall over the years.</p> <p>Relocation of the outfall 100-200 m into the main channel (i.e. eastward) will result in distribution of suspended materials further away from the outfall. However, the patterns of sedimentation will be modified by the river migration prior to relocation of the outfall, and this will be controlled and further modified by changes in the location of the entrance and sand bars in the lower estuary. Further, the impacts on benthic communities with respect to chronic exposure to contaminants will be related to the quality of treatment and the volumes of discharge – i.e. improving the level of treatment and reducing discharge volumes will have a positive impact.</p> <p>With respect to local shellfish beds and impacts of relocating the outfall within 100-200 m of the current outfall, based on the results of the 2018 investigations, there is no clear pattern with respect to the presence of shellfish and sediment grain size or current speeds/shear stress. It is likely that these juvenile pipi beds are partially ephemeral and move in response to the changes to the channel, sand bar and entrance location. As a result, it is expected that impacts on these beds due to relocation of the outfall can be considered to be localised and temporary. WDC note that there is a lower confidence of predicting future effects when relying on a single detailed benthic study of the riverbed as the basis for assessing long-term effects of outfall relocations on potentially ephemeral and/or juvenile shellfish beds.</p>
<p>2e) Please provide additional comment on the potential effects of emerging contaminants of concern.</p>	<p>These are unlikely to be of any greater concern for Wairoa than for any other town's wastewater discharges. The discharge into a comparatively large river flow, rapid dilution,</p>	<p>This answer satisfies HBRC's information requirement</p>	

	and proximity to the coast mean that there is minimal opportunity for EOC's to remain at potentially harmful concentrations and potentially affect fish.		
3a) Please provide a copy of the procedure for the handling of unearthed human remains, taonga tuturu, and artefacts that WDC is going to adopt and provide an amended copy of the proposed consent conditions that includes this requirement.	WDC are developing these protocols based on standard heritage/archaeological and Maori protocols. We will provide them to HBRC prior to the Hearing. The protocols need to address the interests and expectations of all interested parties and authorities including iwi, hapu, HBRC, DOC, and Heritage NZ Pouhere Taonga.	Can you please confirm when this document is likely to be available for Council staff to review? Our preference is prior to the drafting of the section 42A report.	A procedure for the handling of unearthed human remains, taonga tuturu, and artefacts will be made available to HBRC before 30 July 2019. WDC note that this is only relevant to disturbance of the riverbank and perhaps the riverbed for relocating and maintaining the outfall pipeline. Given the scale of coastline erosion and silt deposition since human occupation, it is unlikely that any artefacts will be discovered. In lieu of this procedure, WDC considers that standard accidental discovery protocols address this concern.
3b) Please confirm if during the relocation of any structure within the river bed is it envisaged approval will be obtained by tangata whenua or if the works will be overseen by a tangata whenua representative?	Tangata whenua will be represented on the reserve management board which will need to be providing approval for this too. Tangata whenua could be informed prior to works commencing each time and could be entitled to have an observer. Overall however, the activity itself will be reflective of the existing situation i.e. an outfall structure in the area will not be a foreign concept, while comprehensive conditions are proposed around certification and construction to ensure effects will be less than minor.	This answer satisfies HBRC's information requirement	
3c) Please confirm if there were discussions with tangata whenua around the proposed stages of the BPO being "aspirational" only and that there is a possibility that the discharge into the Wairoa River may continue similar to the current practice (with better treatment)? The Cultural Impact Assessment states that the discharge to the river is culturally offensive and discusses the need to move to a land application discharge method	Yes, tangata whenua were a key group involved in the Stakeholder Group. Iwi views were integral with and drivers of the BPO selection including the acknowledgement of the aspirational nature of the longer-term developments. They agreed that the improvements over time will be better than the existing situation. They agreed that time was required for implementing steps towards the ideal goal of 100% land treatment and acknowledged that this goal may not be achievable within the next 30 years. They also understood that this meant there was a delay in achieving that aim but it allowed costs to be	It is recognised from your response that the intention is there for WDC to work towards a reduction in the discharge into the Wairoa River, however the potential that this may not occur is not reflected in the Cultural Impact Assessment. There is no application document that we can refer to confirming tangata whenua have acknowledged that the proposal is "aspirational". Please provide written confirmation (meeting minutes or records or similar) when and what discussions have been had with tangata whenua regarding this matter.	Consultation included direct iwi engagement, the stakeholder group, public meetings, hui, LTP consultation (which highlighted this proposal as a key aspect of the LTP for feedback), WDC's Maori Standing Committee, and DOC. WDC also note that all MACA claimants were sent a summary of the proposed package of changes for future consenting and subsequently sent a copy of the AEE. There has been very limited feedback. There was no documentation provided by iwi; all feedback was verbal. WDC's records of

<p>to reduce the effects on Maori cultural values.</p>	<p>spread more affordably (potentially with external funding), allowed for reticulation improvements to reduce flows, and provided certainty that steps would continue to be taken by WDC. Also refer to the answers below to question 10 regarding the CIA. Further, although acknowledged to be aspirational, this doesn't mean there isn't an intent to work towards these outcomes. Indeed, this is the very purposes of the proposed condition framework.</p>		<p>consultation are attached, in response to question 9a below.</p> <p>Although WDC's records unfortunately did not provide the level of detail sought by the s92 questions 3c and 9a, this in no way diminishes the value of input received from the WWSG, tangata whenua, and the community. Their views directly drove the development of the proposed package which included the continued river discharge as an essential core component and 100% land discharge as the ultimate goal.</p> <p>As outlined in relation to 9(a) below, it is WDC's understanding that the nature of the proposal was well understood and supported by tangata whenua and the public.</p> <p>WDC consider that submissions generated by public notification of the consent applications is the most appropriate means of checking / validating WDC's understanding of the views of tangata whenua and the wider community. The focus and popularity of any opposition will become apparent from an analysis of submissions.</p>
<p>4a) Please provide evidence that the data set modifications prescribed in Report A211 do not significantly modify the resultant summary data.</p>	<p>Some of the data modifications had large effects on the average (mean) and upper percentile values. Deleting the clearly unrealistically high results would have had a similar effect to the adjustments we made to achieve more realistic results. It was very important to ensure that such high erroneous results did not skew the statistics relied upon for all future aspects of this project. The original means and maxima were unrealistically high, which is what triggered us looking for the individual results responsible for these unrealistic statistics.</p>	<p>Modification of the data sets to remove erroneous data is acceptable, but by replacing erroneous data with values that lie within the existing consent parameters (rather than deleting the data point), this skews the data set. Please provide evidence that the data set modifications prescribed in Report A211 do not significantly modify the resultant summary data, preferably by comparing median and percentile values for original data.</p>	<p>Only one pH reading for effluent quality was modified, and this had no effect on compliance with consent conditions because pH is not one of the parameters limited by the consent. If the erroneous reading of 464 had been deleted instead of replaced with its transposed reading of 7.7, none of the reported statistics changed. The original dataset including this 464 reading generated a mean of 12.1 instead of 7.7, and a 95th percentile of 8.8 instead of 8.6.</p> <p>Most of the data errors related to the influent quality. This is not a consent compliance issue, but changes in these statistics can influence the calculated treatment performance rates. If the</p>

