REPORT

Tonkin+Taylor

Western Stormwater Catchments Management Plan

Prepared for
Western Bay of Plenty District Council
Prepared by
Tonkin & Taylor Ltd
Date
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851969.7000.V3

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Document Control

Title: Western Stormwater Catchments Management Plan					
Date	Version	Description	Prepared by:	Reviewed by:	Authorised by:
04/08/21	1	First draft for client review	R Hansen	P Cochrane	P Cochrane
07/12/21	2	Final draft for BOPRC review	R Hansen	P Cochrane	P Cochrane
13/09/22	3	Final	R Hansen	P Cochrane	P Cochrane

Distribution:

Western Bay of Plenty District Council	1 electronic copy
Bay of Plenty Regional Council	1 electronic copy
Tonkin & Taylor Ltd (FILE)	1 electronic copy

Table of contents

1 Introduction and background

Western Bay of Plenty District Council ("WBOPDC") hold Comprehensive Discharge Permit 67093-DC.01 ("the CDP") issued by the Bay of Plenty Regional Council ("BOPRC"). The CDP authorises the discharge of urban stormwater sourced from the "Western Catchments" to freshwater and coastal water receiving environments. The Western Catchments include the following urban areas:

- Waihī Beach.
- Bowentown.
- Pio Shores.
- Athenree.
- Tanners Point.
- Tuapiro.
- Ōngare Point.
- Te Kauri Village.
- Katikati.

Catchment Managements Plans "WSZ1", "WSZ2" and "WSZ3" covering the Western Catchments were lodged with the BOPRC as part of the application for the CDP in 2012.

Condition 7.2 of the CDP requires that Catchment Management Plans WSZ1, WSZ2 and WSZ3 are updated. Condition 7.3 of the CDP sets out the content required to be included in the updated Catchment Management Plans.

This report provides the updated Catchment Management Plan ("CMP") for the Western Catchments and contains all information required by Condition 7.3 of the CDP. This CMP is the only CMP for the Western Catchments. That is, this CMP covers the spatial areas previously addressed by Catchment Management Plans WSZ1, WSZ2 and WSZ3, as well as updating and consolidating their content into one document[1].

2 Philosophy of this CMP

This CMP is based on a simple approach of:

- Identifying stormwater quantity and erosion related issues.
- Taking a risk and priority approach towards mitigating those issues through an annual works plan over the six-year term of the CMP.

The CMP sets out:

- What the stormwater issue is.
- Whether WBOPDC can practicable manage/mitigate the issue.
- If WBOPDC do intend to address the issue, then how (through specifying mitigation).
- The timeframe for implementing the mitigation to address the issue.

Stormwater quality issues have not been incorporated into this CMP. This is because the Monitoring Plan[2] has only recently been prepared by WBOPDC and certified by BOPRC. Following the implementation of the Monitoring Plan and collection of appropriate data, stormwater quality issues will be able to be identified and used to inform quality related content included in the 2027 CMP.

[1] See CDP Condition 7.2.
[2] Required under Condition 7.3(e) of the CDP.

The decision-making process applied to the stormwater mitigation development process used in this CMP is based on a cost to performance/improvement ratio ("C:P ratio") being high. That is, where the capital cost to develop and implement mitigation is high and the potential performance/improvement is low then that mitigation measure is discounted from this CMP (because this scenario would present a low C:P ratio). However, it is possible that where a mitigation measure currently has too lower C:P ratio to be considered in this CMP it could be reconsidered in future CMP reviews undertaken at 6 yearly intervals.

It is expected that works set out under this CMP are very much aligned with and supported by WBOPDC's Long Term Plan ("LTP").

3 Structure and content of this CMP

The majority of this CMP comprises GIS based maps ("maps") and accompanying matrices contained in Appendix A and Appendix B respectively. The maps show the spatial location of the stormwater issue and assign the issue a unique identifier. The unique identifier is then used for providing specific commentary relating to the mitigation for the issue within the relevant matrix.

Table 3.1 below contains the matters the CDP requires under Condition 7.3 to be included in the CMP along with commentary relating to the matter.

Table 3.1: CMP content as required by Condition 7.3 of the CDP

Criteria	Section of CMP criteria addressed	Comment
7.3(a) Stormwater management issues	Included at Appendix A and Appendix B.	CMP will be updated to include "quality" based issues in 2027 once data from the Monitoring Plan is available.
7.3(b) Statutory and non-statutory mechanisms used to achieve compliance with the CDP	Included at Section 6.	
7.3(c) Asset register	7.3(c) i – iv not included in the CMP but the asset register and supporting T+T 2017 stormwater modelling report have been supplied electronically to the BOPRC. 7.3(c) v – vii include in Appendix B and Section 8.	The asset register is a GIS based tool that WBOPDC access, update and review regularly. An electronic copy of the register has been supplied to the BOPRC in parallel with the submission of this CMP. As required by Condition 9.4 of the CDP, an electronic copy of the register will be submitted to the BOPRC in November annually to capture infrastructure upgrades undertaken in the preceding financial year. At present the register does not have condition rating or inspection records linked to individual assets. As part of a new Asset Management System being developed by WBOPDC, the condition and inspection information relating to

Criteria	Section of CMP criteria addressed	Comment
		each asset will become available. The flood conveyance capacity of the reticulated stormwater network at Waihī Beach was assessed in T+T's 2017 stormwater modelling report for Waihī Beach. The information contained in the T+T report is not linked to the asset register. The 2017 T+T report has however informed the development of this CMP. An electronic copy of the T+T report has been supplied to the BOPRC in parallel with the submission of this CMP. WBODPC intend to undertake further modelling to assess the flood conveyance capacity of the reticulated stormwater network at Katikati. The results of this new modelling will be used to prepare the 2027 update to this CMP. A priority rating (A, B and C) has been assigned to the mitigation nominated within the matrices contained in Appendix B. The maintenance requirements for the assets are set out in Section 8.
7.3(d) Mitigation Plan	Included at Appendix B.	CMP will be updated to include "quality" based issues in 2027 once data from the Monitoring Plan is in place.
7.3(e) Monitoring Plan	Included at Appendix C.	
7.3(f) Urban development areas	Included at Appendix D.	CMP will be updated in 2027 to include areas developed for urban activities in the preceding 6 year period.
7.3(g) Flood maps	Included at Appendix A.	Flood hazard modelling has already been completed for Waihī Beach, Pio Shores, Bowentown, Athenree, Katikati, Tanners Point, Tuapiro, Ōngare Point and Te Kauri Village. The flood hazard modelling completed to date has been used to help inform the mitigation nominated within the matrices contained in Appendix B. Most of the Maps in Appendix A have the

Criteria	Section of CMP criteria addressed	Comment
		existing flood hazard location and extent notated on them. Flood hazard modelling is also used for setting minimum floor levels and mitigation requirements within the identified floodable areas in relation to building and resource consent processes.
7.3(h) Incident management and reporting procedure	Included at Appendix H.	
7.3(i) Contaminant source investigations	Not included.	These investigations are linked to the results of the Monitoring Plan (once it is implemented) i.e. you cannot address trigger value exceedances if you do not know if they are occurring and why. Consequently, this item will be included in the 2027 update to this CMP.
7.3(j) Education and awareness programmes	A copy of the CMP will be available on WBOPDC's website along with key information. Further education programmes have not yet been developed and are therefore not included.	CMP will be updated in 2027 to include programmes targeted at specific communities giving consideration to the results of the Monitoring Plan.
7.3(k) Cultural values	Included at Section 12.	
7.3(l) Consents transferred into the CDP	Included at Appendix E.	

4 Stormwater management issues and mitigation plan

The maps and accompanying matrices contained in Appendix A and Appendix B set out the management issues.

4.1 Map annotations

The blue hatched areas notated on the maps represent the following:

- Waihī Beach, Pio Shores, Bowentown and Athenree: The location and extent of areas predicted by modelling to be inundated in a 2% AEP rainfall event.
- Katikati: The location and extent of areas predicted by modelling to be inundated in a 1% AEP rainfall event.

The red polygons notated on the maps represent areas with known issues with respect to stormwater quantity or erosion.

The number assigned to each red polygon notated on the maps is an individual identifier for the relevant accompanying matrix.

4.2 Methodology

To define the stormwater management issues a workshop was held where key WBOPDC engineering staff drew on the following information sources:

- Existing stormwater modelling data and reports.
- Staff knowledge from inspections and observations during large rainfall and flood events.
- Public service requests.

The workshop was then used to undertake an effect screening exercise. The screening was required to look at a management issues from a perspective of whether the effects were of a nature and scale that they warrant mitigation being developed and implemented by WBOPDC. That is, the enquiry was to challenge any presumption that all effects (regardless of scale, or impact) should be mitigated. For this CMP, the "effects" consideration was limited to flooding and erosion issues for the reasons previously stated.

Where mitigation was determined to be required to be developed and implemented by WBOPDC through the workshop then, as stated in Section 2, the decision-making process applied to nominating the mitigation contained in the matrices in Appendix B was based on a C:P ratio being high.

A priority rating descriptor (A, B or C) has been applied to the assessments and mitigation contained in the matrices in Appendix B. The A, B and C priority descriptors are consistent with those used in the LTP and have the following meaning:

- A: Top priority - a major level of service deficiency.
- B: Medium priority - some level of service deficiency.
- C: Low priority -general ongoing improvements.

4.3 Items deferred to 2027 CMP

The Monitoring Plan annexed to this report as Appendix C contains several water, sediment and ecological sampling and monitoring sites for representative sub-catchments within the Western Catchments. It is envisaged that sampling and analysis will be undertaken for the first three years following approval of this CMP. The sampling and analysis will have an objective of characterising the baseline state of water and sediment quality and habitat values in the receiving environment up and downstream of the urban areas.

Once the baseline data is in place, WBOPDC will seek advice from a suitably qualified and experienced environmental scientists/ecologists to assist them to identify stormwater quality related management issues and develop mitigation measures following roughly the same process described above (effects screening and a cost to performance/improvement ratio). The quality related management issues and mitigation will be provided in the 2027 CMP.

We expect that in identifying stormwater quality related management issues and developing mitigation actions, WBOPDC will need to form an understanding for some sub-catchments as to the relative contribution of urban stormwater versus rural stormwater in deciding what issues will be identified and addressed for the sub-catchment in the CMP. For example, there would be little point in identifying the need for quality-based stormwater ponds to be constructed in the Three Mile Creek catchment. This is because this catchment comprises an expansive rural area and the Waihī Beach Wastewater Treatment Plant, both which are likely to be the biggest influencers of water quality. Consequently, if the 2027 CMP did identify quality based mitigation for this catchment, then it will likely be the use of water sensitive urban design principles on an individual house/lot basis, if

the landowner or developer was willing to do so, or if these principles became part of the WBOPDC Development Code when it is updated.

We further expect that WBOPDC will need to undertake groundwater monitoring within low lying parts of Waihī Beach to understand whether ground soakage of stormwater is a feasible disposal methodology for new development where a stormwater reticulation network is not available. An example of an area likely to require this investigation is the Hanlen Avenue area which is zoned residential under the District Plan. As the CDP authorises existing stormwater discharges, WBOPDC will need to consider whether to accept the transfer of future discharge permits into the CDP based on the groundwater monitoring where applicable. The 2027 CMP is likely to include the results of the groundwater monitoring and any implications for stormwater management issues and mitigation.

5 Key decisions made by WBOPDC

In developing and implementing this CMP (and CDP it is based on) WBOPDC has made the following decisions relating to stormwater management issues and mitigation:

- All catchments
  - WBOPDC will not require developers to attenuate stormwater from the 1% and 2% AEP rainfall event[3] where it can be demonstrated on a site or allotment or subdivision specific basis that there is no benefit in doing so due to factors such as the flooding mechanism, topography and downstream resources. "No benefit" would comprise a lack of or worsening of offsite flooding effects.
  - WBOPDC already have a general practice that where private owners want to raise floor levels in floodable areas to mitigate against habitable buildings being inundated, then this shall be done at the owner's cost. WBOPDC incentivise this owner-led mitigation through waiving building and resource consent processing fees.
- Uretara River catchment
  - WBOPDC will not attenuate or require developers to attenuate stormwater that discharges into the Uretara River from land currently zoned for urban land use. This is because history has shown that it would be more beneficial to allow the urban stormwater to discharge ahead of the peak flow arriving at Katikati from the upper catchment in the Kaimai Ranges. Coincidental discharge of the urban stormwater with peak flood flows in the river and high astronomical tide have historically exacerbated flooding issues for Katikati.
  - The low-lying land[4] on the left bank of the Uretara River and downstream of the State Highway 2 Bridge has been subject to flooding. There is a stop bank in place along the left bank which is owned and managed by the owners of the low-lying land. The flooding of this low-lying land does not impact on the WBOPDC urban stormwater network and the flooding is not related to the stormwater network. Consequently, this area of land is not within the scope of this CMP.

