

WHOSE DISCHARGE IS THIS?

COLLABORATION BETWEEN A PORT AND A CITY

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ABSTRACT (500 WORDS MAXIMUM)

The Port of Tauranga has 115 hectares of land at Mount Maunganui which includes land currently used for wharf activities and the surrounding land used by industries supporting the Port. It is located on the eastern edge of Te Awanui (Tauranga Harbour) in the heart of Tauranga's Mount Industrial sub-catchment.

In 2017, after a long period of consultation with potential affected parties the Port applied for a stormwater discharge consent with Bay of Plenty Regional Council for:

- The discharge of stormwater to the coastal marine area (private stormwater network and overland flow)
- The discharge of stormwater to land where it may enter water (Tauranga City Councils piped network)

Tauranga City Council was granted a comprehensive stormwater discharge consent in 2012, which included the Mount Industrial sub-catchment. The consent included conditions around stormwater discharge, and receiving environment quality parameters. A number of the discharges from this sub-catchment contain discharges from the Port of Tauranga.

During the Ports application process it became apparent that there were issues around how the two consents would operate together with the Port seeking differing discharge limits than that contained within TCC's comprehensive consent resulting in inconsistencies and potential compliance issues in the future.

What evolved through the engagement process was a focus on: the potential inconsistency in discharge limits; current and future potential mitigation and treatment; operational improvements; collaborative monitoring; potential industry process changes; and how operationally the two consents could work side by side to solve ongoing liability issues for TCC.

KEYWORDS

Stormwater Discharge, Consents, Collaboration, Stormwater Monitoring, Stormwater Management

PRESENTER PROFILE

In January 2018, Joey jumped ship from working as a RMA compliance manager, to taking on the role of Environmental Manager for the Port of Tauranga. This position allows Joey to apply his experience in RMA processes, water quality science, and

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environmental monitoring and compliance management to work towards further enhancing environmental performance at New Zealand's largest port.

With a background that includes working in an environmental laboratory, pollution prevention and discharge consent management roles, Radleigh has spent 12+ years working in the three waters industry. His current role includes the review and development of TCC's catchment management plans and managing implementation of treatment and mitigation projects responding to the Council's first 5-yearly stormwater monitoring report.

1 INTRODUCTION

Te Awanui (Tauranga Harbour) has offered calm and secure anchorage from the arrival of the Takitimu waka to the present day. Surrounded by fertile lowland soils and native bush, with rich resources on land and in the water it has been a place people have seen as a good area to make their home, and a place to trade.

The Harbour's navigational channel was first defined and marked in 1863, however, no wharf structure was constructed for many years with cargo commonly exchanged by ox and cart along the Harbour beaches at low tide. Smaller pier structures were built in following years. The step from coastal trade to international trade in Tauranga Harbour began in 1927. The modern port in Tauranga first began to take shape in the 1950s following the maturation of nearby forestry stands and development of timber mill and processing sites. Construction of the first 372 metre wharf began in 1953 on the Mount Maunganui side of the Harbour and was completed approximately 1 year later in 1954.

From humble beginnings, the Port has seen unprecedented growth over the past 65 years. With this growth has been a need to undertake further development including capital dredging programs, landholding expansions and wharf extensions. The current day Port comprises of over 2.8 kilometres of berth length situated in two geographical locations, the Tauranga Container Terminal at Sulphur Point which handles import and export containerised freight, and the Mount Wharves which predominantly handles dry and liquid bulk imports and exports.

Figure 1: The Mount Maunganui Wharves then and now.

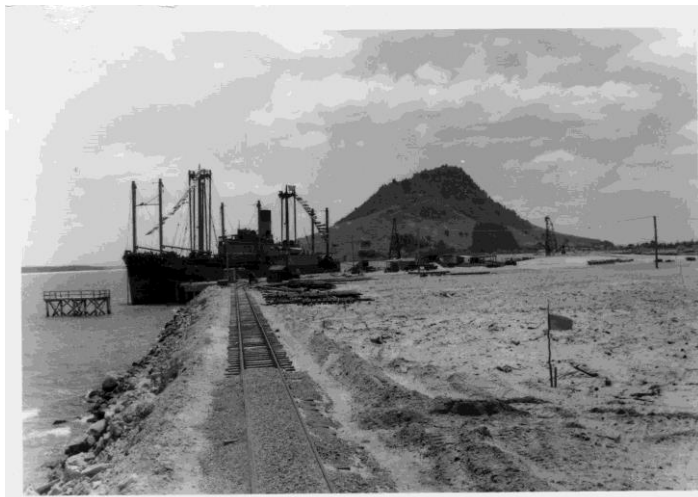


Figure 1: Left: The first official vessel to call at the new Mount Maunganui wharf was Korowai on 6 December 1954. Right: Modern day Mount Maunganui Wharves