			<p>erroneous influent pH reading of 18.2 had been deleted instead of replaced with its transposed reading of 7.7, none of the reported statistics changed. The original dataset including this 18.2 reading generated a mean of 7.6 instead of 7.5 but did not affect the 95th percentile or median pH.</p> <p>If the erroneous influent TKN and TN readings had been deleted instead of replaced with more realistic results, the average TKN would have been 23.8 g/m³ instead of 23.7 g/m³, the 95th percentile TKN would have been 40.5 g/m³ instead of 40.3 g/m³, the 5th percentile TN would have been 10.7 g/m³ instead of 10.8 g/m³, and the 95th percentile TN would have been 40.4 g/m³ instead of 40.2 g/m³. If the erroneous TKN and TN readings had been included, the 5th percentile for TN would have been 10.8 g/m³, both means would have been 28.5 g/m³, the medians for TKN and TN would have been 23.0 g/m³ and 22.5 g/m³ respectively instead of 22.0 g/m³, the 95th percentiles for TKN and TN would have been 43.2 g/m³ and 43.1 g/m³ respectively, and both of the maxima would have been 220 g/m³ instead of 56 g/m³.</p> <p>If the erroneous influent TP readings had been deleted instead of replaced with more realistic results, the mean would have been 3.4 g/m³ instead of 3.5 g/m³, the median would have been 3.2 g/m³ instead of 3.3 g/m³, the 95th percentile would have been 5.8 g/m³ instead of 6.0 g/m³, and the other statistics would have been identical. If the erroneous TP results had been included, the mean would have been 4.4 g/m³, the median would have been 3.3 g/m³ (the same as the modified dataset), the 95th percentile would have been 6.9 g/m³, and the maximum would have been 60 g/m³.</p>
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			<p>The dataset for the primary treated effluent also has no consent compliance implications and the changes to the dataset did not skew the statistics that resulted from deleting the two erroneous results except for a very small reduction in the 95th percentile from 4.9 g/m³ for the modified dataset to 4.8 g/m³ for deleted results. If the two erroneous readings had been included, the mean would have been 3.2 g/m³ instead of 3.0 g/m³, the 95th percentile would have been 5.0 g/m³, and the maximum would have been 14 g/m³ instead of 6.1 g/m³.</p> <p>In all cases, the comparisons above show that there were no significant effects on any of the statistics when the few erroneous results were deleted instead of being replaced with more realistic results. The median effluent quality was compared with the median influent quality to gauge the WWTP's treatment performance, and the assessment in LEI, 2017:A2I1 remains unchanged by deleting the erroneous results.</p>
<p>4b) Provide full data sets and summary calculations, including graphical and statistical representations of performance, that form the basis of AEE table 5.3:</p> <ul style="list-style-type: none"> i. Historical performance flow and load/concentration data for the WWTP; ii. Historical influent parameter records (flows and loads). iii. Confirm whether there is any treatment plant influent and effluent performance data for 2017 and 2018. 	<p>We do not believe that this information is directly relevant to the discharge consents. While performance has a bearing on effluent quality and loads, the future I & I and treatment enhancements will ensure that the future treatment performance and discharge quality will be better than historic data.</p> <ul style="list-style-type: none"> i. We haven't calculated these apart from the overall means in Table 5.2 and section 5.4 of LEI, 2017:A2I1. ii. See Table 5.2 of LEI, 2017:A2I1. iii. Monthly influent quality sampling ceased in December 2017. Monthly effluent quality sampling continues to occur. 	<p>The proposed solution relies on network improvements to maintain effluent quality. However there is no quantification of the expected flow improvements, or analysis of treatment plant performance based on the revised flows to the plant. Given that the plant is currently likely to be experiencing significant benefit from dilution within the network, evidence is required that the treatment plant performance expected after the proposed upgrades will maintain or improve the discharge loads into the environment. Please provide evidence that the pond treatment performance after the proposed network and other upgrades has been assessed to be the same or better than the current discharge load, and the basis influent flow and load data (existing and post upgrade) used to form this evaluation.</p>	<p>Table 5.2 of the AEE provided estimates of the anticipated future daily flows, and this was a copy of Table 4.2 of the Conceptual Design report (LEI, 2018:C1.0). The rationale for these future flows is provided in Section 4.3.2 of LEI, 2018:C1.0. The overall aim is for 2050 flows to be similar to 1997 flows with some allowance for population growth. Table 5.1 of the AEE shows the significant reductions in daily flows for winter months of 2018 (less apparent for summer) due to reticulation and rainfall.</p> <p>The treated wastewater quality in 1995-98 was similar to that of more recent years despite the recent considerable increase in I & I dilution and some sludge accumulation variations. This indicates that the dilution rate balances with the WWTP hydraulic residence times to</p>

[Nick Dempsey has subsequently clarified his concern that the flow reductions may not be achievable, and that resulting treatment plant performance and effluent quality changes have not been robustly quantified. This is also relevant to whether the proposed limits for the effluent quality and the resulting effects of the discharges on the river environment will be achievable.]

maintain similar treatment performance and effluent quality (concentrations).

Based on this historic data, WDC expect that as flows revert towards 1990's levels, the WWTP's treatment performance and resulting effluent quality (concentrations) will remain similar and will stabilise because of less peaky flow pulses through the WWTP. WDC expect that the annual discharge loads will reduce as a direct result of reducing flows.

Note that discharge *concentrations* are more important in the river than *loads* of ammonia and pathogens. This is because there are lower risks of adverse effects when discharging lower concentrations that benthic communities can tolerate. WDC acknowledge that the loads of suspended solids and phosphorus may be more important than their concentrations because of their potential to deposit onto the riverbed, but the intention of locating the outfall on the edge of the main river channel is to ensure that river flow rates prevent any deposition of these contaminants before entering Hawke Bay.

Once UV and filtration have been added to the outlet, the discharged concentrations and loads of suspended solids and pathogens are likely to reduce by about 90 %.

WDC did not undertake a detailed assessment of the WWTP's past and future performance because the effluent quality was believed to be acceptable for discharges to the river (in terms of its effects on water quality after dispersion) and to land. WDC's primary concern was the flow generated by I & I which was the cause of a number of problems. Further, the additional treatment proposed (filtration and UV) was in response to community perceptions and desires to have cleaner water quality (including