[3] As per the requirements of Conditions 6.2(f) and 6.2(f) of the CDP.
[4] Legally described as Lots 1-3 DPS 82610.

6 Statutory and non-statutory mechanisms

The following key statutory and non-statutory mechanisms relate to this CMP for the reasons stated:

- WBOPDC Annual and Long Term Plans: Allocation of funding to develop and implement stormwater quantity, erosion and quality related mitigation identified in Appendix B of the CMP.
- New Zealand Building Act 2004: The companion Building Code, through Clause E1, states that "surface water" from a 2% AEP rainfall event shall not enter buildings. This performance criterion will be applied to the design of mitigation identified in Appendix B of the CMP. Further, the Act contains specific limitations and restrictions on granting building consents for buildings on land subject to natural hazards. "Flooding", "overland flow" and "ponding" are all identified as natural hazards. Not worsening existing natural hazard effects on land is a key outcome sought through the design of mitigation identified in Appendix B of the CMP.
- BOPRC Hydrological and Hydraulic Guidelines 2012: Provides design guidelines for stormwater management in so far as engineering calculations and assessments are required. The guidelines have been applied to the development of modelling completed to date for Waihī Beach, Pio Shores, Bowentown, Athenree and Katikati which has been considered in the development of the mitigation identified in Appendix B of the CMP. The guidelines will be applied to the development of future modelling work undertaken for the catchments of the CMP.
- BOPRC Stormwater Management Guidelines for the Bay of Plenty Region 2012: Set guidelines for stormwater quality treatment and stormwater quantity control. The guidelines will be applied where mitigation identified in identified in Appendix B of the CMP is a stormwater "practice" [devices].
- WBOPDC Development Code 2009: Set the design standards for stormwater works undertaken by developers and vested in WBOPDC, as well as works undertaken by WBOPDC. The code will be applied to the design of mitigation identified in Appendix B of the CMP.
- WBOPDC Stormwater Bylaw 2020: Control the discharge of contaminants into the WBOPDC stormwater network. Therefore, the bylaw will assist with addressing quality issues to be inserted into the 2027 CMP.
- Condition 6.2 of the CDP: Set out design criteria for new and upgraded stormwater infrastructure. The design criteria listed under the condition will be applied to the design of mitigation identified in Appendix B of the CMP.

In addition to the key documents described above, there are other statutory mechanisms prepared by Central Government and the Bay of Plenty Regional Council that lend support to and/or inform the development and implementation of this CMP. These mechanisms include the National Policy Statements for Freshwater Management and Urban Development, the New Zealand Coastal Policy Statement, National Environmental Standard for Freshwater, the Bay of Plenty Regional Policy Statement, the Bay of Plenty Regional Coastal Environment Plan and Bay of Plenty Regional Natural Resources Plan.

7 Monitoring Plan

WBOPDC have prepared the Monitoring Plan and it has been subsequently certified by the BOPRC. The Monitoring Plan is annexed to this report as Appendix C.

8 Maintenance requirements

8.1 Entire catchment

The inspection requirements for each asset type are as follows:

- Stormwater outfalls: six monthly inspections.
- Stormwater floodgates: monthly inspections.
- Stormwater ponds: six monthly inspections.
- Stormwater open drains: six monthly inspections.
- Stormwater pump stations: weekly inspections.
- Stormwater pump stations: six monthly electrical inspections.
- Stormwater pumps: annual inspections (following annual tear down).

"As required" maintenance will be undertaken following these inspections. This could include lubricating floodgate hinges, replacement of corroded or perished components of outfalls and pumps, and removal of sediment and vegetation from stormwater ponds. Sediment will be removed from ponds whenever deemed necessary and/or once 25% of the pond storage volume is taken up by accumulated sediment. Sediment removed from stormwater ponds will be disposed of offsite to an approved landfill facility.

The scheduled maintenance requirements for each asset type are as follows:

- Stormwater open drains: six monthly herbicide spraying of banks and mechanical clearance of accumulated sediment and vegetation in beds.
- Stormwater pump stations: weekly clearing and wet well washing.
- Stormwater pumps: annual mechanical tear down and part replacement.

8.2 Bowentown and Pio Shores

Within the Bowentown and Pio Shores sub-catchments the general inspection and maintenance requirements specified under Section 8.1 apply. In addition, the following sub-catchment specific inspection and maintenance requirements apply.

Inspection requirements:

- Stormwater soakage basins in dunes in Pio Shores: annual assessment and/or following a 10% AEP rainfall event[5] to confirm that no erosion of their crests has occurred and that accumulated fine sediment, organic matter and dense vegetation are not limiting the ability for stormwater to soak through their inverts.

As required maintenance will be undertaken following these inspections to ensure the basins continue to provide the design storage volume and that disposal of stormwater through soakage within their inverts can occur effectively. An example of as required maintenance would be that accumulated fine sediment and dense vegetation are manually excavated from the basins. Fine sediment removed from basins will be disposed of offsite to an approved landfill facility.

Scheduled maintenance requirements:

- "Novaflo" drains in Bowentown: annual flushing.

[5] Measured at the Waihī Beach Wastewater Treatment Plant Rain Gauge

9 Urban development areas

This is the first CMP prepared under the CDP. Therefore, this CMP does not include the areas developed for urban activities in the past 6 years.

The areas which can be developed for future urban activities are identified on the maps annexed to this report as Appendix D. The yellow shading notated on the maps shows these areas as "potential future urban activities". Where a settlement is not shown on the maps then it is considered that future urban activities are unlikely to occur based on factors such as current allotment sizes and development density or ownership. Examples are Māori owned land at Otāwhiwhi and land at Ōngare Point and Te Kauri Village, where the density of development appears to be already at what the District Plan provides for.

The spatial location and extent of the potential future urban activities' areas notated on the maps contained in Appendix D are based on the residential zoning shown on the District Plan Maps. The notations take no account of topography, connection to WBODPC roading and reticulated services and natural hazard and ecological constraints, as these matters would be considered through the design of development proposals. We note that the CDP authorises existing stormwater discharges and therefore the areas which can be developed for future urban activities are of little relevance to this CMP. This is because these future urban activities would need to be considered under a separate discharge permit application process prior to forming part of this or any future CMP.

10 Flood maps

Flood hazard modelling has already been completed for Waihī Beach, Pio Shores, Bowentown, Athenree, Katikati, Tanners Point, Tuapiro, Ōngare Point and Te Kauri Village. Flood hazard maps for Waihī Beach, Pio Shores, Bowentown, Athenree and Katikati have been published by WBOPDC and the blue hatched areas notated on the maps annexed as Appendix A represent areas predicted by modelling to be inundated. Flood hazard maps for Tanners Point, Tuapiro, Ōngare Point and Te Kauri Village have not yet have been published by WBOPDC as they are still being publicly consulted on, but the draft maps are being used by WBOPDC for regulatory purposes. Once the Flood hazard maps for Tanners Point, Tuapiro, Ōngare Point and Te Kauri Village have been published then they will be included through an update to this CMP.

11 Incident management and reporting

WBOPDC have development an Incident Management and Reporting Procedure; this is annexed to this report as Appendix H.

To attempt to avoid or minimise the occurrence of incidents that would negatively impact on stormwater quality and quantity within the Western Catchments, WBOPDC have developed a "pre-heavy rainfall inspection checklist"; see Appendix G. This checklist is populated by WBOPDC's maintenance contractor during the inspections and the completed spreadsheet sent to WBOPDC on completion of the inspections.

12 Cultural values

For the purposes of a preparing a CMP, the integration of cultural values into stormwater management can be dealt with at a "principle" based level. Further, if the western science quality attributes are met then there is likely to be broad alignment with traditional and cultural values towards water quality. Based on the above, it is considered that the CMP can and will take account of cultural values relating to water quality.

We have reviewed the following Iwi and Hapū Management Plans ("IMP") lodged with the BOPRC that relate to the Western Catchments and the receiving watercourse and harbour environments:

- Tauranga Moana Iwi Management Plan 2016-2026 prepared by Ngāti Ranginui, Ngāi Te Rangi and Ngāti Pūkenga.
- Ngāi Te Rangi Iwi Resource Management Plan 2005 prepared by Te Rūnanga o Ngāi Te Rangi.
- Ngāi Tamawhariua Hapū Management Plan 2015.

Our review of the IMP was undertaken to understand whether any specific issues (for example identification of significant watercourses, water quality objectives or targets, high risk sub-catchments) have been articulated and how any specific issues could be managed within the CMP. The results of our review and related commentary are presented Sections 12.1 – 12.3 below.

12.1 Tauranga Moana Iwi Management Plan 2016-2026

Sections 6.1, 6.3 and 6.4 contained in the *Healthy Waters* chapter of the Plan contain objectives, policies and actions directly applicable to this CMP. The objectives and policies of relevance to this CMP are centred on:

- The restoration and protection of the mauri of fresh water and coastal water so as the water is clean enough to drink, swim in and sustain mahinga kai.
- The investigation and management of cumulative impacts on water quality.

The actions of relevance to this CMP relate to:

- Promoting additional treatment (with a focus on reduction of sedimentation and "retention" of stormwater).
- Mātauranga based tools to measure and monitor cultural impact on discharges to water.

The Plan does not identify any specific issues as described above.

WBOPDC see the CMP as a vehicle to assisting with a long-term objective of restoring water quality in the receiving environments. To enable water quality to be restored, WBOPDC first need to gather information on the state of the existing water quality. WBOPDC are committed to working with tangata whenua to include Mātauranga Māori based techniques into their water quality monitoring programme.

12.2 Ngāi Te Rangi Iwi Resource Management Plan 2005

Section 2.4 *Harbour, inland waterways and estuaries* contains a policy statement directly applicable to this CMP. The policy statement is centred on maintenance and enhancement of water quality in the harbour, estuaries and freshwater bodies, so as customary food gathering practices can be sustained. The Plan does not identify any specific issues as described above. The comments provided under the commentary relating to the Tauranga Moana Iwi Management Plan's application to the CMP equally apply to this IMP.

12.3 Ngāi Tamawhariua Hapū Management Plan 2015

Within this IMP, there is specific reference in the *Threats and challenges to our environment* section to Te Rereatukahia River, its degraded state and asserted causes of the degradation. However, this river and catchment is outside the Western Catchments covered in this CMP. The IMP also references contamination of kaimoana and "pollution" of the harbour as threats. As to these issues, the commentary relating to the Tauranga Moana Iwi Management Plan's application to the CMP equally apply to this IMP.

13 Schedule of resource consents

A schedule of discharge permits, structures consents and other ancillary consents relating to stormwater discharges that have been amalgamated into the CDP is included at Appendix E.

14 Applicability

This report has been prepared for the exclusive use of our client Western Bay of Plenty District Council , with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that this report will be used by the Bay of Plenty Regional Council in undertaking its regulatory functions in connection with the exercise of Comprehensive Discharge Permit 67093-DC.01.