The mount wharves comprise of 115 hectares of land which includes land currently used for wharf activities and the surrounding land used by industries supporting the Port. It is sandwiched between Te Awanui and Tauranga's Mount Industrial area.

Tauranga City Council (TCC) was granted a comprehensive stormwater discharge consent in 2012, which included the Mount Industrial sub-catchment. The comprehensive stormwater consent (CSC) included conditions around stormwater discharge quality parameters, and receiving environment quality parameters. A number of the discharges from this sub-catchment contain discharges from the Port into TCC stormwater network, although the Port also has private stormwater network discharges directly to the Harbour.

2 INITIAL APPLICATION

2.1 BACKGROUND TO APPLICATION

The Port has two sites already consented for their stormwater discharges. These are the Tauranga Container Terminal at Sulphur Point, and the log storage yard on the corner of Hewletts Road and Totara Street in Mount Maunganui. In late 2017, after a large amount of pre application work had been undertaken with local iwi (Ngai Te Rangi, Ngati Pukenga and Ngati Ranginui), the Port lodged its application to the Bay of Plenty Regional Council (BOPRC) for consent to discharge stormwater from the Mount Wharves.

2.2 2017 APPLICATION

2.2.1 DISCHARGES COVERED

The Mount Wharves area comprises of over 2 kilometers of wharf that is positioned as a continuous quay, which runs along the Te Awanui shore line. The Port land located behind the quay is utilised for the storage and facilitation of cargo across the wharves. The Port owns the wharf and land for which consent is sought, however, much of the site is leased to independent entities and freight handling on site is undertaken by importers, exporters, and their contractors. In this way, the Port stormwater management is

complicated as the Port sets and monitors operational standards and rules, however, the appropriate use of the site to minimise potential issues with stormwater quality is the responsibility of multiple parties.

To manage third party risk on Port land, the Port sets port user rules and standards and require port users and leaseholders to develop environmental management plans that detail how they will avoid remedy and mitigate their own environmental risks and impacts associated to their operation. Environmental management plans are required to comply with the Port rules and standards and the operations undertaken by third parties are monitored and assessed by the Port to ensure adequate risk reduction is provided; the Port requires improvements to operating procedures and operations were deemed necessary. Environmental monitoring is also undertaken by the Port and BOPRC to ensure an adequate level of environmental protection/compliance is being provided third party port user environmental management plans and the port user rules and standards.

Stormwater management and monitoring in this area is further complicated by the fact that the Mount Industrial sub catchment discharges a large portion of it's stormwater to Te Awanui underneath the Mount Wharf structure following the collection of some of the Port's stormwater. This leads to the situation where some discharges are purely from the Port of Tauranga, some are combined Port of Tauranga and TCC (Mount Industrial sub-catchment) and some are purely TCC network.