			<p>cultural mitigation) and not based on mitigating any adverse effect.</p> <p>During preparation of consenting documents the scale and rate of flow reductions was not able to be reliably predicted. The recent works on reticulation have since been shown to have significantly reduced flows. Further changes are expected over the next 1-2 years, after which the rate of change is expected to slow down.</p> <p>Questions 9f and 9g below discuss using WDC's historic effluent quality data for determining appropriate limits for future discharges to the river. It is proposed that these limits can be developed later in the consenting process, as typically occurs. The concerns raised in question 4b are also directly related to setting those limits.</p> <p>WDC were comfortable to set effluent quality limits during the consenting process and then use those limits to specify performance limits for future changes to the WWTP design and operation. WDC were intending to reassess flows and effluent quality prior to designing the sand filtration and UV system, as these key parameters are crucial for correctly sizing the disinfection system. However, given the more rapid than expected reductions in flows and the need to set realistic effluent quality limits for the future consent conditions, WDC can more confidently undertake this assessment now during the consent process instead of later during implementation. WDC will now undertake this assessment during the public notification period so that effluent quality limits can be set with more confidence of future compliance and for design of the future disinfection system.</p>
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			WDC do not believe that robust statistics and proposed limits for these parameters need to be refined and agreed prior to notification of the consent applications. HBRC had agreed to this approach for 9f and 9g. WDC also note that the receiving environment is not sensitive to any changes in discharge quality because of the rapid and high rate of dilution in the river. For example, a 50% increase in the concentration of a parameter in the treated wastewater would result in no significant change in the assessed effects on the environment.
4c) Provide technical assessment of the pond treatment capacity against established pond design parameters. This should cover at least historical kgBOD/ha.day, and assessment of changes to performance due to reduced I&I in the network, and changes to the treatment process.	The final paragraphs of section 5.4 of LEI, 2017:A2I1 provided this. It noted that BOD had never been monitored but, based on CBOD, the load on the surface area of the entire WWTP is 394 kg CBOD/ha/d which is 4.7 times the NZ recommended guideline value of 84 kg BOD/ha/d. However, it should be noted that the aerated lagoon reduces CBOD by about 75%, so the load on the main oxidation pond is only slightly above this guideline value. Reductions in I & I will reduce flow rates, reduce dilutions, and increase BOD concentrations, but the overall load will remain unchanged.	Section 5.4 of LEI 2017:A2I1 provides a brief explanation of the pond loadings currently experienced in the WWTP. However these reference a pond loading rate of 84 kgBOD/ha/d which is not relevant to the partially aerated pond. In addition, cBOD values are used, which are different to BOD loadings (BOD is typically 1.1 to 1.3 times higher). Taking into account estimates of BOD loadings, and aerated pond discharge values, the facultative pond is likely to be 1.5 to 1.8x overloaded when compared to the design loading rate provided. Given the current apparent overloading, and time since desludging the facultative pond, please provide evidence that the capacity of the aerated and facultative ponds are effectively analysed to confirm the effect of the proposed network and WWTP changes, demonstrate that effluent quality will be no worse on a load and concentration basis.	As noted earlier, cBOD was used because BOD has not been monitored at the inlet or outlet of WWTP. The difference between BOD and cBOD was not considered to be crucial for the assessment of its treatment performance or loading rate. The 84 kg BOD/ha/d guideline was developed in 1974 and is conservative to account for cold winters with little wind. Wairoa's climate is more conducive to good treatment performance. Regardless of whether the BOD entering the second pond is theoretically overloading it, the final treated wastewater quality has been indicating that the degree of treatment is similar to the expected performance of a typically loaded WWTP of this design. Desludging and reduced I & I fluctuations in flows will clearly assist with stabilising the WWTP's treatment performance and should reduce the 90-95 th percentile discharge concentrations. WDC believe that the WWTP's treatment performance and resulting effluent quality in recent years probably represent "worst case" conditions. See also WDC's previous response to 4h) below which is relevant too.
4d) Confirm when the two ponds were last deslugged, and what are	The aerated lagoon was most recently deslugged in April 2018, with about 517 m ³ (dry	This answer satisfies HBRC's information requirement	

<p>the measured sludge levels at present.</p>	<p>basis) removed. The maturation pond was most recently de-sludged in May to September 2010.</p> <p>We do not believe that this information is directly relevant to the discharge consents but is simply an operational matter that WDC need to keep on top of in order to maintain the WWTP's treatment performance and discharge quality.</p>																															
<p>4e) Only four compliance reports are included in the assessment in A211, up to the year 2014. Were additional compliance reports available for inclusion in the assessment and if so, what is their impact on A211 Table 7.1.</p> <p>Previous compliance reports for the compliance years 2008-2009, 2009-2010 and 2012-2013 are available from Council if needed.</p>	<p>At the time of gathering information for this report, only those four compliance reports were available from HBRC and WDC staff. More recent reports have not been sought but instead WDC's monitoring data was relied on. WDC have acknowledged that rates of compliance with daily discharge volumes and timing have continued to be problematic during and immediately after storm events. It was not considered of any benefit to seek or review older reports, especially as flow characteristics are changing as a result of reticulation improvements.</p>	<p>This answer satisfies HBRC's information requirement – HBRC to provide copies of pervious compliance reports to Nick Dempsey for reference</p>																														
<p>4f) Provide median and other percentile performance data for the existing pond such that ongoing median values can be considered for consent conditions.</p>	<p>Median values were presented in Table 5.2 of LEI, 2017:A211. 90th percentile values are pH = 8.3, DO = 14.7, COD = 260, NH₃-N = 28, TSS = 118, cBOD = 55, and <i>E. coli</i> = 135,000.</p>	<p>Please provide median and 10th and 90th percentile performance data for the existing pond to assist with developing consent conditions.</p>	<p>WDC is not sure why the 10th percentiles are relevant, nor how they would assist with the development of the consent conditions which the original question stated would be based on median values, but the 10th and 90th percentile performance (influent vs effluent quality) for 2008-16 are as follows:</p> <table border="1" data-bbox="1606 1086 2141 1278"> <thead> <tr> <th rowspan="2">Parameter</th> <th colspan="4">Percent Reductions</th> </tr> <tr> <th>Conc. 10th</th> <th>10th</th> <th>Median</th> <th>90th</th> </tr> </thead> <tbody> <tr> <td>COD</td> <td>116</td> <td>59%</td> <td>46%</td> <td>30%</td> </tr> <tr> <td>CBOD₅</td> <td>32</td> <td>71%</td> <td>71%</td> <td>71%</td> </tr> <tr> <td>NH₃-N</td> <td>8.4</td> <td>11%</td> <td>4%</td> <td>17%</td> </tr> <tr> <td>TN/NH₃-N</td> <td>12.7</td> <td>41%</td> <td>29%</td> <td>34%</td> </tr> </tbody> </table> <p>Note that for all responses to 4f, the same set of 2008-16 data has been relied upon.</p>	Parameter	Percent Reductions				Conc. 10 th	10 th	Median	90 th	COD	116	59%	46%	30%	CBOD ₅	32	71%	71%	71%	NH ₃ -N	8.4	11%	4%	17%	TN/NH ₃ -N	12.7	41%	29%	34%
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<p>4g) Confirm whether membrane filtration was considered in the</p>	<p>Sand filtration was selected in consultation with iwi and the community partly because it involves contact with minerals and geological</p>	<p>This answer satisfies HBRC's information requirement</p>																														