Tonkin & Taylor Ltd

Report prepared by:	Authorised for Tonkin & Taylor Ltd by:
	
.....	.....
Reuben Hansen	Peter Cochrane
Principal Environmental Consultant	Project Director

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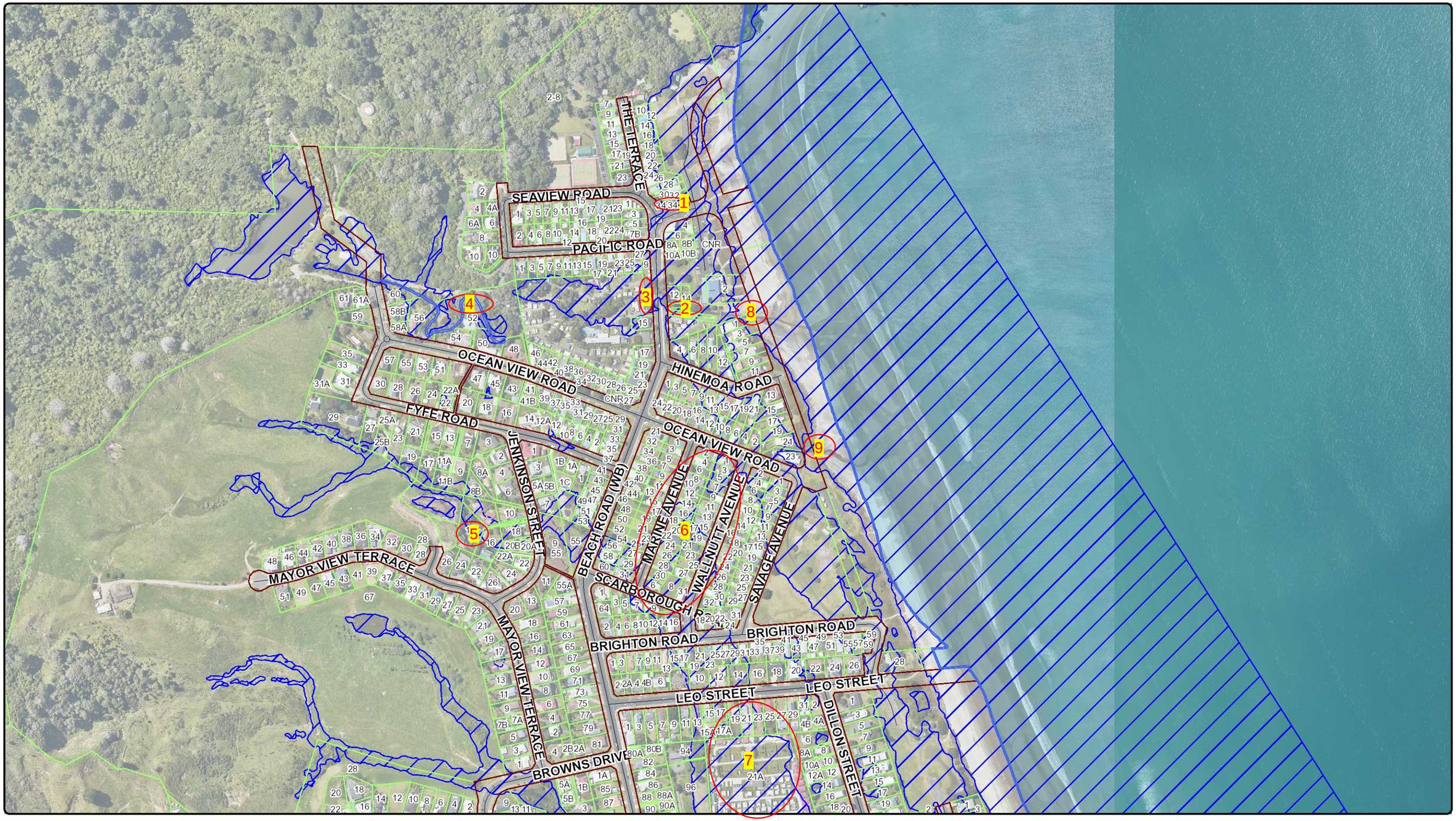
Appendix A: GIS maps



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Location of services is indicative only. Council accepts no liability for any error.
Archaeological data supplied by NZ Archaeological Assoc/Dept. of Conservation.

Date: 14/05/2021
Operator: Reuben Hansen
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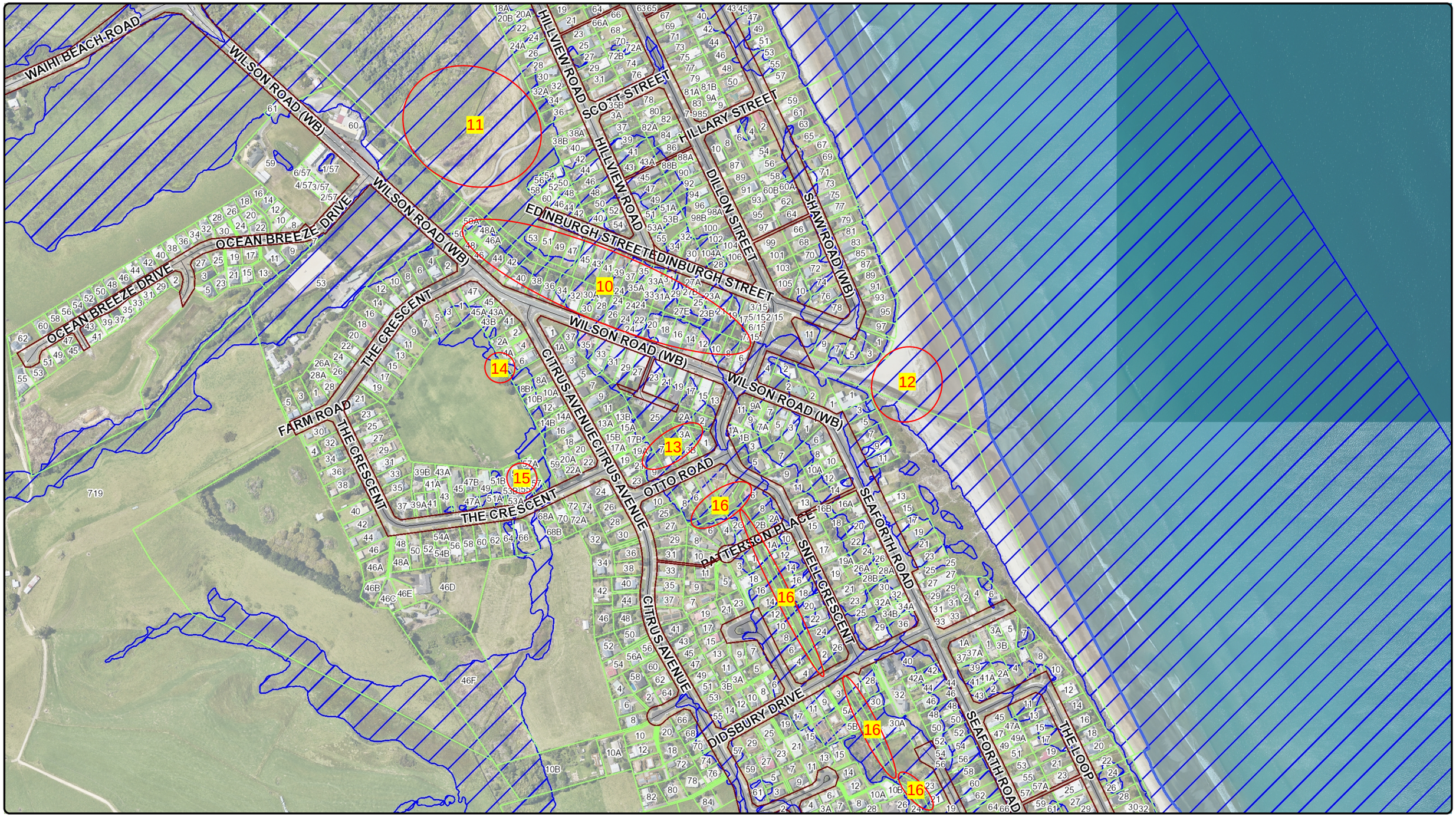
Western Bay of Plenty District Council

Waihi Beach
One Mile Creek and Darley Drain Catchment
Stormwater Management Sites

N



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Date: 18/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
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Western Bay of Plenty District Council

Waihi Beach
Two and Three Mile Creek Catchment
Stormwater Management Sites

N

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Date: 25/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
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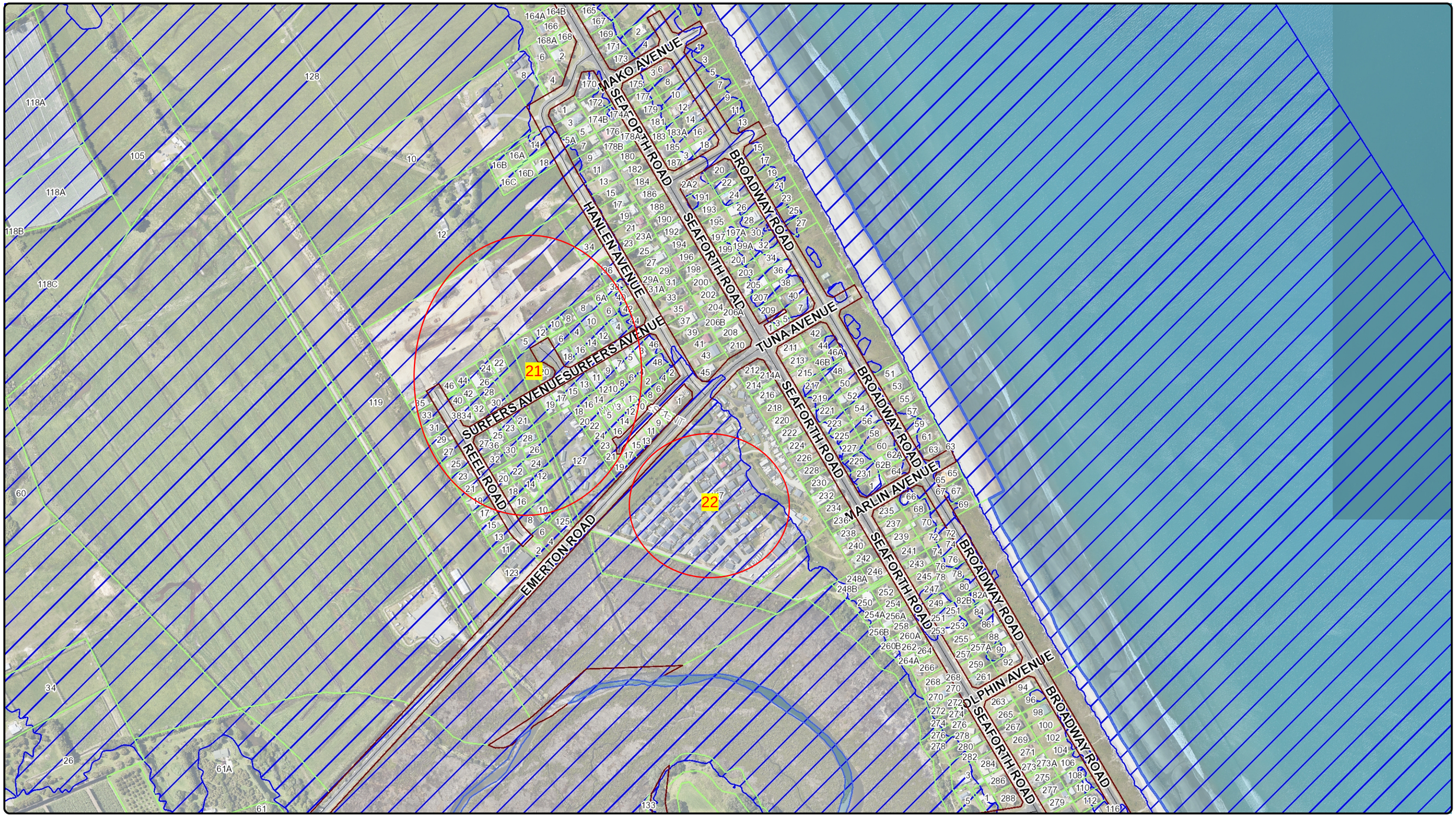
Western Bay of Plenty District Council