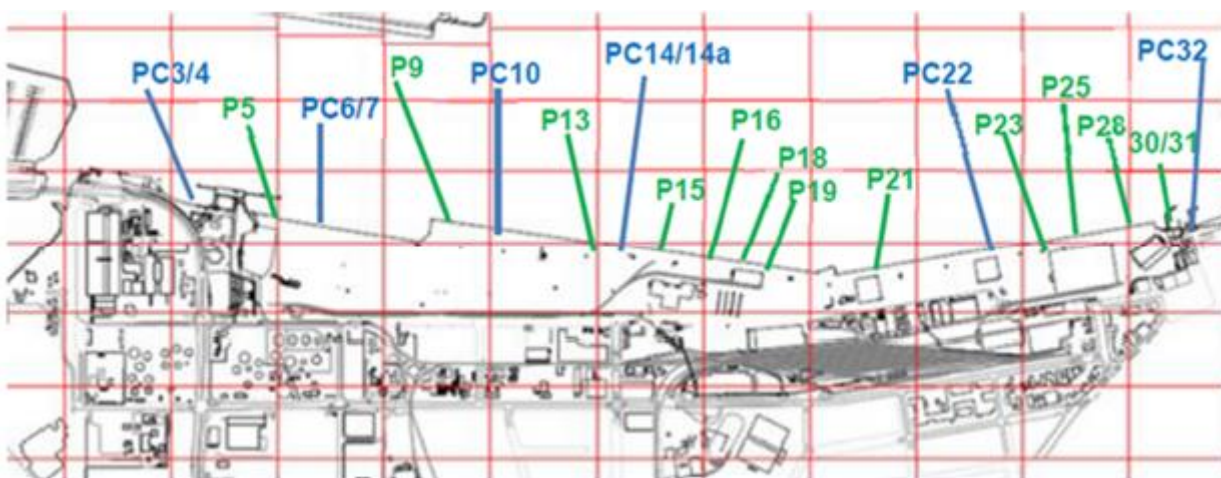


Figure 2: Plan showing discharge outlets from Mount Wharves. Port only discharges (green) and combined TCC and Port discharges (blue), TCC only discharges are not featured.

For these reasons the following resource consents were required from the Port:

- Discharge of Stormwater to land (TCC piped network) where the discharge may enter water.
- Discharge of stormwater to the Coastal Marine Area (CMA) which includes direct discharges from the Port's stormwater network, and overland flow from the site via the wharf structures.

2.2.2 TCC MOUNT INDUSTRIAL CATCHMENT

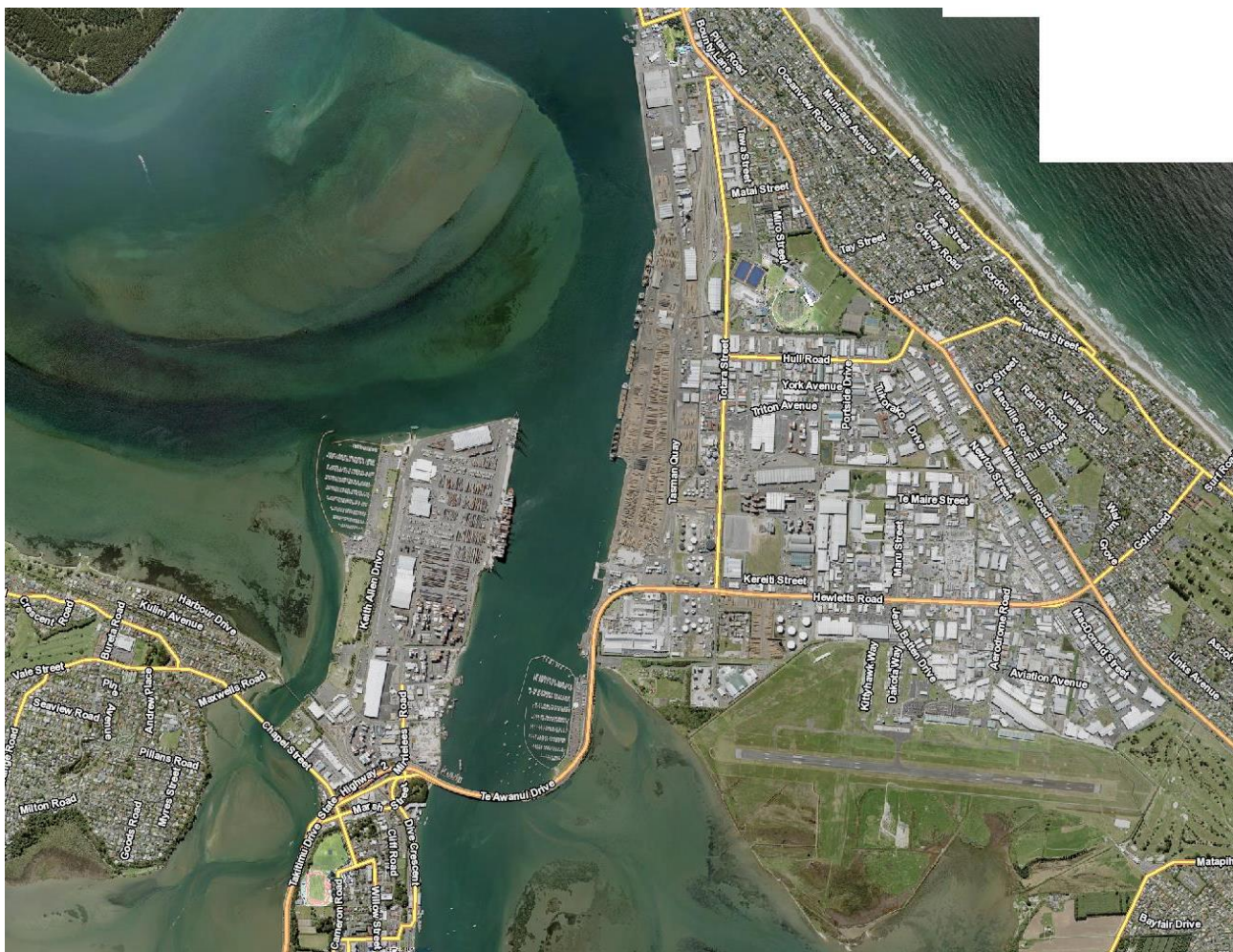
The Mount Industrial sub-catchment is predominantly commercial and industrial land use. In addition to a large number of commercial and industrial sites it includes a network of sealed roads, including state highway, access ways, a significant rail network, the Tauranga Airport and the Port of Tauranga. Most of the areas roads have intensive heavy traffic use as well as significant light vehicle use at peak times due to the area linking both Mount Maunganui and Papamoa to the Central Business District.