<p>BPO long list of options in lieu of filtration and UV.</p>	<p>matter which reflect Maori tikanga that human wastes can only have their mauri restored through contact with Papatuanuku. Further, sand filtration would assist in algae removal to allow more effective UV treatment. Membrane filtration would have served no benefit over and above the proposed solution, and would not have had any positive cultural value.</p>		
<p>4h) Does the proposed programme to improve network conditions quantify the expected improvements in influent wastewater?</p>	<p>No. Historic data when flows were lower and population was higher guides expectations for future flow reductions. Overall, not much changes in the treated wastewater quality because the load remains static or declines with declining population.</p>	<p>This answer satisfies HBRC's information requirement</p>	
<p>5a) Please confirm if the treated discharge pipeline overflow for the main discharge still discharges into an adjacent stormwater channel or is now discharging into a separate overflow pipe. Please provide plans that show the pipeline configuration (for both sewer and stormwater for the Fitzroy pump station and WWTP going into the main outlet discharge and overflow).</p>	<p>Details in the AEE for consent application DP180254L and WDC's infrastructure records indicate that the main outfall's emergency overflow currently uses a dedicated 375 mm pipe that is not connected to any stormwater drain near the coast, and it will continue to do so until the outfall pipeline can be moved and perhaps have its diameter enlarged. I & I reductions will also assist.</p>	<p>This answer satisfies HBRC's information requirement</p>	
<p>5b) Please confirm if the Fitzroy Pump Station gets inundated during storm events similar to the other three pump stations and where does this overflow discharge to.</p>	<p>Yes it has in the past, but only during one very large storm since December 2017. These overflows will be mainly stormwater with a small wastewater component. The wet well's emergency overflow feeds into the main outfall pipeline and out to the river discharge structure. The treated wastewater from the WWTP will mix with the Fitzroy Street overflows within the pipe before discharging into the river.</p>	<p>This answer satisfies HBRC's information requirement</p>	
<p>5c) Please confirm if investigations into removing the emergency overflows has been done in conjunction with the proposed upgrades and network</p>	<p>Yes, the reticulation proposals have been designed in an integrated manner. The emergency overflow pipes won't be removed at any stage, as they will always be needed for protecting the reticulation from excessive</p>	<p>This answer satisfies HBRC's information requirement</p>	

<p>improvements, particularly as they will be discharging less diluted wastewater into the river. Please provide information regarding this work.</p>	<p>pressure. Overflows will still require the same flow rate and volume of stormwater to trigger such events, so the dilution will be very similar to historic dilutions. What will change is the intensity of storm (mm/h and its duration) and the frequency of events that will need to occur in order to trigger overflows – larger and longer storms that occur less frequently will be needed.</p>		
<p>6a) Please provide details (including a map) identifying what and where edible species of kaimoana can be gathered around the river mouth.</p>	<p>As consistently shown by the benthic surveys, and eCoast’s spatially broader study, the estuary is not conducive to shellfish thriving. Surveys and feedback from local residents indicated that there is no harvesting of shellfish here. Flounder are caught in the estuary, but otherwise all fishing activities occur in the marine area. Producing a map is a significant task, and we are unsure of its value and relevance for this consent application.</p>	<p>Information provided indicates that: the estuary is not conducive to shellfish thriving and no shellfish harvesting occurs, but flounder are caught. However, a map of where fishing occurs is not provided (because it is considered to be a significant task, and WDC are unsure of its value and relevance for this consent application). We consider knowing what and where kai moana are harvested to be a key consideration for a wastewater outfall in an enclosed estuary such as this. It would also seem a relatively simple exercise for the Council to (at least) map its understanding of where harvesting occurs.</p>	<p>In terms of gathering kaimoana around the river mouth, such as shellfish in the sediment and/or on hard substrate, none are gathered due to river water quality being too poor (in terms of high levels of <i>E. coli</i> that would make them inedible). More importantly, it is because there are few there, and they don’t grow to maturity.</p> <p>Local experienced fishers and the benthic surveys have indicated that the most common shellfish found in the Wairoa River estuary are pipi, but they are not gathered for human consumption. The areas close to the mouth of the Wairoa River are a known pipi nursery. However, pipis are known from the benthic surveys and local residents to not reach maturity in this area. This could be due to a couple of processes as recognised by local tangata whenua. These processes include the to and fro nature of the river mouth location (the taniwha brothers arguing) creating a change in river current and intertidal strength resulting in an unfavourable and unstable habitat, rather than the presence of the outfall. Pipi are tolerant of moderate wave action and commonly inhabit coarse shell sand substrata in bays and at the mouths of estuaries where silt has been removed by waves and currents (Morton & Miller, 1968). They have a broad tidal range tolerance, occurring inter tidally and sub tidally in high current harbour channels to water depths of at least 7 m (Dickie, 1986;</p>

			<p>Hooker, 1995). Because the Wairoa River current and silt loading is ever changing, this could inhibit a large portion of pipi reaching maturity. Because pipi do not reach maturity, they are not gathered within this area.</p> <p>It is noted in the eCoast report that “Previous monitoring reports (Smith 2007, 2011) have suggested that the presence of species like pipi (<i>Paphies australis</i>), at sites around the outfall were evidence that any potential effects emanating from the outfall were not large enough to constitute an undue adverse effect. While pipi were encountered at the majority of sites in 2018 (including A, B and C), when the potential impact sites are evaluated against the new sites it is apparent that pipi numbers are significant lower at sites A, B and C, at least relative to sites E, F, G and H. This trend appears unrelated to silt content, however it must be stressed that all pipi enumerated were <30 mm in size, therefore are likely to be stressed at all sites where they are encountered. Again, comparisons of trends detected here are consistent with those derived from SoE monitoring.”</p> <p>Further inland, the Wairoa River is an important source of food, including inanga (whitebait), mohao (flounder), kanae (mullet), tuna (eel), kākahi (fresh water mussels) and koura (fresh water crayfish) (HBRC, 2018).</p> <p>Local residents and their families who recreationally fish and represent several decades’ experience have confirmed that shellfish are not collected anywhere in the estuary because of public health warnings, shellfish population declines, and the small sizes of pipi and mussel spat. They noted that a range of fish are caught in the estuary, such as mullet, inanga, whitebait, paraki (smelts),</p>
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			<p>flounder, kahawai, and occasionally snapper. However, most fishing is in the ocean (popular around the Mahia Peninsula) or in the pristine upper Wairoa catchment (eels and trout).</p> <p>It should also be noted that all MACA claimants were sent a summary of the proposed package of changes for future consenting and were subsequently sent a copy of the AEE. Their complete absence of feedback suggests that kaimoana and mahinga kai are not valued and perhaps do not exist in the vicinity of the WWTP discharge pipeline or its plume.</p>
<p>6b) Please confirm what funding options WDC has investigated in assisting with the costs associated with the BPO and if purchasing of land was included in this investigation.</p>	<p>Yes purchasing land was considered but that's not preferred, as leasing is cheaper while retaining a farm manager who has a vested interest in the land and animal health. Other central government funding options have been explored, and there is hope that funding may ultimately become available as a result of the three waters review.</p>	<p>Evidence of other funding options has not been provided, please provide or is WDC solely waiting on the three waters review? Please confirm.</p>	<p>It is anticipated that funding and resource support will be sought from sources outside Council, including HBRC, central government, and community grants. Other sources that were suggested during consultation included local philanthropists and Trusts, industries, businesses, Eastland/Genesis Energy, Lotteries, farmers, Marae – PSGE (post settlement governance entities), tourists, Rocket Lab, and NASA. Successful funding may bring forward the implementation of some actions. In addition, community, tangata whenua, and environmental groups are expected to assist with seeking funding and providing manpower to help to expedite the delivery of some tasks.</p> <p>There is a limitation on rates funding. Loans also need community servicing through rates. Currently there is no government funding available, but some government funding could occur in future.</p> <p>Current government funding sources include the Provincial Growth Fund (PGF), Freshwater Improvement Fund (FIF), and the Tourism Infrastructure Investment Fund (TIIF). The FIF requires projects to achieve "significant water quality improvement" which Wairoa won't achieve due to the WWTP discharge's less than</p>