Waihi Beach
Three Mile Creek
Stormwater Management Sites

N



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Date: 27/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
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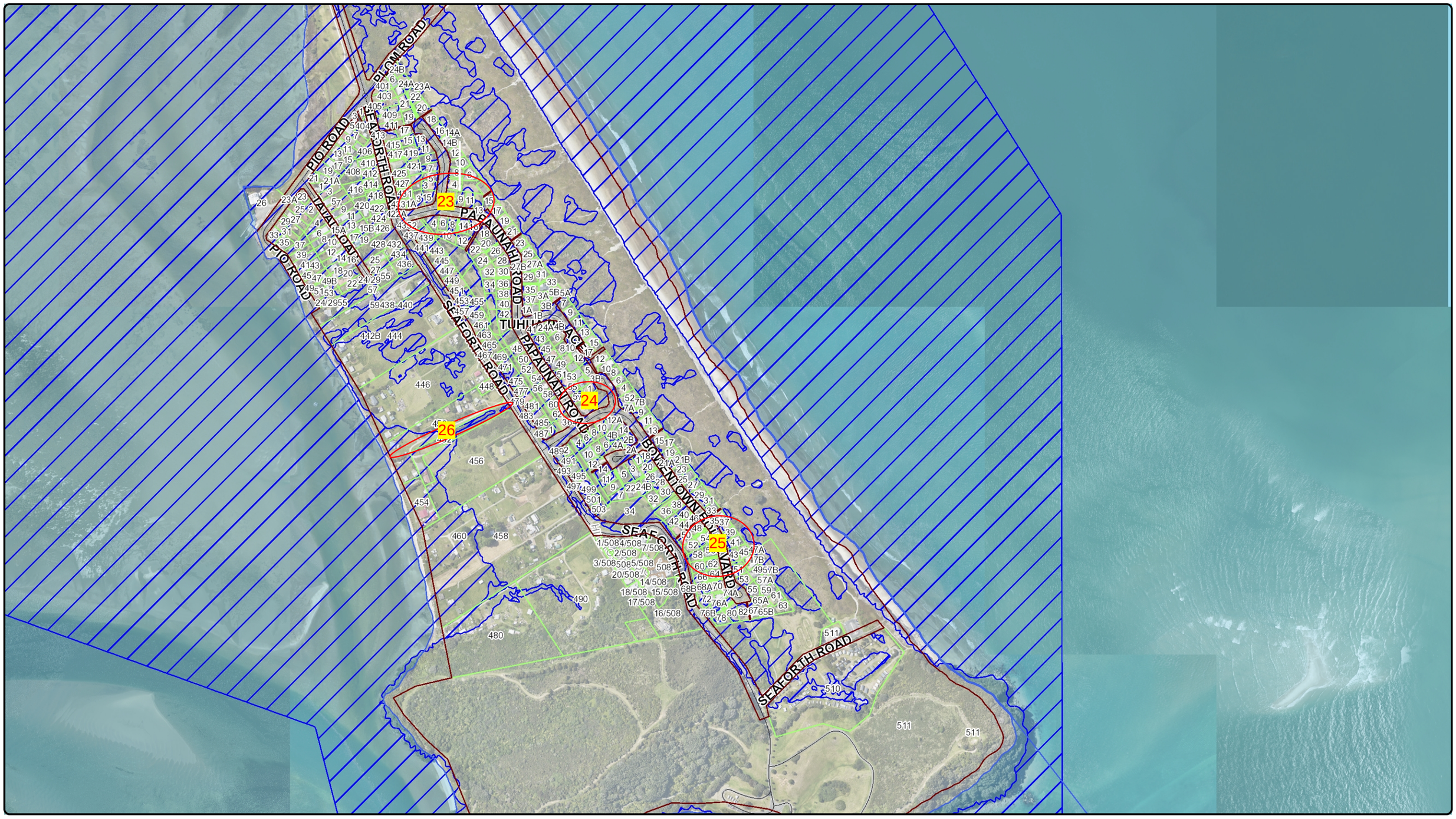
Western Bay of Plenty District Council

Waihi Beach
Waiau River Catchment
Stormwater Management Sites

N



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Date: 27/05/2021
Operator: Reuben Hansen
A3˚Scale 1: 7,500
0 375 Meters

Western Bay of Plenty District Council

Pio Shores
Stormwater Management Sites

N

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Date: 28/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
0 250 Meters

Western Bay of Plenty District Council

Ongare Point
Stormwater Management Sites

N

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Date: 28/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
0 250 Meters

Western Bay of Plenty District Council

Tanners Point
Stormwater Management Sites

N

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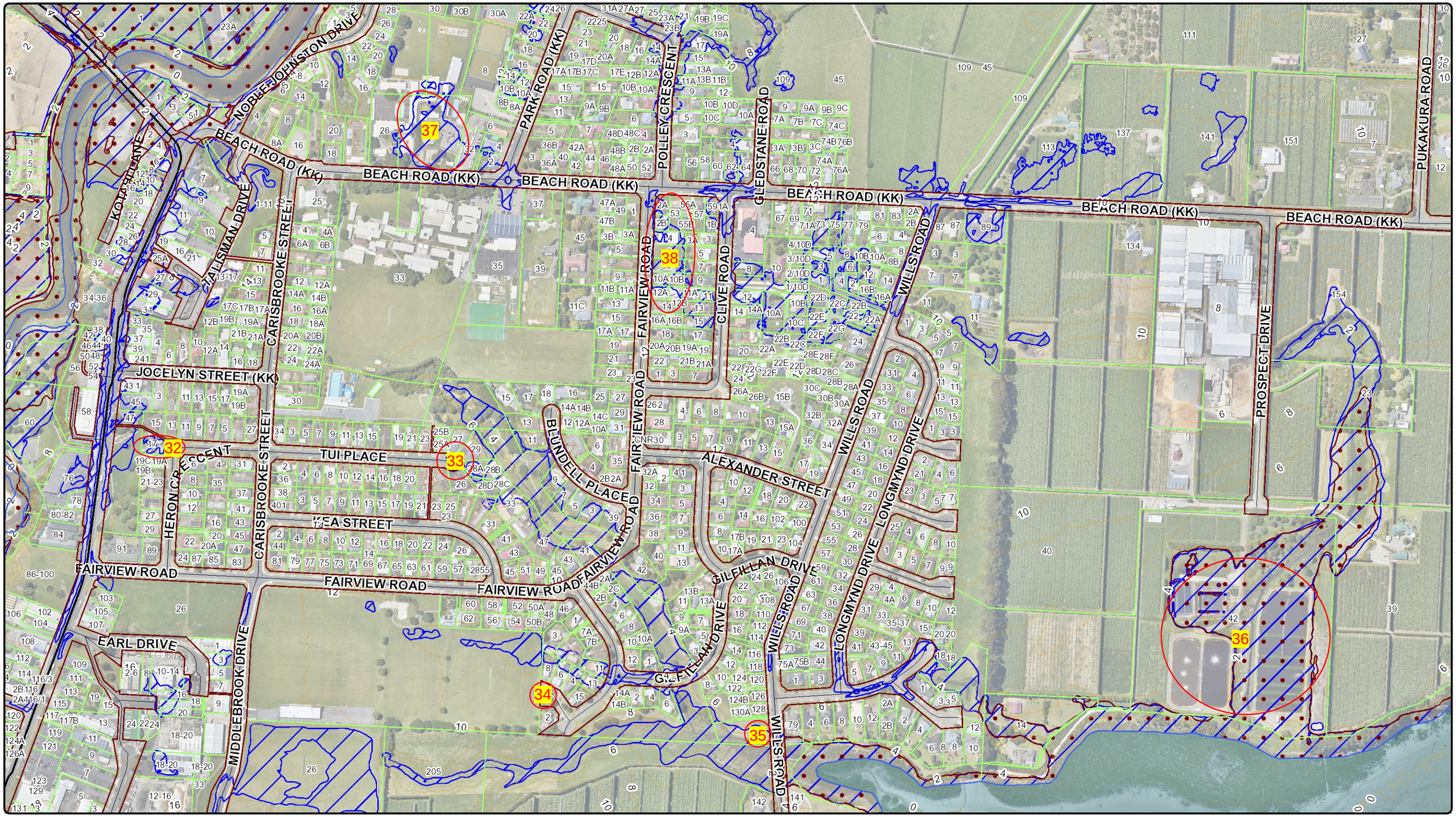
Date: 28/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
0 250 Meters

Western Bay of Plenty District Council

Kauri Point
Stormwater Management Sites

N



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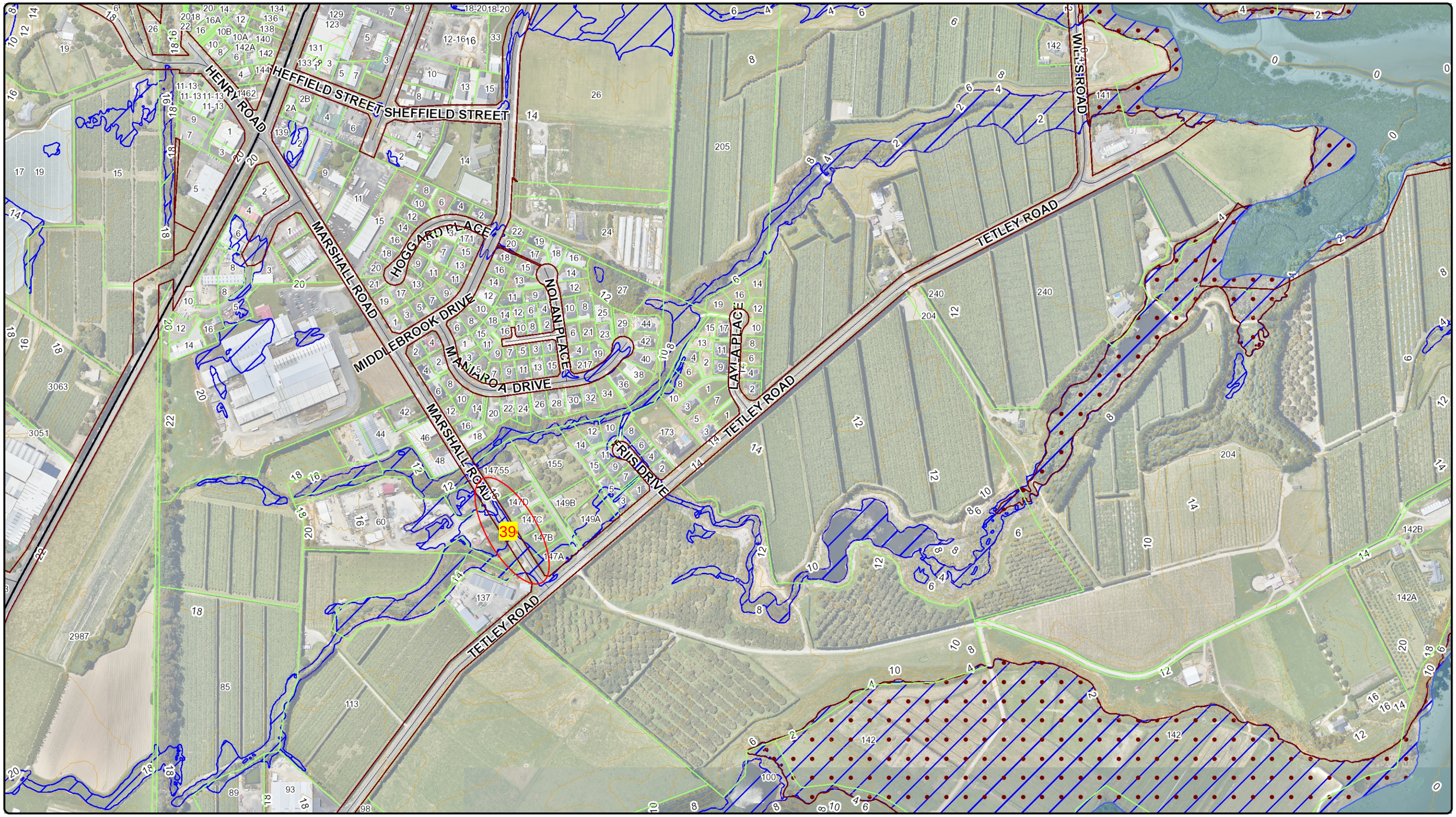
Date: 28/05/2021
Operator: Reuben Hansen
A3 Scale 1: 5,000
0 250 Meters