The quality of stormwater runoff from the sub-catchment is a significant issue, with contaminants arising from the industrial land use, industrial processes and road use within the catchment.

As a requirement of its CSC, TCC completed it's first five yearly review of stormwater discharge and State of the Receiving Environment monitoring data in 2018. This identified that nine out of 57 discharge sites monitored within Tauranga accounted for almost 50% of exceedances above the contaminant trigger values in the CSC. of the nine sites, five of these are within the Mount Industrial sub-catchment. On this basis, the Mount Industrial Catchment was identified as a high priority for improved stormwater management through investigative monitoring, possible mitigation measures, and enhancement. Contaminants include heavy metals, total suspended solids, and nutrients. Four of these discharges comprise stormwater from both the greater Mount Industrial sub-catchment as well as from the port catchment for which consent is being sought. .

The CSC requires exceedances of the trigger values at each site to be investigated and possible sources identified to enable an improvement in discharge quality over time.

Figure 3: Mount Industrial Sub-catchment.



2.2.3 PORT OF TAURANGA PROPOSAL

The Port applied for consent to authorise the existing stormwater discharges into the Harbour from the Port's private network, the Port's discharge via TCC's network, and directly via overland flow from the wharves.

The consent application proposes an adaptive management approach to manage the stormwater in the following ways:

- Maintaining the existing stormwater network and flow paths
- Improving onsite management practices in accordance with a reviewed stormwater management plan through
 - Improved procedural measures
 - Improved structural controls
 - Continuous reviews of the plan and procedural measures
- Formalising these improved measures and requirements into conditions of Port use and lease agreements with third parties operating on site.

Adopting an adaptive management approach to stormwater management also included a

continual monitoring programme and adaptation of the site stormwater management practices to achieve improvements in discharge quality over time. This approach is considered by the Port to be similar to the approach taken by the CSC held by TCC in that issues that are identified by the monitoring programme trigger investigations into contaminant sources. Opportunities that may reduce contaminant loads are then identified and implemented to address the issue.

Monitoring would be undertaken of the receiving environment and at both Port only and combined outfalls. Combined stormwater discharges would also be monitored prior to any Port contribution to enable easier identification of whether the source has come from the greater Mount Industrial sub-catchment or from the Port catchment.

2.2.4 ASSESSMENT OF EFFECTS

2.2.4.1 ENVIRONMENTAL

The Ports consent application assessment of effects identified potential contaminants of concern associated to the Port catchment stormwater as suspended solids, petroleum hydrocarbons, pH, and heavy metals such as copper, lead and zinc. The Port's discharge causes temporary visual discolouration of the receiving environment.

The Ports application notes that water quality within Te Awanui adjacent to the stormwater discharge points is considered to be good due to the area being well flushed on each tidal cycle. Water quality however is observed to suffer from visual discolouration during and following rainfall events as a result of urban and industrial stormwater discharges, including Port contributions and also due to non-point source agricultural run-off.