			<p>minor contribution. The PGF doesn't fund this type of infrastructure project. The TIIF could be used but it is only used in high tourism pressure areas and requires 10's-100's of millions of dollar projects. Wairoa fails to meet these criteria.</p> <p>Government funding needs to help Wairoa. WDC's programme allows for and encourages seeking outside funding. It should also be noted that future governments will change policies and so there may become new avenues of obtaining government funding over the next 20-30 years.</p> <p>WDC is committed to continually reviewing funding options and actively seeking funding throughout the project. WDC have successfully been awarded funding for their Mahia Beach scheme through the Ministry of Health Sanitary Works Sewage Subsidy Scheme. This scheme no longer exists. The Provincial Growth Fund does not fund wastewater projects. The Freshwater Improvement Fund may contribute some funding, but this would be minimal compared to that needed for significant change. Regardless, funding is based on need and where there is either clear public or environmental health implications; neither of which exist at Wairoa.</p> <p>All funding applications require certainty of implementation and a strong case giving reasons why the external funder should invest in Wairoa's infrastructure, including why WDC funds are not available and how it meets funding criteria and is good value. In any case, WDC do not believe that identifying potential funding options now is a matter for consenting assessment, and it is not a relevant RMA effect (other than perhaps as a means of reducing the financial burden on the community).</p>
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<p>7a) Please provide a monitoring plan which is to include the following;</p> <ul style="list-style-type: none"> i. The objectives of monitoring, ii. The actual issues of concern, the monitoring required to detect trends and ensure adverse effects remain within acceptable ranges (parameters, sites, times and sampling methods), iii. Confirm how in-river monitoring will be integrated with discharge monitoring, include how discharge volumes and loads will be determined, iv. Confirm how the results will be used to inform and adapt the management of the wastewater network and treatment plant over the duration of the consent. <p>7b) Alternatively provide a consent condition to give certainty that this monitoring plan will be provided in a timely manner.</p>	<p>Proposed condition 34 already proposed this to be developed within 3 months of granting consents and implemented within 12 months of granting. We can instead aim to develop this plan soon and re-draft monitoring conditions to reflect these details before the Hearing. We intend collaborating with Shaw and Shane to develop this plan.</p>	<p>Can you please confirm when this document is likely to available for Council staff to review? Our preference is prior to the drafting of the section 42A report.</p>	<p>WDC and HBRC experts will collaborate to develop a draft benthic monitoring plan during the public notification period. If they are unsuccessful in this endeavour prior to HBRC drafting their s42A reports, WDC will modify the draft consent conditions to specify the relevant monitoring plan requirements and timeframe for its preparation following granting of the consents. The conditions will also reflect adaptive monitoring plan changes that can occur during the consent term.</p>
<p>8) Please provide confirmation as to the rationale for the proposed changes and selection of discharge criteria, including an assessment of environmental implications (particularly for human health), this is in relation to the relaxation of the discharging at night requirement.</p>	<p>The BPO and Conceptual Design reports provided the rationale for these changes. Human health effects are driven by pathogens. Once filtration and UV have been installed the treated wastewater discharge will be cleaner than the river for a large number of parameters. It can therefore be discharged at any time without causing human health concerns. Despite this, under lower flows we have chosen to maintain discharges only during out-going river flows (which require out-going tides when river flows are below 3 x median). Discharging during daytime as well as night</p>	<p>This answer satisfies HBRC's information requirement</p>	<p></p>

	<p>allows slower discharge speeds which will more readily remain within the outfall pipe's capacity and will be a smaller proportion of the river flow, thus having potential for greater dilution upon full mixing with the river. The adopted discharge regime also avoids the need to upgrade discharge pipe capacity and reduces surcharging of the treatment ponds.</p>		
<p>9a) Given the Wairoa Wastewater Stakeholder Group (WWSG) was formed in late 2016 with terms of reference established in early 2017, consent conditions 19 and 20 do not seem necessary or is WDC proposing another stakeholder group be created? Can you please confirm the status of the WWSG plus submit a copy of all meeting minutes held for the WWSG and terms of reference.</p>	<p>The intention is the formation of a new stakeholder group with a focus on reviewing Council's progress with implementing the proposed changes and to assist Council to understand the community's preferences for direction and next steps over rolling 5-year periods.</p> <p>The WWSG has been discontinued because it has fulfilled its roles of providing the community's values and aspirations and guiding WDC's selection of the BPO for consenting. Why do you need all WWSG meeting minutes and terms of reference? The consultation summary and Way Forward report provide these.</p>	<p>A copy of all of the meeting minutes is considered important in confirming what discussions were had during these meetings and with whom. Please provide a copy of all meeting minutes held for the WWSG.</p>	<p>Copies of the WWSG terms of reference and all available minutes from the WWSG and hui-a-iwi are attached. Unfortunately, some of these meetings were not captured in any notes or formal minutes. The level of detail provided by the available records unfortunately did not provide the level of detail sought by the s92 questions 3c and 9a. This in no way diminishes the value of input received from the WWSG, tangata whenua, and the community, and which directly drove the development of the proposed package which included the continued river discharge as an essential core component and 100% land discharge as the ultimate aspirational goal. The verbal feedback was generally as follows:</p> <ul style="list-style-type: none"> • The focus for the wastewater system was on eliminating wastewater overflows due to I&I entering reticulation. • The key values used for determining the preferred discharge option were overall affordability and cultural values. • The overriding objective is to improve the health of the Wairoa River • There was a strong desire for removing the wastewater from the river and for some form of land treatment. • "...We want to see the wastewater out of the river and we should start that process so future generations don't have a bigger problem to deal with..." • "...We are a community of limited financial means and our solutions – and the timing

			<p>of implementing those solutions – needs to be affordable...”</p> <ul style="list-style-type: none"> • “...It is not just the wastewater discharge – we want to see progress on the overall health of the river from the mountains to the sea...” • “...Other stakeholders should contribute including Regional Council, DoC, Central Government...” • Contributors that affect river quality such as point source discharges (eg stormwater, AFFCO) and diffuse discharges such as runoff from farmland need to improve too. <p>In reviewing the proposed condition frameworks it should be very clear as to how their structure and anticipated outcomes provide for these very matters.</p>
9b) Please amend the proposed consent conditions to include conditions that clearly state the role the WWSG will hold during the term of this consent.	Its role is described above and provided for in conditions. We feel these clearly set out the role of the group over the term of consent.	This answer satisfies HBRC’s information requirement	
9c) Council has concerns regarding the 35 year duration sought for this application, particularly as after the 10th year stages 3 and 4 of the BPO are considered to be aspirational only with no certainty given that additional storage and irrigation will actually occur. Can you please advise what certainties WDC can give in regards to additional storage, irrigation areas, reduced incidences of emergency overflows and river discharge volumes, as it is not clear in the application or consent conditions that a 35 year duration can be justified.	<p>Firstly, WDC are confident that the reticulation programme will significantly reduce the frequencies and volumes of pump station overflows and assist with reducing storage requirements and avoiding/minimising river discharges. The daily flows are about twice the flows recorded in the 1990’s and early 2000’s, so reticulation improvements should eventually be able to revert flows to those historic levels.</p> <p>In terms of irrigation, WDC can’t be certain of the extent of irrigation at this early stage. The implementation relies on farmers agreeing to irrigate wastewater and being within an economically affordable distance for reticulation from the WWTP to their farm, and their farm soils and topography being suitable. This uncertainty should not detract</p>	The response provided does not provide any certainty therefore does not reflect the 35 year duration that WDC is seeking. Unless further justification can be provided (i.e. proposed consent conditions) then it is recommended that the applicant reviews/amends their proposed consent duration to ensure it reflects the treatment and mitigation measures they are proposing (excluding the aspirational land discharge and associated storage component).	<p>It is hoped that the preceding overview of the condition framework will assist HBRC to understand the long-term approach that the applicant is seeking to establish for wastewater management through this consent.</p> <p>In terms of land application in particular, although it is not possible to provide certainty of irrigation development when the land areas have not been formally identified and their owners directly involved, WDC understand that cultural and community values are the key driver for this. In response WDC has crafted a condition framework to require the work associated with the BPO to be undertaken in a sound and logical sequence with a series of key milestones set down in an enforceable manner to work towards reduced river discharges and</p>