Western Bay of Plenty District Council

Katikati
North
Stormwater Management SiteS

N



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0 250 Meters

Western Bay of Plenty District Council

Katikati
South
Stormwater Management SiteS

Appendix B: Stormwater management matrices

Matrix for Map 1 – Waihī Beach – One Mile Creek and Darley Drain

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
1	The ground floor of a dwelling has flooded during large rainfall events. This dwelling was the only one affected by the rainfall event i.e. all others surrounded it have more elevated floors.	WBOPDC will support[1] the landowner if they decide to raise the floor level of the dwelling.	Nil.	Not applicable. Funding is available in the Long Term Plan ("LTP") (project 226355) to improve the overland flow path if monitoring identifies a need in the 2027 & 2028 Financial Year ("FY") – Priority Ranking B.
2	The ground floor of a dwelling has flooded during large rainfall events.	The culvert under Beach Road has been upgraded by WBOPDC and the owner of the affected dwelling has raised the floor level of the dwelling. No further action required at stage other than to monitor.	Nil.	Not applicable. Funding is available in the LTP (project 226355) to improve the overland flow path if monitoring identifies a need in the 2027 & 2028 FY – Priority Ranking B.
3	Several buildings within the campground and located adjacent to Beach Road have flooded during large rainfall events.	The culvert under Beach Road has been upgraded by WBOPDC. No further action required at this stage other than to monitor.	Nil.	Not applicable. Funding is available in the LTP (project 226355) to improve the overland flow path if monitoring identifies a need in the 2027 & 2028 FY – Priority Ranking B.
4	Creek bank erosion has become evident.	WBOPDC will undertake an assessment as to: · Whether the erosion is likely to worsen and create ongoing effects (such as sedimentation or threaten assets). · What mitigation if any is required (such as riparian planting or erosion protection structures).	To be confirmed following completion of assessment.	Assessment to be completed during WBOPDC financial year of 1 July 2021 to 30 June 2022 – Priority Ranking C (subject to outcome of monitoring).
5	The dwelling has flooded during large rainfall events.	WBOPDC has made several improvements to the inlet structure of the stormwater pipe. WBOPDC will support the landowner if they decide to raise the floor level of the dwelling. Further mitigation options are considered unfeasible.	Nil.	Not applicable.
6	Several dwellings located adjacent to Wallnutt Avenue and Marine Avenue have flooded during large rainfall events.	A large diameter concrete pipe was installed by the predecessor to WBOPDC within a stormwater overland flow path located in a dune swale to facilitate the development of dwellings within the infilled former dune swale. During large rainfall events, the concrete pipe is not adequately sized and has insufficient grade to convey the stormwater sourced from the upper catchment to the Darley Drain and flooding to dwellings has occurred. There are dwellings located over the pipe and/or near it meaning that upgrading/replacement of the pipe or reinstatement of an overland flow path would be unfeasible. WBOPDC have completed assessments to date regarding pipe condition, pipe replacement and ground settlement around the pipe. Extensive modelling on this catchment has been undertaken to date and several options considered. All modelling indicates that due to the nature of this catchment, protection of dwellings from flooding during large storm events is unfeasible. WBOPDC	To be confirmed following completion of further assessments. Flooding: To be confirmed if WBOPDC proceed to commission options assessments for the Maranui catchment diversion, new pipe down Wallnutt Ave and/or detention options.	Assessments to be completed during WBOPDC financial year of 1 July 2022 to 30 June 2023. Projects 226356 and 226357 (Priority Ranking B) included in LTP for 2026 and 2030 financial years to support this catchment. Funding included is likely to be insufficient and further funding will be requested through the LTP following further mitigation assessments.

[1] See description of how WBOPDC provide support to landowners within Section 4.2 of the CMP.

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
		therefore strongly encourage landowners to raise their dwellings above the flood level and will support them if they choose to do this. Further mitigation options are being considered to reduce flooding during the more frequent rain events[2] and funding has been included in the LTP. WBOPDC will commission assessments on the feasibility of detention and diversion options within the "Maranui" catchment. These options could potentially provide some mitigation towards existing flooding in the campground and wider area however, it is unlikely to resolve the flooding issue.		
7	Several buildings located within the campground have flooded during large rainfall events.	The affected buildings are not permanent habitable dwellings. The Campground is located on WBOPDC owned land and a lease arrangement is in place with the campground owner. The owners are aware of the ongoing flood risk and the campground has made the necessary adjustments to its facilities (i.e. raising electrical services). Prior to heavy rain warnings the campground is made aware of a potential flood risk. It is not considered feasible or practical to further protect the campground from flooding. At times stormwater from the campground inundates the wastewater pump station. WBOPDC is currently assessing options to resolve the wastewater pump station issue.	Wastewater: To be confirmed following completion of options assessments currently being undertaken.	Wastewater assessment to be completed during WBOPDC financial year of 1 July 2020 to 30 June 2021 – Priority Ranking C.
8	Sediment accumulates at the outlet of One Mile Creek and can cause stormwater to back up in the creep upstream, thereby exacerbating bank erosion and flooding issues during large rainfall events.	WBOPDC manually removes accumulated sediment from the creek mouths for flood and erosion management purposes under a separate resource consent granted by the BOPRC. This is an ongoing maintenance activity that occurs numerous times per year. No further action required at this stage.	Regular removal of sediment from the delta area and placement of the sediment on the high tide beach either side of the creek to assist with mitigating the effect of coastal erosion on the adjacent foredunes.	Mitigation has been implemented and will continue to be on an ongoing basis.
9	Sediment accumulates at the outlet of the Darley Drain and can cause stormwater to back up in the creep upstream, thereby exacerbating bank erosion and flooding issues during large rainfall events.	WBOPDC manually removes accumulated sediment from the creek mouths for flood and erosion management purposes under a separate resource consent granted by the BOPRC. This is an ongoing maintenance activity that occurs numerous times per year. No further action required at this stage.	Regular removal of sediment from the delta area and placement of the sediment on the high tide beach either side of the creek to assist with mitigating the effect of coastal erosion on the adjacent foredunes. Assessment of options to improve outlet performance to be undertaken.	Mitigation has been implemented and will continue to be on an ongoing basis. Assessment of potential outlet improvement options to be undertaken in 2020/21 financial year. Project 226357 included in LTP for the 2029/30 financial year – Priority Ranking B.

[2] WBOPDC Level of Service aims to protect dwellings from flooding during the 1 in 10 year rain event.

Matrix for Map 2 – Waihi Beach – Two and Three Mile Creek

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
10	Creek bank erosion has been an ongoing issue. The catchment of the creek is predominantly from the rural area and so quality and quantity issues are largely unrelated to urban stormwater.	Erosion issues are aggravated by large rainfall events. However, anecdotal evidence from landowners is that wetting and drying of the sandy soils in the creek banks due to water level fluctuations caused by sediment accumulation at the creek outlet have also contributed to the issue. WBOPDC have obtained resource consent to construct an erosion protection structure upstream of the Dillon Street bridge on both sides of the creek to a point equivalent to 34 Wilson Road and 47 Edinburgh Street. There is existing commercial land use activity on Wilson Road but not any activities that are likely to result in contaminants entering stormwater (over and above those in typical urban stormwater).	Creek bank protection works which are authorised by existing resource consents subject to landowner approvals being obtained. If the creek erosion protection works authorised by the existing resource consents proceed then the riparian vegetation enhancement will be implemented.	To be confirmed. Funding in place for creek bank erosion protection (project 226353) and now awaiting landowner approval to proceed to construction – Priority Ranking A.
11	A lack of riparian vegetation at the top of the salt water wedge within the creek when the creek is documented in the Regional Natural Resources Plan as providing inanga spawning habitat.	Substantial riparian vegetation enhancement in Broadlands Block is required under resource consent for the erosion protection structure and a community group plan to undertake further environmental enhancement the area dominated by willow (adjacent to the WBOPDC Library) of "Broadlands Block".	If the creek erosion protection works authorised by the existing resource consents proceed then the riparian vegetation enhancement will be implemented.	As above – Priority Ranking A.
12	Sediment accumulates at the outlet of Two Mile Creek and can cause stormwater to back up in the creep upstream thereby exacerbating bank erosion and flooding issues during large rainfall events.	WBOPDC manually removes accumulated sediment from the creek mouths for flood and erosion management purposes under a separate resource consent granted by the BOPRC. This is an ongoing maintenance activity that occurs numerous times per year. No further action required at this stage.	Regular removal of sediment from the delta area and placement of the sediment on the high tide beach either side of the creek to assist with mitigating the effect of coastal erosion on the adjacent foredunes.	Mitigation has been implemented and will continue to be on an ongoing basis.
13	Localised flooding of private land arising from rain falling on the ground (ponding) has occurred during large rainfall events.	As the issue relates to flooding of land rather than habitable buildings WBOPDC would not usually be concerned. However, this site is an exception. This is due to a historic issue whereby a stormwater pump station was removed. The presence of a historic pump station has set community/landowner expectation as to WBOPDC's role and responsibility. WBOPDC have completed an assessment of the feasibility of a pump station. That assessment concluded that a pump station did not stack up favourably on a cost to benefit basis. No further action required at stage other than to monitor.	Nil.	Not applicable.
14	Localised flooding of private land arising from rain falling on the ground (ponding) has occurred during large rainfall events.	As the issue relates to flooding of land rather than habitable buildings WBOPDC would not usually be concerned. However, this site is an exception. This is due to a historic issue whereby a stormwater pump station was removed. The presence of a historic pump station has set community/landowner expectation as to WBOPDC's role and responsibility. WBOPDC have completed an assessment of the mitigation options and concluded that regrading of the reserve and construction of a localised low bund to prevent stormwater ponding on the private land is the most appropriate.	Regrading of the WBOPDC reserve and construction of localised low bund along the reserve/private land interface.	Mitigation to be constructed during WBOPDC financial year of 1 July 2025 to 30 June 2026 – Priority Ranking C.

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
15	Localised flooding of private land arising from rain falling on the ground (ponding) has occurred during large rainfall events.	As for 14 above.	As for 14 above.	As for 14 above – Priority Ranking C.
16	Disbury Drain has a very flat grade across its length and this causes stormwater to be retained within the invert rather than flushing and discharging into Three Mile Creek unless a large rainfall event occurs. “Stagnant” water causes aesthetic issues. Flooding issues to land but does not affect houses.	WBOPDC have completed an assessment of the feasibility of improving water quality in drain. That assessment concluded that the potential options developed did not stack up favourably on a cost to benefit basis. No further action required at stage other than to monitor.	Nil.	Not applicable.

Matrix for Map 3 – Waihi Beach - Three Mile Creek

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
16	Disbury Drain has a very flat grade across its length and this causes stormwater to be retained within the invert rather than flushing and discharging into Three Mile Creek unless a large rainfall event occurs. “stagnant” water causes aesthetic issues.	WBOPDC have completed an assessment of the feasibility of improving water quality in drain. That assessment concluded that the potential options developed did not stack up favourably on a cost to benefit basis. No further action required at this stage other than to monitor.	Nil.	Not applicable.
17	An existing stormwater swale was unfilled to facilitate redevelopment of some of these private land parcels. Consequently, there is potential for flooding to occur during large rainfall events.	WBOPDC have not observed or had any reports of flooding to dwellings occurring to date. No further action required at stage other than to monitor.	Nil.	Not applicable.
18	Sediment accumulates at the outlet of Three Mile Creek and can cause stormwater to back up in the creek upstream thereby exacerbating bank erosion and flooding issues. Private landowners at Glen Isla Place consider that the stormwater exiting Three Mile Creek into the CMA exacerbates coastal erosion of the WBOPDC reserves. Technical assessments from T+T and findings from an Independent Commissioner do not support this claim by the private landowners. Through Environment Court Mediation WBOPDC agreed to monitor the erosion of the WBOPDC reserve.	WBOPDC manually removes accumulated sediment from the creek mouths for flood and erosion management purposes under a separate resource consent granted by the BOPRC. This is an ongoing maintenance activity that occurs numerous times per year. WBOPDC will monitor their reserve and coastal erosion as per the existing resource consent conditions	Regular removal of sediment from the delta area and placement of the sediment on the high tide beach either side of the creek to assist with mitigating the effect of coastal erosion on the adjacent foredunes. Monitor WBOPDC reserve and coastal erosion.	Mitigation and monitoring have been implemented and will continue to be on an ongoing basis.
19	Water quality within the outlet of Three Mile Creek is periodically unsuitable for contact recreation and shellfish consumption.	The catchment of the creek is predominantly from the rural area. Further, the Waihi Beach Wastewater Treatment Plant (“WBWWTP”) is authorised to discharge treated wastewater to the creek under a discharge permit issued by the BOPRC. Consequently, quality issues are largely unrelated to urban stormwater. No further action required at this stage other than to monitor and comply with conditions of discharge permit for the WBWWTP.	Nil.	Not applicable.
20	A lack of riparian vegetation within the creek when the creek is documented in the Regional Natural Resources Plan as providing inanga spawning habitat.	Riparian vegetation enhancement in Three Mile Creek is required under BOPRC resource consent RM 19-0613. No further action required.	Approximately 200 m of riparian vegetation enhancement using oi oi and wiwi was implemented on the true right bank of the creek in 2020.	Completed in 2020.