Investigations of ecological impacts within Te Awanui cited by the assessment of environmental effects for the Port's consent application identified that no measurable or more than minor adverse effects on ecological values of Te Awanui had been identified adjacent to the stormwater from the Port/Mount industrial sub-catchment discharge locations. Receiving environment monitoring also identified that stormwater contaminants are rapidly assimilated within the receiving environment and throughout a tidal exchange, and the assessments considered that the discharge should not be considered to cause more than minor adverse effects on ecology and habitats.

2.2.4.2 CULTURAL

The Cultural effects of the discharge quality were also considered and discussed the common themes of the Cultural Impact Assessments prepared by the three iwi holding mana whenua for the area, namely Ngai Te Rangi, Ngati Ranginui and Ngati Pukenga. The application identified the Port's commitment to ongoing investigation into improvements in discharge quality including through potential treatment devices, reviews of stormwater management processes and monitoring. It was considered by the application that overall the effects on cultural values of the stormwater discharge would be no more than minor and could be managed in an ongoing way.

2.2.4.3 TAURANGA CITY COUNCIL

Stormwater discharges from the Port catchment frequently exceed TCC comprehensive stormwater consent trigger values for total suspended solids which is set at a concentration of 150 grams per cubic metre (g/m³), these exceedances are in relation to the high solids presence at the Port and are generally associated with log storage,

handling and loading activities. These solids predominantly consist of sediments brought in on logs and solids originating from bark material.

The Ports application requested an initial trigger limit value of 450g/m³, which included those discharges that may enter the TCC network. This could create issues for TCC's comprehensive stormwater consent, and inconsistencies with other third party stormwater discharge consents that discharged within the area covered by the CSC. It would also potentially create a long term liability issue which will be explored further on in the paper.

2.3 NOTIFICATION

BOPRC with the assistance of an independent commissioner concluded that the adverse effects on the environment from the stormwater discharge are not more than minor and public notification was not required.

However, as the Port discharges contaminants into the TCC stormwater network, TCC are an affected party and the adverse effects on the public network could not be determined to be less than minor. This determination was for several reasons including the potential for the Port's discharge into the TCC network to cause non-compliance of TCC with their CSC. Additionally the notification decision detailed that it was not possible to conclude that adverse effects on the relevant iwi of the Te Awanui area were not less than minor.

Therefore, the application was limited notified to Ngai Te Rangī, Ngati Ranginui, Ngati Pukenga and Tauranga City Council.

3 SUBMISSIONS

3.1 NGAI TE RANGI & NGATI RANGINUI SUBMISSIONS

Ngai Te Rangī through the Te Runanga o Ngai Te Rangī Iwi Trust and Ngati Ranginui through the Te Runanga o Ngati Ranginui Inc. Society submitted on the Ports' stormwater discharge application. Both Iwi prepared Cultural Impact Assessments for the Port which identified a number of issues, however both Iwi still opposed the consent being granted in its current proposed form.

Both Iwi considered the effects of the stormwater discharge to be more than minor and as such must be avoided, remedied or mitigated to achieve acceptable levels of effect under section 5 of the Resource Management Act (RMA).

Concerns around the impact of the current discharges included (but were not limited to):

- Adverse effects upon the mauri of Te Awanui
- The impact of contaminants on taonga species and the relationships that iwi, hāpu and whanua had with the impacted taonga.
- Adverse effects on the mana, rangatiratanga & kaitiakitanga of iwi, hāpu and whanau.
- Cumulative effects of stormwater discharges, including the Port's on Te Awanui
- Insufficient accountability from the Port in respect of their commitment to consider and implement additional stormwater treatment, including land filtration options

3.2 TCC SUBMISSION

Tauranga City Council welcomed and supported the Port seeking consent for the stormwater discharges from the Maunganui Wharves. The Council saw this as a significant development as part of wider efforts to improve water quality in the Tauranga Harbour, including those of TCC. However, Council did have concerns regarding the application and possible implications, if appropriate conditions requiring best practicable options, improvements in stormwater management, effective monitoring and appropriate contaminant limits were not put in place.