	<p>from the willingness or intent to work towards it over time, however, and the condition framework clearly provides for this direction of travel.</p> <p>Regardless of the extent and rate of adoption of both irrigation and storage, the effects associated with the river discharge regime, including river flow discharge rate and filtration and UV disinfection, are considered to be less than minor. Any adoption of land application would only serve to enhance and delivery on the community aspiration to avoid river discharges.</p>		<p>ultimately transition towards full land application.</p> <p>The solution aspired to by the community will take time and will involve a number of work streams. A plan and programme of action is required, and this is exactly what the condition framework seeks to establish. The time is representative of the transformation planned and in this regard the proposed duration should not be judged on the level of certainty throughout, but rather the ability of the overall approach to deliver an improved outcome.</p> <p>WDC is very aware of the risk and disadvantages of short-term consents. Short-term consents can be inefficient and work against directing long term visions and can compromise momentum and speed/co-ordination of implementation of WDC's programme of ceasing discharges to the river. WDC see no benefit in a series of short-term consents in this case where a long-term view can be taken and provided for. An approach involving a series of short-term consents would merely require WDC to direct time and funds towards consent replacement processes as opposed to working towards reduced discharge to the river. This would also potentially delay development of land discharge schemes due to uncertainty of the consent renewal outcomes.</p> <p>Overall, a long-term approach is considered the best course of action for addressing this issue. WDC therefore continue to seek a 35-year term with a robust review and milestone process. WDC also note that the s128 consent condition review process available to HBRC allows for HBRC to change and/or impose new conditions to respond to any significant issues that may arise.</p>
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			<p>Against the background of a comprehensive and enforceable framework embodied within the consent conditions to work towards reduced river discharges and transition to land application, taking comfort in the review option rather than a short consent duration is considered by WDC to be the more appropriate response. This will be assisted with regular progress reviews and oversight by a Stakeholder Group which will maintain pressure on WDC to continually implement the proposed actions.</p>
<p>9d) - Please provide further treatment options/mitigation measures if the discharge into the Wairoa River is to continue at the stage 1 level proposed of the BPO.</p>	<p>Putting cultural values aside, no further treatment or mitigation options in our view would be necessary, as the discharge will have negligible effects (as is currently the case) on the environment upon achievement of Stage 1. The condition framework would however provide for further consideration of options with the WWSG under Conditions 21 and 22, with the System Improvement Plan framework occurring thereafter.</p>	<p>Council disagrees with the response provided and suggest that WDC reassess this question. The further treatment options requested could be/should be appropriate to reduce adverse effects on Maori cultural values and mitigate other effects/concerns regarding the continued discharge to the river.</p>	<p>In addition to the response to 9c) the primary mechanism for addressing cultural values is the transition to land treatment (irrigation) if and when possible. However, the proposed disinfection treatment is a significant step to addressing cultural values for continued discharges to the river, and as such is identified as mitigation in the CIA.</p> <p>Stakeholder Group, iwi, and public meeting feedback all confirmed that the proposed filtration and UV treatment were acceptable for continuing to discharge to the river. The feedback generally did not support any additional or alternative treatment, especially if it was not going to produce environmental or public health benefit.</p> <p>WDC and their community believe it is unrealistic and unaffordable to treat Wairoa's wastewater to a potable standard. This level of treatment would ultimately become redundant when river discharges occur less frequently and when river discharges ultimately cease. The investment would then be a completely wasteful and inefficient use of public funds. Stakeholder Group, iwi, and public meeting feedback consistently indicated that the community preferred investment into other urban and rural projects that would gain</p>

			<p>greater and more widespread water quality improvements for a longer length of the river.</p> <p>One of the roles of the WWSG could be to review potential treatment options, including new or more affordable treatment options that may have become available in the meantime, and to guide WDC with deciding whether to consider implementing any further treatment. It is therefore possible that WDC could be forced by the review processes to implement additional or alternative measures, in the event that WDC does not implement changes rapidly enough to satisfy the community or alternative options become feasible and favourable. WDC do not wish to pre-empt that possibility now.</p>
<p>9e) Please confirm whether there has been any sensitivity testing of the proposed 60m³/s median flow in the Wairoa River. If the actual median flows of the river change over time, what will impact will this have on either effects, or ability to achieve conditions.</p>	<p>No, but it is clear that the river flows are far in excess of the discharge flows. We do not expect changes in river median flows to have any significant impacts on scale of effects or ability to achieve conditions.</p>	<p>The discharge triggers have been linked arbitrarily to a median river flow of 60m³/s. Given the consent term being sought, and potential population and climate change over that time, could a link be provided in the consent conditions such that the flows at the trigger values are updated with changing median river flows and discharge flows?</p>	<p>The selection of median (and half median and 3 x median) flow was not arbitrary. Median flows are the trigger used by Policy 72 of the RRMP for the application of Policy 71's river water quality limits for all of the specified environmental guidelines except suspended solids. Half median flow is commonly used as a cut-off for State of the Environment reporting of water quality and for setting rules limiting river abstractions and discharges.</p> <p>3 x median is shown on HBRC's river flow monitoring graphs as indicative of flood conditions which reflects its common use for this definition. The river flows above about 3 x median have also been shown to be roughly the flow rate that prevents seawater intrusion into the estuary via the river mouth during incoming tides and is therefore useful as a trigger for discharges to switch between continuous and only during out-going tides.</p> <p>The hydrodynamic modelling of discharge scenarios also showed how the discharges would disperse differently at each of these river flow rates. As expected, river flows below</p>