Matrix for Map 4 –Waihi Beach - Waiau River

Site number	Management issue	WBOPDC approach to management address	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
21	The land between the airstrip and Hanlen Ave is located within a floodplain. There is potential for buildings on this land to flood during large rainfall events.	WBODPC have determined that raising of the land above the flood level appropriately manages the issue. WBOPDC have concluded that filling in this area does not take up flood storage capacity and so there are no adverse effects from the management approach. WBOPDC have noted that improving the quality of stormwater discharged from this area is going to be problematic due to the presence of elevated groundwater and proximity of the site to the salt marsh and estuary.	WBOPDC have required developers, through subdivision and land use consents for urban development in this area, to implement the mitigation. This approach will continue.	Mitigation has been implemented and will continue to be on an ongoing basis.
22	The land bounded by Emerton Road, the Waiau River and Seaforth Road is located within a floodplain. There is potential for buildings on this land to flood during large rainfall events.	As for Site 21 above.	As for Site 21 above.	As for Site 21 above.

Matrix for Map 5 – Pio Shores

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
23	Several dwellings located adjacent to Papaunahi Road and the stormwater pump station have flooded during large rainfall events.	Pio Shores' stormwater collection, conveyance and disposal system was designed in the 1970s' under a "low impact" (now termed "water sensitive design") philosophy. Stormwater collected from impervious areas is sent via grassed swales and catch pits to pump stations which deliver the stormwater to scruffy domes located in the coastal foredune. Stormwater bubbles up out of the domes and discharges to soakage in the dunes. Groundwater is located close to the land surface and is connected to tidal water in the open coast and harbour. Reliance on pumping is not best practice and so WBOPDC have commissioned various technical assessments to understand what options are available to (1) address existing flooding issues and (2) address future flooding issues under a future climate state where sea levels are predicted to be more elevated and rainfall intensity and distribution is predicted to change (for the worse). The most recent technical assessment prepared by T+T in 2019[1] assessed 11 options for potentially addressing the issues discussed above. Three workshops were held to discuss the options. The workshops were attended by Pio Shores' residents, WBOPDC and T+T. The outcome of the workshops was that it was agreed that Options 2, 3, 6, 7, 8 and 10 from the 2019 T+T report would be implemented. Option 9 was also considered potentially advantageous, but it relied on obtaining permission from Ōtāwhiwhi Marae and therefore requires further discussion and input from the marae prior to being nominated as an option for implementation.	Options 3 and 8 from T+T 2019 report. These are: Option 3: Doubling the capacity of the Papaunahi Road pump station Option 8: Creating wet well for on call surface water pumps to be sited within if these pumps are deployed during large rainfall events to aid the permanent pump station.	Additional pump station to be constructed during WBOPDC financial year of 1 July 2022 to 30 June 2023. Wet well to be constructed and on call surface water pumps to be purchased during WBOPDC financial year of 1 July 2022 to 30 June 2023. Funding included in LTP (project 226361) – Priority Ranking B.
24	Several dwellings located adjacent to Bowentown Boulevard (north end) and the stormwater pump station have flooded during large rainfall events.	As for Site 23 above.	Options 2 and 7 from the T+T 2019 report. These are: Option 2: Doubling the capacity of the Boulevard North pump station Option 7: Creating a wet well for on call surface water pumps to be sited within if these pumps are deployed during large rainfall events to aid the permanent pump station.	Additional pump station to be constructed during WBOPDC financial year of 1 July 2022 to 30 June 2023. Wet well to be constructed and on call surface water pumps to be purchased during WBOPDC financial year of 1 July 2022 to 30 June 2023. Funding included in LTP (project 226361) – Priority Ranking B.
25	Several dwellings located adjacent to Bowentown Boulevard (south end) and the stormwater pump station have flooded during large rainfall events.	As for Site 23 above.	Option 6 and 10 from the T+T 2019 report. These are: Option 6: Creating wet well for on call surface water pumps to be sited within if these pumps are deployed during large rainfall events to aid the permanent pump station Option 10: Bund off flow path from Seaforth Rd towards Bowentown Boulevard and disconnect pipe feeding Boulevard South pump. Instead connect open drain to pipe network	Wet well to be constructed and on call surface water pumps to be purchased during WBOPDC financial year of 1 July 2022 to 30 June 2023. Bund construction and pipework modifications to be undertaken

[1] *Pio Shores stormwater management options assessment* prepared for Western Bay of Plenty District Council dated October 2019.

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
			conveying north that discharges to Seaforth Rd South Recreation Reserve.	during WBOPDC financial year of 1 July 2022 to 30 June 2023. Funding included in LTP (project 226361) – Priority Ranking B.
26	Ōtāwhiwhi Drain discharges stormwater from Pio Shores to Tauranga Harbour. Ōtāwhiwhi Marae do not approve of the continued use of the drain for reticulating urban stormwater through ancestral land from a perspective of conveyance of urban stormwater through their land, the health and safety implications for children on the marae of a steep sided and deep drain and the release of urban stormwater containing contaminants into the harbour in an area used for shellfish gathering.	The Ōtāwhiwhi Drain issues are complex. Not only are there concerns from the marae, but the drain is also difficult to maintain due to its location on private land and it is tidally influenced. Consequently, the drain has historically become overgrown with vegetation and sediment has accumulated in its base affecting its performance to effectively convey stormwater. WBOPDC will undertake assessments and further discussions with Ōtāwhiwhi Marae relating to other options to attempt to resolve this issue.	To be confirmed following completion of further assessments and discussions with Ōtāwhiwhi Marae.	Assessments to be completed during WBOPDC financial year of 1 July 2023 to 30 June 2024. Funding included in LTP (project 226361) – Priority Ranking A.

Matrix for Map 6 – **Ō**ngare Point

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
27	Dwellings adjoining Esplanade Road and Potu Road have flooded during large rainfall events.	WBOPDC have investigated potential options for addressing the flooding issues. The conclusion of the investigation was that there is no appropriate solution, especially given the elevation and proximity of the residential land in relation to the harbour. Harbour inundation is likely to become a more regular and injurious issue than fluvial/pluvial flooding for the subject dwellings in the future especially as the sea level rises. The Potu Road stormwater outfall periodically becomes blocked with sediment and sea lettuce which can contribute to flooding. WBOPDC regularly inspect the outfall and remove obstructions to mitigate this effect. No further action required at this stage other than to monitor.	Nil.	Not applicable.

Matrix for Map 7 – Tanners Point

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
28	Private accessways at the end of Giles Way have been subject to flooding during large rainfall events.	WBOPDC investigated the cause of the flooding and constructed new kerbing and installed new catch pits to intercept stormwater prior to it discharging into the private properties. The residual issue is that leaf litter accumulates over the stormwater catch pits which can result in blockages. This leaf litter requires regular removal. No further action required at this stage other than to monitor and continue regular inspections and removal of debris on catch pit grates.	Nil.	Not applicable.
29	Manholes popping off at 163 Tanners Point Road.	All maintenance issues No further action required at this stage other than to monitor and continue regular inspections and removal of debris on catch pit grates.	Nil.	Not applicable.

Matrix for Map 8 – Kauri Point

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
30	Dwellings adjoining the intersection between Kauri Point Road and Chelmsford Street 8 or 10 have been subject to flooding during large rainfall events.	WBOPDC investigated the cause of the flooding and constructed new kerbing and installed new catch pits to intercept stormwater prior to it discharging into the private properties. No further action required at this stage other than to monitor.	Nil.	Not applicable.
31	Dwellings along Princess Street have experienced flooding in the past. The stormwater network along Princess Street may be undersized.	WBOPDC to investigate the cause of flooding and review the capacity of the stormwater network. If network is undersized upgrade to meet Councils LOS.	Upgrade of stormwater network.	Review of network to be undertaken 2022/23 financial year. Upgrade (if necessary) planned for 2023/24 financial year (project 332621 in LTP) - Priority Ranking C.

Matrix for Map 9 – Katikati – North

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
32	Potential for dwellings to be flooded during large rainfall events.	The modelling predicts that during a 1% AEP rainfall event flooding originating from State Highway 2 affects private land and potentially dwellings in the vicinity of 17 Heron Crescent. WBOPDC has not received any service requests from the affected property owners with regards to historic flooding. No further action required at stage other than to monitor.	Nil.	Not applicable.
33	Dwellings at the end of Tui Place have been subject to flooding during large rainfall events.	WBOPDC investigated the cause of the flooding and installed new catch pits and a second outlet pipe. These stormwater network improvements appear to have resolved the historic flooding issue. No further action required at this stage other than to monitor.	Nil.	Not applicable.
34	Dwellings in Hansen Place have been subject to flooding during large rainfall events.	WBOPDC investigated the cause of the flooding and constructed a bund within Moore Park adjacent to Hansen Place. This bund diverted stormwater away from Hansen Place and appears to have resolved the issue. No further action required at this stage other than to monitor.	Nil.	Not applicable.
35	Potential for wastewater pump station to be flooded during large rainfall and cause sewerage to be released to the adjacent stream and harbour.	The modelling predicts that during a 1% AEP rainfall event the pump station and storage chambers will be inundated from floodwater sourced from the adjacent stream. WBOPDC will undertake a site-specific assessment as to: · What the location, extent and depth of the inundation would likely be in relation to the pump station infrastructure. · Topographic conditions, flood water levels and the levels of the storage chamber lids. · What mitigation (if any) is required (such as bunding to protect the infrastructure from flooding).	To be confirmed following completion of assessment.	Assessment to be completed during WBOPDC financial year of 1 July 2022 to 30 June 2023 – Priority Ranking B.
36	Potential for wastewater treatment plant to be flooded during large rainfall and cause sewerage to be released to the adjacent harbour.	The modelling predicts that during a 1% AEP rainfall event the treatment plant will be inundated from floodwater sourced from the adjacent stream. WBOPDC will undertake a site-specific assessment as to: · What the location, extent and depth of the inundation would likely be in relation to the wastewater pond bunds. · Topographic conditions, flood water levels and the levels of the wastewater pond bunds. · What mitigation (if any) is required (such as raising bunding and constructing diversion channels to protect the ponds from flooding).	To be confirmed following completion of assessment.	Assessment to be completed during WBOPDC financial year of 1 July 2022 to 30 June 2023 - Priority Ranking B.
37	Potential for primary school buildings to be flooded during large rainfall events.	The modelling predicts that during a 1% AEP rainfall event flooding affects the land and potentially some buildings within the primary school site. WBOPDC has not received any service requests from the primary school with regards to historic flooding. No further action required at stage other than to monitor.	Nil.	Not applicable.

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
38	Potential for dwellings to be flooded during large rainfall events.	The modelling predicts that during a 1% AEP rainfall event flooding affects private land and potentially dwellings in the vicinity of 2-14 Fairview Road. WBOPDC has not received any service requests from the affected property owners with regards to historic flooding. No further action required at stage other than to monitor.	Nil.	Not applicable.

Matrix for Map 10 – Katikati – South

Site number	Management issue	WBOPDC approach to management issue	Mitigation to address management issue	Timeframe to undertake assessment/construct/implement mitigation
39	Potential for improvements which have been undertaken to Tetley Road in the vicinity of the Marshall Road intersection to have altered a historic overland flow path.	WBOPDC have received advice from residents that improvements to Tetley Road have altered an existing overland flow path for stormwater. The residents consider that the alteration of the overland flow path has resulted in stormwater from the industrial area being diverted into the stream to the north of Tetley Road ("the north stream") whereas it used to flow into the stream to the south of Tetley Road ("the south stream"). The north stream has multiple residential land parcels adjoining it and there is potential for increased flooding to result to the land and potentially dwellings if a diversion has occurred. WBOPDC will undertake an assessment as to: · Whether an overland path has been altered and a diversion of stormwater and floodwater to the north stream has occurred. · If a diversion to the north stream has occurred, then have any changes in stormwater and flooding effects resulted to the residential properties. · If changes in stormwater and flooding effects have resulted to the residential properties, then what are the nature and scale of any effects. · What mitigation (if any) is required. This would involve a review of the detention ponds shown on the Structure Plan.	To be confirmed following completion of the assessment.	Assessment to be completed during WBOPDC financial year of 1 July 2021 to 30 June 2022.

Appendix C: Monitoring Plan

report

May 2021

Western Comprehensive Stormwater Consent Monitoring Plan

Submitted to:
Western Bay of Plenty District Council

freshsolutions water
environmental consultants

Quality Assurance

This report has been prepared and reviewed by the following:

Prepared by: Phil Taylor
Freshwater Ecologist

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Freshwater Ecologist

Reviewed by: Richard Montgomerie
Director

Status: Final **Issued:** 17 May 2021

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Appendices

1.0 Introduction

1.1 Background

Western Bay of Plenty District Council (WBOPDC) have been granted the Western Comprehensive Stormwater Consent (67093-DC.01) that authorises:

a) Discharge of stormwater from urban areas within the Western Catchments of the Western Bay District.

b) Temporary discharges of sediment contaminated stormwater from earthworks related to the replacement of stormwater infrastructure.

c) Incorporates existing stormwater discharges associated with existing consents (refer to Schedule 1 for a list of stormwater related consents).