Issues identified included:

- Concerns around Port discharges to the public network compromising the ability of TCC to comply with its own comprehensive stormwater consent due to the application seeking higher discharge trigger limits.
- Concerns that TCC would have limited ability to effectively respond to exceedances attributed to the Port discharges under the RMA and Local Government Act (LGA) if consented.
- That there should be greater alignment between conditions in the Port consent and those currently in the comprehensive stormwater consent.
- That the application did not demonstrate enough ongoing intent to improve stormwater management and discharge quality over time rather than consent the current discharges to Te Awanui.
- That the assessment of effects data used in the application was insufficient and historical, and did not necessarily capture the nature and variability of the discharge from the Port operation.

TCC hoped to work with both the Port and BOPRC on these issues to improve the application so that any final consent clarified how the two consents would work alongside each other and lead to improvements in discharge quality over the life of what could potentially be a 35 year consent.

4 POT RESPONSE TO SUBMISSIONS

4.1 IMPROVEMENTS ON WHARVES

Industrial activities within the Port landholding cause multiple contaminant risks for stormwater especially heavy metals and hydrocarbons associated with the operation of heavy machinery and low pH and elevated suspended solids associated with open log storage and bulk granular cargo handling.

Log handling, storage and loading remains a large contributor to contaminant loads at the Mount Wharves, especially suspended solids, however, as log export volumes have increased over time, procedures and technology both on Port and in forestry sectors has resulted in reduced solids loads within the Port stormwater catchment. Improvements in industry practices and stormwater management at the Port are always ongoing.

Reductions in bark and sediments coming through the port gate are evident following increased mechanical harvesting and de-limbing of logs which results in large quantities of looser bark material being removed from the logs in the bush and decreases log

contact with soils. Complete debarking of logs through industrial debarking facilities is also becoming more common.

Port processes have also evolved and resulted in reduced solids at risk of becoming entrained in Port stormwater. This includes sealing of the Port's log yards, continuous increases and refining of bark collection and sweeping via vacuum sweeper trucks, implementation of higher standards in housekeeping requirements for individual Port Users (and increased monitoring and enforcement of Port User housekeeping by Port of Tauranga and Bay of Plenty Regional Council) and changes in log handling technology utilised within the Port which reduces the number of log movements and associated log abrasion resulting in less material being lost to ground.

Installation of structural controls and significant procedural changes in granular dry bulk import handling, such as the bulk unloading of palm kernel, wheat or phosphorus products has also resulted in significant reductions in particulate loss to ground and stormwater.

Current trials are underway at the Port to determine if greater screening and passive filtration of stormwater is achievable prior to discharge. While stormwater screening has been undertaken on site for some time, finer passive filtration has not been achievable due to higher loadings of suspended solids in the stormwater influent than the lower loads currently seen on site.



4.2 WITHDRAWAL OF IWI SUBMISSIONS

Since the end date for submissions, the Port, Ngai Te Rangi and Ngati Ranginui had engaged in discussions regarding the two iwi submissions and working towards finding an agreement regarding the Port's application.

In December 2018 the Port requested that any hearing date be postponed while the details to these agreements were worked on, with the possibility that both iwi would withdraw their submissions on completion of this work.

The BOPRC suspended the timeframe between submissions and hearing date to allow this to occur, with the result being that both iwi withdrew their submissions in March 2019.

Through these discussions, the Port altered the current proposal to include a greater requirement to investigate land filtration treatment technology and also agreed to support iwi lead cultural monitoring of the health of the greater harbour to assist in further developing the understanding of current harbour health and current and future cumulative effects and impacts. These discussions have been invaluable in further developing the relationship between Iwi and the Port, and has provided ability for the Port to better demonstrate to Iwi their stormwater management processes and improvements installed and being investigated, and provided the ability for Iwi to raise their concerns and their improvement concepts with the Port.

5 PORT PROPOSAL TO TCC

As well as working with Ngai Te Rangi and Ngati Ranginui, the Port also prepared a proposal in response to TCC's submission.

From the Port's point of view the Port consent would mirror TCC's CSC utilizing an adaptive management approach, setting individual stormwater contaminant trigger limits. A Monitoring programme would enable any exceedances to be investigated to identify potential sources of contaminants followed by installation of improvement measures to enable a reduction in these.

All trigger limits with the exception of total suspended solids would mirror the CSC. The Port had repeatedly discussed that it was likely that they would be unable to meet the trigger limit of 150 g/m³ in the councils consent and proposed a higher limit of a 75th percentile of 450 g/m³ for the first year of the consent.