			<p>the median flow are the most sensitive to any changes in discharge volumes and tidal timing.</p> <p>The Wairoa River's median and low flows are influenced by the wet weather retention and dry weather supplementation provided by the hydroelectric dams upstream (Waikaretaheke and Waiau Rivers). Any changes in long-term median flow will be of little consequence for discharge dilutions, particularly as discharges will generally avoid summer flows once irrigation is implemented.</p> <p>The definitions on the cover page of the conditions included the methodology to calculate the river flow for the lower Wairoa River. The median flow of 60 m³/s will be amended to add "or as may be determined from time to time by HBRC."</p> <p>The conditions relating to the System Review Exercises could also incorporate reviews of river flow rates and the associated regime of treated wastewater discharge rates. This ensures that this is clear, and also that it can be updated/reviewed should changes in actual river flows, climate patterns, data collection, HBRC calculation methodology etc occur. So yes, a link can be provided in the consent conditions such that the flows at the trigger values are updated with changing median river flows and discharge flows.</p> <p>If median river flows increase, the dispersion and dilution of the discharged wastewater will only improve, assuming that the limits on discharge volumes remain unchanged. If median river flows decrease (which would seem more likely than increases based on NIWA's long term climate change projections for precipitation and dry days), then this merely reinforces WDC's plans for irrigation</p>
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			<p>development and restrictions on low river flow discharges. However, flows would have to reduce significantly (median 50 m³/s or less) for dispersion to change much, as can be seen through comparisons of modelled scenario 2 against 3 and scenario 4 against 5.</p> <p>WDC do not believe the consent conditions need to be modified in response to population changes because the reduction in I & I will far outweigh any population growth and, in any case, should population expand during years 20-35, the storage and irrigation available by that time has the potential to accommodate most of those flows instead of discharging to the river. In any case, wastewater flows will be one of the factors that the WWSG and WDC will review during the term of the consents.</p>
9f) Please consider rewording of Condition 8 to reflect a median (i.e. 6 of 12 samples) and higher percentile parameter that are aligned with the current treatment plant performance data and realistic performance of the upgraded plant (and network).	We need some time to work these out, perhaps in collaboration with Nick. We suggest these can be done as we progress with the application and do not need to be sorted/agreed at this time.	This answer satisfies HBRC's information requirement – and agree that collaboration with Nick Dempsey can occur at a later stage to address this issue	
9g) Please confirm why soluble carbonaceous five-day Biochemical Oxygen Demand (ScBOD ₅) is proposed for the consent measurement? Has there been any performance data for the existing plant been collected to date for this parameter?	CBOD ₅ has been monitored, and we need to check if it's only the soluble portion. It has shown a range of 5.9-190 g/m ³ with a median of 23 g/m ³ .	Please confirm why soluble carbonaceous five-day Biochemical Oxygen Demand (scBOD ₅) is proposed for the consent measurement? Has there been any performance data for the existing plant been collected to date for this parameter?	<i>Soluble</i> CBOD ₅ hasn't been measured for WWWTWP so WDC is happy to adopt CBOD ₅ which <i>has</i> been routinely monitored since early 2008. Tables 5.2 and 5.3 of LEI, 2017:A211 presented the influent and effluent CBOD ₅ concentrations which indicate its performance has been 84 % reduction based on mean CBOD ₅ . It should be straightforward to use this data to generate appropriate consent limits.
9h) Please confirm why BOD is being proposed as the oxygen demand parameter, as opposed to COD in the previous consent?	COD seems unusual for municipal wastewater that has no industrial inputs, so we changed it to cBOD to be similar to/consistent with other consents for similar discharges.	This answer satisfies HBRC's information requirement	
9i) Please confirm why such lenient percentiles (e.g. for scBOD ₅ , 4/12 = 220mg/L 33% of	At the last minute scBOD ₅ was stated instead of the current COD but the values were unchanged from the existing COD limits, partly	This answer satisfies HBRC's information requirement – and agree that collaboration	

<p>the time, and 10/12 = 224mg/L 83% of the time) are being proposed. However, “current” treated wastewater median is ~23mg/L for cBOD. Current consent is for COD <220mg/L. Note COD will always be significantly higher than ScBOD5.</p>	<p>because we expected these to be negotiated during consent processing anyway. We are happy to adjust the proposed limits to reflect the actual historic cBOD₅ concentrations, which are about 1/10th of the COD concentrations. A greater difference will also be introduced for the two limits. We suggest that tweaking of these limits can be done as we progress with the application and do not need to be sorted/agreed at this time.</p>	<p>with Nick Dempsey can occur at a later stage to address this issue</p>	
<p>9j) Please explain why such narrow bands are to be met between the 33% and 83% trigger values.</p>	<p>All values were simply rolled over from the existing consent limits and changed the criteria to reflect the 8/12 and 10/12 limits which have been applied to more recent consent conditions elsewhere.</p> <p>We suggest that tweaking of these limits can be done as we progress with the application and do not need to be sorted/agreed at this time.</p>	<p>This answer satisfies HBRC’s information requirement – and agree that collaboration with Nick Dempsey can occur at a later stage to address this issue</p>	
<p>9k) Please provide treated wastewater consent parameters for pre and post upgrade to the network and treatment plant.</p>	<p>We would also like to understand why such parameters would be needed, as we see no environmental effects rationale for imposing future more stringent limits when the current effects are no more than minor.</p> <p>Again, we suggest that working through this issue can be done as we progress with the application and do not need to be sorted/agreed at this time.</p>	<p>This answer satisfies HBRC’s information requirement – covered in question 4c)</p>	
<p>9l) Provide proposed consent conditions for E Coli.</p>	<p>We need some time to work out appropriate limits pre and post UV.</p>	<p>This answer satisfies HBRC’s information requirement – and agree that collaboration with Nick Dempsey can occur at a later stage to address this issue</p>	
<p>9m) Conditions 21 and 22. Confirm who the System Review Data Reports are intended to be issued to at 5, 10, 20, and 30 years.</p>	<p>The work and processes involved are intended to assist the WWSG and ultimately WDC to make decisions around the options to achieve the outcomes stated in the conditions. Once the option or approach has been determined, this will be presented to HBRC under the System Improvement Plan framework.</p>	<p>This answer satisfies HBRC’s information requirement</p>	

<p>9n) Conditions 25 & 26. Confirm whether measurement of influent wastewater to the treatment plant is possible, as this will be the key gauge of success of the I&I programmes (Condition 15, Network Management Plan).</p>	<p>Yes, this is routinely measured already (flow at Fitzroy St pump station and quality at WWTP inlet). Each pump station's flows are continuously monitored and can readily be used to gauge the success of the I & I programmes. Some reductions have already been observed in terms of daily total flows and frequency of pump station overflows.</p>	<p>This answer satisfies HBRC's information requirement</p>	
<p>9o) Condition 42. Is the intention that these reports be issued annually or biennially</p>	<p>Every 2 years.</p>	<p>This answer satisfies HBRC's information requirement</p>	
<p>10) The cultural values outlined in the CIA should underpin the proposed consent conditions of this proposal. Removing the discharge from the Wairoa River is paramount (to provide for the cultural values set out in the CIA) and the BPO sets out stages where this can be gradually improved overtime. Stages 3 and 4 of the BPO have been described as aspirational, which is of concern to Council. This however is not mirrored in the CIA which states <i>"...by year 30 The Package will have delivered an achievable, positive result for the river's cultural values and health in a manner which has been well consulted upon and which is realistically achievable, acceptable and, with good planning, affordable for the Wairoa Community"</i>. Council also have concerns regarding the difficulty in finding and securing appropriate land to irrigate on, particularly as this is wholly reliant on a 3rd party (long term) participation. Therefore, to reflect the cultural values identified in the CIA, the existing resource consent</p>	<p>When drafting the CIA Nigel acknowledged and understood the need for time to implement the stages proposed. The installation of filtration and UV is a significant step towards drinking water quality for the discharge while avoiding a very expensive process that will eventually become redundant. The CIA provides a cultural assessment of the discharge when each stage is achieved, regardless of whether it is achieved within the aspirational timeframe or at a later stage. The conclusion that there are cultural concerns until full implementation has occurred will provide WDC with a strong driver to continue implementing irrigation over larger land areas, and this will be no doubt reiterated by the WWSG.</p> <p>With strong community support and successful demonstration schemes such as the Mucalo farm, WDC hope to gain much wider buy-in from the rural community for expanding the irrigation, and perhaps this will occur faster than anticipated if all goes well. Requesting notification will provide an opportunity for greater understanding around how the proposal provides for cultural values, and we would look to digest and consider any matters raised in submissions, which may result in changes or specific actions.</p>	<p>Council does not consider this question appropriately addressed and would have thought that the CIA would have been amended prior to this application being made to include any discussions that have been made with tangata whenua confirming that land discharge and associated storage are aspirational and may not occur (question 3).</p> <p>Therefore Council are seeking the section 92 issues identified in the letter dated 7 May 2018 for application DP180173L - P I and J R Mucalo be provided as soon as possible, this information was due on 30 May 2018 (see attached copy for your reference). This information is required so Council can assess both applications simultaneously/bundle the applications for processing if it is considered the best option. A copy of this letter and previous correspondence will also be sent to Paul Mucalo.</p>	<p>The CIA does reflect the aspirational nature of irrigation and storage expansion in Stage 4, and the assessment conclusion for Stage 4 includes <i>"very significant increases in storage capacity and irrigation are projected which will have a corresponding positive effect on the river's cultural values"</i> and <i>"The 21-30 year stage continues to greatly improve the operations of the WWTP in a manner which incorporates tangata whenua worldviews, but does not fulfil them completely by removing wastewater discharge to waterways completely nor delivering 100% drinkable quality water to the river."</i> In section 7.3 of the CIA Nigel observes: <i>"During the 30-year implementation of The Package a significant amount of wastewater will be discharged to land, but waterways discharge will not be completely discontinued. The impact of the discharges will be less and thus more acceptable than the current situation, but remains culturally inappropriate to a lesser extent than the current situation."</i> The CIA's conclusions repeat these views for Stage 4.</p> <p>Nigel How has also provided the following response in relation to this request: <i>"The Oxford definition of the word 'plan' includes:</i></p> <ul style="list-style-type: none"> • A detailed proposal for doing or achieving something.