The purpose of this report is to set out the proposed Stormwater Monitoring Plan that will be implemented to monitor the effects of the stormwater discharges.

1.2 Relevant Consent Conditions

Condition 7.3 outlines the details required in the Stormwater Monitoring Plan in items a–l. Item e, outlines the requirements of the monitoring plan as follows:

e) A Monitoring Plan, including monitoring locations, frequency of monitoring and reasonable mixing zones. The locations shall be provided on a map with GIS co-ordinates. The Monitoring Plan must include monitoring the discharge quality of representative stormwater discharges and representative receiving environment sediment[1] and macroinvertebrate conditions.

Condition 7.5 requires that:

The Monitoring Plan required by Condition 7.3(e) must be prepared, and certified as appropriate, for the catchment and the receiving environment, by a suitably qualified environmental scientist(s).

Condition 9.1 discusses the mandatory inclusions of the Monitoring Plan:

The Monitoring Plan required by Condition 7.3(e) must include the following specifications:

a) Representative samples of stormwater discharges must include the following locations:

(i) Upstream of "discharge"

(ii) Downstream of the discharge in the freshwater receiving environment (after accounting for reasonable mixing);

(iii) In coastal water (below MHWS).

b) Representative sediment samples must be taken at a depth of sediment not greater than 2 cm and composed of not less than 10 sub-samples taken from a minimum of 5 metres of stream length at the discharge, upstream and downstream locations identified in Condition 9.1(a). Analysis for metals shall be undertaken at trace detection level.

c) All sampling under (a) and (b) must be undertaken within 30 minutes of the commencement of a storm event, where practicable, but no later than 60 minutes after the commencement of a storm event.

[1] The consent conditions for sediment monitoring are currently being revised and updated. It is our understanding that the updated consent will specify quarterly, dry weather sediment sampling at representative locations.

d) Annual measurements of the stream channel width downstream of representative urban stormwater discharges into receiving freshwater streams as a stream bank erosion indicator. The exact location(s) of the channel measurements must be provided to the Regional Council Chief Executive or delegate within 12 months of granting this consent (map and GPS Co-ordinates). All subsequent measurements must be taken annually at the same location(s).

e) Investigations of the cause of streambank erosion or scour that has resulted in any increase of 5% or more in stream channel width from the grant of this consent.

f) All water and sediment analyses must be carried out by an IANZ registered laboratory.

g) All macroinvertebrate surveys must be undertaken by a suitably qualified and experienced ecologist.

1.3 Catchment Context

The Comprehensive Stormwater Consent (67093-DC.01) covers WBDC's Waihi Beach and Katikati wards, described as the Western Catchments. The Western Catchments include the existing and planned urban areas of the:

- Waihi Beach Catchment that comprises Waihi Beach (8 sub-catchments), Athenree (6 sub-catchments) and Bowentown/Pios Shores.
- Small Coastal Communities Catchments that include Tanners Point, Ongare Point, Te Kauri Village and Tuapiro
- Katikati Catchment (27 catchments).

Waihi Beach

Two Mile Creek in Waihi Beach is a highly modified soft bottom stream draining a predominantly rural 525 ha catchment. Most of the stream has been channelised and in the lower reaches the streams course is constrained by flood protection structures. Approximately 21 ha of the lower stream catchment is zoned residential and commercial. The stream discharges directly to the sea over Waihi Beach. The stormwater catchment sampled within Two Mile Creek is 4 ha in size and comprises a mixture of residential and commercial land use (Figure 1).

Okawe Stream originates within the Puketoki hills and drains through land adjacent to the Waihi Beach Stage 2 growth cell before discharging to the sea over Waihi Beach at Seaforth Road. The stormwater catchment comprises primarily residential landuse that may expand with the urban growth that is predicted to occur (Figure 2).

Katikati

The Uretara River is a hard bottom river draining a 32.9 km^2 catchment with a mean flow at Henry's Crossing of 0.88 m^3/s. The upper third of the catchment (26.5 km of river channel), located on the eastern flanks of the Kaimai Range, is covered in indigenous forest. The river then flows some 53 km from the Kaimai Ranges through pasture and horticultural land uses before entering the urban area (lower 5.5 km of river channel) in the north of Katikati. The river enters the Tauranga Harbour and has a saline estuary section that extends upstream of the state highway bridge in Katikati. The stormwater catchment sampled within the Uretara River is 7.5 ha in size and comprises a mixture of residential and commercial land use and is dominated by the state highway which runs through the middle of the catchment (Figure 3).

An unnamed drain that originates at a culvert from the stormwater catchment that runs beneath sports fields to the east of SH2/Main Road flows in a south easterly direction and discharges to the Tauranga Harbour at Willis Road. The drain is a small soft bottom channelised waterway draining a stormwater catchment of ~5.3 ha that has almost completely impervious land cover used for commercial and industrial purposes (Figure 3).

2.0 Water Quality Monitoring

2.1 Water Quality Monitoring Locations

Monitoring sites were selected to provide representative samples from 1) a developed catchment with both residential and industrial/commercial activity (Katikati and Waihi); and, 2) a less developed catchment with primarily residential land use (Athenree). Freshwater Solutions propose to focus the sampling effort on the more developed catchments of Waihi Beach and Katikati rather than the small coastal communities of Tanners Point, Ongare Point, Te Kauri Village and Tuapiro where stormwater discharge effects are expected to be minimal. No suitable watercourses were identified from aerial imagery at Athenree and Bowentown/Pios Shores for upstream/downstream receiving environment sampling. Therefore, no receiving environment monitoring will be carried out at these locations but a stormwater discharge sample will be collected at Anthenree to characterise the water quality.

In accordance with Condition 9.1, a water quality sample will be collected from upstream of the selected stormwater catchment and downstream in the freshwater receiving environment (after accounting for reasonable mixing) and in coastal catchments in coastal waters (below MHWS).

Water samples will be collected from the selected discharges (immediately before entering the stream) and from upstream of the main stormwater inputs and 20–50 m downstream of the urbanised portion of the selected stormwater catchment. Refer to Table 1 and Figure 1 to Figure 4 for site locations. Site W3-US is included to account for the Waihi Beach Stage 2 future development.

2.2 Timing and Frequency of Water Quality Sampling

Water quality monitoring will be carried out on six occasions per year and comprise quarterly dry weather (baseline) events and two storm events and will be analysed for the parameters presented in Table 2. Baseline sampling will be carried out in the receiving environment following at least three days of no rain. Storm event sampling will be carried out from each of the selected stormwater discharges and the receiving environments within 1 hour (ideally within the first 30 minutes) following a rainfall event that is greater than 10 mm and following at least three days of dry weather. The rainfall event definition is aligned with the Tauranga City Council Monitoring Plan (TCC 2012).

Sampling at Site K1-DS will be timed, where possible, to coincide with an outgoing tide in order to capture a more representative sample.

In the event that receiving environment monitoring identifies that any water quality trigger value (refer to Table 2) is exceeded, a further sample shall be taken within 2 months. If any water quality trigger value is exceeded in three consecutive sampling results for the same site, WBDC must undertake a contaminant source investigation within 3 months of the third exceedance and submit a report to the Regional Council Chief Executive or delegate. Detailing the contaminant source sampling and reporting is outside the scope of this monitoring plan.

Figure 1: Waihi Beach Two Mile Creek sampling site locations.

Figure 2: Waihi Beach Okawe Stream sampling site locations.

Figure 3: Katikati sampling site locations.

Figure 4: Athenree sampling site locations.

Table 1: Sampling site locations.

Location	Site code	Catchment	NZTM	
			Easting	Northing
Waihi	W1-US	Upstream – Two Mile Creek	1859913	5855747
Waihi	W1-DS	Downstream – Two Mile Creek	1860658	5855374
Waihi	W1-Dis	Stormwater Discharge	1860418	5855443
Waihi	W1-SC	Stream Channel – Two Mile Creek	1860434	5855454
Waihi	W2-US	Upstream – Okawe Stream	1860649	5854413
Waihi	W3-US	Upstream – Stage 2 Development	1859899	5854420
Waihi	W2-DS	Downstream – Okawe Stream	1861156	5854446
Waihi	W2-Dis	Stormwater Discharge	1861078	5854389
Waihi	W2-SC	Stream Channel – Okawe Stream	1861098	5854383
Katikati	K1-US	Upstream – Uretara Stream	1857368	5839375
Katikati	K1-DS	Downstream – Uretara Stream	1857951	5840107
Katikati	K1-Dis	Stormwater Discharge	1857659	5840059
Katikati	K1-SC	Stream Channel – Uretara Stream	1857700	5840032
Katikati	K2-US	Upstream – Unnamed drain	1858205	5839510
Katikati	K2-DS	Downstream - Unnamed drain	1858576	5839091
Katikati	K2-Dis	Stormwater Discharge	1858500	5839093
Katikati	K1-SC	Stream Channel – Uretara Stream	1857700	5840032
Athenree	A-Dis	Stormwater Discharge	1862114	5851732

2.3 Roles and Responsibilities for Water Quality Sampling

Water quality sampling will be carried out by WBOPDC staff or contractors who have the expertise to ensure that each discharge and receiving environment can be sampled during the first flush (i.e., within one hour of the storm event starting). To ensure that all samples are collected within one hour of a storm event it is expected that a combination of sampling methods using staff collecting water samples, Nalgen Bottle samplers and possibly auto samplers will need to be used.

2.4 Water Quality Sampling Methodology

Spot measurements of dissolved oxygen, pH, electrical conductivity and temperature will be made at all sites using calibrated handheld meters. The time at which measurements are made will be noted.

On all sampling occasions at each sampling site, visual observations of oil or grease films,

scums or foams, or floatable and/or suspended materials will be recorded and a photographic record made. Any objectionable odours emanating from the water will also be recorded. Visual clarity will be measured using a clarity tube or if water clarity is > 1m then black disc measurements will be made.

A grab sample will be collected from each site, labelled with site name, date and time and chilled before transport to Hills Laboratories for analysis. Chilled samples will be delivered to the laboratory within 24 hours. Samples will be analysed for the parameters presented in Table 2 and compared with consent trigger values.

Table 2: Water quality sampling parameters and guidelines.

Parameter	Unit	*Trigger Values Freshwater Receiving Environments*[a]	*Trigger Values Marine Receiving Environments*[a]	Where
pH		≤6 and ≥9	≤6 and ≥9	Field
Temp	°C	-	-	Field
Dissolved oxygen[b]	g/m³	>5	-	Field
Water clarity	m	-	-	Field
Turbidity	g/m³	-	-	Lab
Total suspended solids	g/m³	-	-	Lab
Chemical Oxygen Demand	g/m³	250	250	Lab
Dissolved reactive phosphorus	g/m³	-	-	Lab
Total phosphorus	g/m³	-	-	Lab
Total Kjeldahl nitrogen	g/m³	-	-	Lab
Nitrate [c]	g/m³	3.4	-	Lab
Nitrite	g/m³	-	-	Lab
Total ammoniacal nitrogen[d]	g/m³	0.39	1.2	Lab
Total nitrogen	g/m³	-	-	Lab
Hardness	g/m³	-	-	Lab
Metals and metalloids (total and dissolved)				
Copper[e]	g/m³	0.0018	0.003	Lab
Lead[e]	g/m³	0.0056	0.0066	Lab
Zinc[e]	g/m³	0.015	0.023	Lab
Mercury	g/m³	0.0019	0.0007	Lab
Cadmium[e]	g/m³	0.0004	0.014	Lab
Chromium	g/m³	0.006	0.02	Lab
Arsenic	g/m³	-	-	Lab
Nickel	g/m³	-	-	Lab
Total petroleum hydrocarbons	g/m³	15	15	Lab
E. coli [f]	CFU/100 ml	900	-	Lab
Enterococci [g]	CFU/100 ml	-	-	Lab

Table 2 Advice Notes:

a) Where available ANZG (2018) 90% level of protection is used for freshwater and marine receiving environment trigger values. Trigger values for stormwater related effects are determined by subtracting the upstream values. Trigger values for metals and metalloids are based on the dissolved fraction.

b) Dissolved oxygen Attribute State B for one-day minimum from the NPSFM (the 2017 and 2019 versions).

c) Nitrate nitrogen Attribute State B for annual 95th percentile from the NPSFM (the 2017 and draft 2019 versions).

d) For freshwater receiving environments Attribute State B in the NPSFM the 2017 and draft 2019 versions has been used: The ANZG (2018) guidelines for 90% protection are above the NPSFM Bottom Line, therefore the Ammonia triggers are set in accordance with the NPSFM. For marine receiving environments the ANZG (2018) trigger value for 90 % protection has been used.

e) At hardness = 30 g/m^3 as $CaCO_3$.

f) The E.coli guideline values in the freshwater receiving environment falls within Attribute State B in the NPS –FM (the 2017 and 2019 versions).

g) Enterococci guideline values from: MfE Guidelines for Recreational Water Quality 2003.