It is proposed by the Port that this trigger limit (as well as other trigger limits) are to be reviewed following one year of intensive monitoring before then adjust the limits to a lower level where possible once more comprehensive data was available to set a suitable standard. This approach was taken as though stormwater quality and receiving environment monitoring data had been undertaken, comprehensive stormwater quality was unknown at the time of lodging the consent. The setting of a higher discharge trigger limit for the Port discharge was supported in the application by the consideration of the discharge in some form having occurred for over 60 years and adverse environmental effects being no more than minor.

To gain a comprehensive understanding of the Port stormwater quality the Port proposed using automated samplers and high sampling frequency monitoring to identify contaminant concentrations throughout a discharge event.

This meant that potentially the Port's discharge could lead to TCC's discharge exceeding the trigger values in the comprehensive consent, while still being below the Port's consented limit, creating a liability for TCC at end of pipe where the discharge enters the receiving environment and where discharge compliance is required by the consent.

In a practical sense the Port's solution is to monitor the stormwater discharge on combined TCC and Port stormwater discharges both pre and post Port contribution, so that it can be shown that any exceedance of contaminants is coming from either the Port or the wider network.

TCC are happy to work with the Port around monitoring to enable both parties to have the information required for any investigation into contaminant exceedances, however this practical solution does not address the legal responsibility laid down in the comprehensive consent.

Condition 8.1 of the CSC states:

*"Where the quality of stormwater discharged at the **outlet** of any discharge point authorized under this consent exceeds the trigger levels listed; or the quality of any freshwater or marine water in the receiving environment (as measured at **the receiving environment monitoring locations** set out in the Monitoring report) exceeds the trigger levels listed, the consent holder shall implement actions identified in condition 9.7"*

TCC's legal advice has been that this means that whether monitoring points are moved to sites prior to any Port discharges entering the network, TCC would still be liable for any exceedances at end of pipe.

To address this, the Port has proposed that the Port's consent is written as a supplementary consent, which is appropriately worded to work in partnership with the comprehensive consent. Though supplementary consents have been utilised historically for the likes of water takes, a supplementary discharge permit is suspected to be something new.

The supplementary consent is proposed to clearly identify that trigger limits could be set above those of Tauranga City Council's consent, however, it also details that simultaneous monitoring should be undertaken by the Port both upstream and downstream of Port influences and that any increase in contaminant concentrations below the upstream monitoring site from compliance perspective would be associated with Port stormwater influence and fall subject to the authorisation and responsibility of the Port. As the Port is the late comer to gain consent, it is also proposed that the consent states it would be incumbent on the Port to demonstrate that the exercise of its resource consent was not compromising TCC's compliance under resource consent 66823.

It is possible a party may argue that any and all stormwater discharged from a Tauranga City Council stormwater pipe (whether it includes Port stormwater or not) must meet the trigger levels set by their consent. However, it is proposed that this risk is removed if it is clear that it is the later consent which authorises stormwater with different or higher quality parameters and describes how those will be assessed and differentiated from the stormwater discharged under the Tauranga City Council consent.

The Port also proposes that this approach is consistent with the Resource Management Act 1991 as long as the proposal is put forward to enable the consent authority to make sure that the consents are clear when read in partnership as to the way in which they inter-relate. This in particular is necessary to enable the consent authority and the consent holder(s) to clearly understand the scope of the permissions granted and the requirements imposed on those permissions through consent conditions.

Tauranga City Council and Port of Tauranga are currently awaiting a response from BOPRC regarding this proposal, with legal representatives due to meet at the beginning of April 2019.

6 NEXT STEPS

BOPRC plan to circulate draft recommended conditions in early April 2019 for comment prior to any final report being released for the hearing set for early May 2019.

The Stormwater Conference presentation will include information regarding the proposed conditions of the Port of Tauranga's consent, any resolution to the legal liability issue and collaboration between the Port and TCC on monitoring of the two consents prior to any decision by the Environment Court.

ACKNOWLEDGEMENTS

We would like to thank staff from both the Port of Tauranga and Tauranga City Council for assistance in preparing this paper.

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ABBREVIATIONS

ASCV Area of Significant Conservation Value

BOPRC Bay of Plenty Regional Council

CMA Coastal Marine Area

COD Chemical Oxygen Demand

CSC Comprehensive Stormwater Consent

LGA Local Government Act

RMA Resource Management Act

TCC Tauranga City Council