<p>(previously known as WP180173 – applicant P I and J R Mucalo) could be amended to reflect the proposed BPO (which is likely to be publically notified) or alternatively could be included in this application with proposed consent conditions amended to suit. Alternatively, please provide a pathway/amended consent conditions so give Council certainty that land application options will be explored and implemented.</p> <p>We note the effects on cultural values, particularly tangata whenua, are effects that we need to consider as the discharge of treated wastewater into the Wairoa are likely to remain. Nigel How confirmed in the CIA “The effects of the current discharge regime on the river’s cultural values are at odds with tangata whenua worldviews and is culturally offensive”, unless the wastewater is treated to a 100% drinkable quality then this view would apply even with the proposed filtration and UV treatment proposed in stage 1.</p>			<ul style="list-style-type: none"> • An intention or decision about what one is going to do. <p>By the above definition it is the proposed intention of WDC to implement the 30 year plan, which was my understanding when I wrote both reports. Whether or not the 30 year plan can be achieved with any percentage of certainty is an impossible question to answer. However, recent community activism requires delivery of the plan. The willingness of WDC to positively respond is a strong indicator that the 30 Year Plan will be implemented.”</p> <p>WDC also note that all MACA claimants were sent a summary of the proposed package of changes for future consenting and they were subsequently sent a copy of the AEE and there has been very limited feedback.</p> <p>WDC would like public notification to proceed without delay as the best course of action to confirm views around the efficacy of the proposal in providing for cultural values. It may be that the subsequent engagement and the Hearing process can be used to further develop and refine the draft consent conditions</p> <p>WDC do not consider consent bundling to be appropriate as neither discharge consent actually relies on the other to be implemented. Each discharge can be managed independently in accordance with operating parameters and in compliance with separate consent conditions without triggering compliance or operational issues for the other.</p> <p>The Mucalo consent is an example of the process that would be required to enable land irrigation. Future irrigation consents need to be able to be processed independently of the Mucalo and river discharge consents without</p>
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			<p>triggering s128 reviews of those prior consents' conditions. In WDC's view bundling is not appropriate because the Mucalo consent does not require the river discharge consent to be assessed or exercised in order for the Mucalo irrigation to be assessed and exercised in compliance with its separate discharge consent conditions i.e. it is a land discharge that does not rely on a river discharge to be able to operate.</p> <p>Likewise, the proposed river discharge consent does not require the Mucalo consent or any other irrigation consent to be assessed or exercised in order for the river consent to be assessed and exercised in compliance with its discharge consent conditions.</p> <p>WDC can appreciate HBRC's desire to assess them together because of their related reliance on the Wairoa WWTP as their shared treated wastewater source, however WDC believe that the separate or co-ordinated implementation of each consent is simply not inextricably linked, and therefore bundling of their consent processing is not necessary.</p> <p>The Mucalo s92 response will also be progressed separately from the WWTP consents.</p>
<p>11) A search of our records indicates that there is no resource consent to discharge stormwater from the municipal system in to the Wairoa River. There is confirmation in the application that very little is known about the status of the current stormwater system (LEI2015A111 – section 7 Stormwater Management Issues), however it is clear that wastewater is getting into the stormwater</p>	<p>Wastewater is not entering stormwater; stormwater is entering the wastewater system. The only known exception is where the treated wastewater outfall pipe is surcharging and then overflowing via the emergency pressure relief weir into the last few metres of stormwater drain between Kopu Road and the coastline. Once the main discharge structure is modified and I & I issues are reduced this will become a much less common event.</p>	<p>This answer satisfies HBRC's information requirement – HBRC staff have been advised of the application that is in the process of being prepared, in conjunction with the investigation work being undertaken by WDC which is identifying and remediating illegal stormwater connections into the sewer network</p>	

<p>system and possibly contaminants from other land uses within the catchments. Therefore, resource consent would be required for those stormwater discharges that do not meet Rule 163 as per the Regional Coastal Environmental Plan (RCEP) and Rule 42 of the Regional Resource Management Plan (RRMP), the relevant rule is dependent on the location of the discharge pipe into the Wairoa River. If resource consent approval is needed then the current investigations that WDC are currently undertaken will be integral to that application. The HBRC Consents section suggests that WDC meets with HBRC staff for a pre-application meeting to discuss the appropriate steps in ensuring that, if an application is needed that it is applied for in due course. This matter will be passed onto the Incidents and Enforcement section if necessary.</p>	<p>WDC and HBRC’s consent compliance staff have discussed consenting needs for Wairoa’s stormwater for several years now and WDC have been gathering information to support a future consent application. Grey Wilson of Good Earth Matters has had preliminary discussions with HBRC regarding preparation of a WDC global stormwater consent application.</p> <p>In any case, we do not believe that the treated wastewater consent application should be delayed or related to the stormwater consents because the reticulation and discharges are not directly linked.</p>		
<p>12) Please confirm the likelihood Rule 26.5.6 for the Operative Wairoa District Plan would trigger the need for public notification given it is a Discretionary Activity? Can you please provide clarification regarding this matter from WDC Planning staff? It may be in the best interests for WDC to have a joint hearing (if needed) to avoid incurring additional costs associated with having two separate hearings.</p>	<p>We would not expect public notification from a land use perspective, particularly given effects on the receiving water body would have been addressed under this process. We are in the process of discussing this with WDC planning staff.</p>	<p>This answer satisfies HBRC’s information requirement – this question was more of a “heads up” to WDC to make provision for perhaps a joint hearing if needed.</p>	