3.0 Sediment Quality Monitoring

3.1 Sediment Quality Sampling Sites

A stream sediment sample will be collected from upstream of the selected stormwater discharge and downstream in the freshwater receiving environment (after accounting for reasonable mixing) or in coastal catchments in coastal waters (below MHWS) in accordance with Condition 9.1.

3.2 Timing and Frequency of Sediment Quality Sampling

Sediment samples will be collected at all upstream and downstream receiving environment sites twice annually to coincide with the ecological sampling where possible. Sampling will be carried out following at least 3-days of dry weather.

3.3 Roles and Responsibilities for Sediment Quality Sampling

Sediment quality sampling will be carried out by qualified and experienced freshwater scientist.

3.4 Sediment Quality Sampling Methodology

At each sampling site a composite sediment sample will be collected of surface sediment (< 2 cm in depth) that is composed of 10 sub-samples. Each sample will be collected from a length of stream of at least 5 m with sediment sub-samples collected from across the width of the wetted channel working upstream to avoid disturbing the sediment being collected.

The samples will be stored in a plastic container and couriered to the laboratory. Analysis for the metals and hydrocarbons presented in Table 3 will be undertaken at trace detection level and compared with consent trigger values. Sediments will be analysed at the <63 µm fraction.

Table 3: Sediment quality sampling parameters and guidelines.

Parameter	Unit	*Trigger Values Freshwater and Marine Receiving Environments*	Where
Copper	m/kg dry weight	65	Lab
Lead	m/kg dry weight	50	Lab
Zinc	m/kg dry weight	200	Lab
Chromium	m/kg dry weight	-	Lab
Arsenic	m/kg dry weight	-	Lab
Nickel	m/kg dry weight	-	Lab
Total hydrocarbons	g/m³	-	Lab
PAH	g/m³	-	Lab
PCB	g/m³	-	Lab

4.0 Ecological Monitoring

4.1 Sampling Sites

Instream and riparian data and benthic invertebrate sampling will be undertaken at the same upstream and downstream sites from which sediment samples will be collected. Refer to Table 1 and Figure 1 – Figure 3 for site locations.

4.2 Timing and Frequency of Ecological Monitoring

Aquatic habitat and benthic invertebrate sampling will be undertaken once per year during summer low flow conditions at the same time as the dry weather sediment sampling.

4.3 Roles and Responsibilities for Ecological Sampling

Ecological sampling will be carried out by qualified and experienced freshwater ecologist.

4.4 Ecological Monitoring Methodology

Aquatic Habitat

Aquatic and riparian habitat was assessed at each receiving environment site. Habitat can influence benthic invertebrate communities so this data was collected to assist in the interpretation of results. Data will be recorded from the same habitat where the invertebrate samples are collected. Habitat parameters assessed will include:

- Channel width (m) and water depth (m).
- Streambed substrate (percent boulder, cobble, gravel, sand/silt).
- Streambed compaction and embeddedness.
- Organic matter content (percent logs, branches, leaves and detritus).
- Channel shade (%).
- Stream bank erosion (%).

Stream Erosion

Annual measurements of the stream channel width immediately downstream of the discharge sites will be recorded as a stream bank erosion indicator. Refer to Table 1 for details of the site locations. At each site a painted waratah will be installed on the bankside and GPS co-ordinates recorded to ensure exactly the same location is sampled each year. Photographs will be taken at each site and the parameters assessed will include:

- Stream bank erosion (%).
- Channel width (m).
- Channel depth (m).

Benthic Macroinvertebrates

Benthic invertebrates are a key part of stream ecosystems and are good indicators of water and habitat quality. One of the advantages of using benthic invertebrates in a water quality monitoring programme is that benthic invertebrates reflect the cumulative water quality effects of a discharge over the preceding 3 months (depending on stream flow conditions).

Four replicate benthic macroinvertebrate samples will be collected from each site using a sweep net and following the quantitative Protocol C3 or C4 (Stark et al. 2001, MfE 2020) depending on whether the stream is hard bottomed or soft bottomed respectively. Samples will be preserved and identified by an experienced taxonomist using Protocol P3 (full count + sub-sampling) in Stark et al. (2001) and MfE (2020).

Biological indices and metrics calculated from invertebrate data to assess community health and indicative habitat and water quality included taxa number, abundance, Macroinvertebrate Community Index (MCI), Quantitative Macroinvertebrate Community Index (QMCI) and EPT taxa number. A brief description of each of the metrics/indices is presented below:

- *Community composition* – relative abundance of the main taxonomic groups making up the macroinvertebrate communities recorded from each watercourse. Can be used to provide a general indication of stream health based on the relative proportions of water and habitat sensitive and tolerant taxonomic groups.
- *Taxa number* – a measure of the overall health of the benthic macroinvertebrate community and habitat and water quality. In general, high taxa number can be an indication of a healthy waterway. The number of taxa present at a site can be highly variable and can fluctuate depending on many factors including habitat, water quality and sampling effort.
- *Abundance* – a measure of the total number of individuals in a sample. Total abundance tends to increase in the presence of organic/nutrient enrichment but declines in the presence of toxic pollution.
- *Macroinvertebrate Community Index (QMCI)* – the MCI is a presence/absence based index for measuring stream health and in particular organic enrichment. Individual taxa scores range from 1 (pollution tolerant) to 10 (highly pollution sensitive). Community MCI scores range from < 80 (poor) to >120 (excellent) and are interpreted following the guidelines in Table 4.
- *Quantitative Macroinvertebrate Community Index (QMCI)* – the QMCI is a quantitative variant of the MCI and is used for measuring stream health and in particular organic enrichment. Individual taxa scores range from 1 (pollution tolerant) to 10 (highly pollution sensitive). QMCI scores range from <4.00 (poor) to

>6.00 (excellent) and are interpreted following the guidelines in Table 4.

- *EPT taxa number* – a measure of the overall health of the community and of habitat and water quality. A community that has a higher number of water and habitat sensitive taxa from the groups Ephemeroptera (mayflies), Plecoptera (stoneflies) and Trichoptera (caddisflies) (EPT) indicates a healthy community and stream.

Table 4: MCI and QMCI classes and indicative stream health (Stark and Maxted 2007).

Stream health	Descriptions	MCI	QMCI
Excellent	Clean water	>120	>6.00
Good	Doubtful quality/possible mild pollution	100–119	5.00–5.99
Fair	Probable moderate pollution	80–99	4.00–4.99
Poor	Probable severe enrichment	<80	<4.00

5.0 Reporting

An annual report describing the sampling programme methods and presenting and interpreting the results of the stormwater water and stream sediment and biological sampling will be prepared and provided to WBOPDC in October of each year in a format that can be included in the WBOPDC report that must be submitted to the BOPRC in November of each year in accordance with Condition 9.4.

The consent holder must submit to the Regional Council Chief Executive or delegate an annual report of the Waihi Beach and Katikati catchments in November of each year, covering

a) A summary report of any monitoring undertaken including an analysis of the monitoring results;

b) Any stormwater network or stormwater infrastructure upgrade works undertaken;

c) Any stormwater induced erosion, flood risk alleviation, or stormwater quality mitigation measures implemented;

d) Any incidents resulting in unanticipated contaminants entering the stormwater network, the investigation of the cause of the incidents and any remedial actions implemented to avoid a repeat occurrence of the incident;

e) An updated Asset Register; and

f) Any new structures to be included in the consent (Asset Register)

The report will compare the stormwater and the receiving environment water and sediment quality and ecology results with any relevant water quality data held by EBOP. Recommendations for further sampling (if required) will be included in the report.

A 6-yearly report must be prepared by the consent holder in accordance with Condition 9.5, which states:

The consent holder must submit to the Regional Council Chief Executive or delegate a Catchment Management Overview Report to accompany the Catchment Management Plan review, on a 6- yearly basis, from the date of granting of this consent (Refer Advice Note 9). The Report must include, but not be limited to:

a) *An assessment of the catchment flood risk indicating improvements made over time;*

b) *A summary of any stormwater network upgrades and mitigation measures implemented, including treatment devices and low impact design improvements and specifically progress in achieving the requirements of condition 6.2(k);*

c) *An assessment of the effectiveness of previous mitigation methods and identification of any changes from previous methods used;*

d) *State of the receiving environment monitoring and trends;*

e) *A list of consents transferred to this consent;*

f) *A schedule of any changes to the Catchment Management Plans.*

6.0 References

ANZECC 2000. Australia and New Zealand Guidelines for Fresh and Marine Water Quality.

MfE 2020. National Environmental Monitoring Standards - Macroinvertebrates. Collection and Processing of Macroinvertebrate Samples from Rivers and Streams.

Stark, J. D., Boothroyd, I. K. G., Harding, J. S., Maxted, J. R., Scarsbrook, M. R. 2001: Protocols for sampling macroinvertebrates in wadeable streams. Prepared for the Ministry for the Environment. November 2001.

Stark, J., Maxted, J. 2007: A user guide for the Macroinvertebrate Community Index. Cawthron Report No 1166. April 2007.

TCC 2012. Monitoring Plan for Tauranga City Council Comprehensive Stormwater Consents.

APPENDIX A

Resource Consent

Resource Consent

Resource Consent 67093-AP

Following the processing of the Application received on the 9 May 2012, the Bay of Plenty Regional Council has granted the applicant(s):

Western BOP District Council

Consent(s) to:

67093-BC.02	Beds Damming and Diversion	Expiry	30 November 2054
67093-BC.03	River Structure	Expiry	30 November 2054
67093-CC.01	Disturb Coastal Habitat or Plants	Expiry	30 November 2054
67093-CC.02	Occupy Coastal Space	Expiry	30 November 2054
67093-DC.01	Discharge to Water	Expiry	30 November 2054
67093-LC.01	Earthworks or Excavation	Expiry	30 November 2054

The consent(s) are subject to the conditions specified on the attached schedule(s) for each activity. Advice notes are also provided as supplementary guidance, and to specify additional information to relevant conditions.

The Resource Consent hereby authorised is granted under the Resource Management Act 1991 does not constitute an authority under any other Act, Regulation or Bylaw.

DATED at Whakatane this 4th day of February 2020

For and on behalf of The Bay of Plenty Regional Council

Fiona McTavish
Chief Executive

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 14(2) of the Resource Management Act 1991 and Rule WQ R21 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to temporarily divert and/ or dam water in various waterbodies within the western urban catchments of the Western Bay District**

subject to the following conditions:

1 Purpose

1.1 To authorise the temporary damming or diversion of water where it is associated with urban stormwater management and maintenance activities.

Advice Note: *For clarity, the purpose of this consent does not include any permanent damming, diversion or re-alignment of any water body listed in Schedule 1 of the Regional Natural Resources Plan, including the construction of stop banks and dams.*

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 subcatchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets which are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any work in a freshwater body that will cause damming or diversion of the water. Notification must include details of who is responsible for on site management and ensuring compliance with consent conditions (see Advice Note 2).

5.2 Within 5 working days of completion of damming or diversion works authorised under this consent, the consent holder must notify the Chief Executive of the Regional Council or delegate.

Advice Note: *The purpose of the notification is to set up a final inspection meeting to verify compliance with the Damming and Diversion Plan required by condition 6.1.*

6 Damming and Diversion of Water

6.1 The consent holder shall provide to the Chief Executive of the Regional Council or delegate, for certification, a Damming and Diversion Plan, one month prior to any damming or diversion works commencing. The Plan must be prepared by a suitably qualified environmental engineer or environmental specialist and include the proposed work methodology and mitigation measures.

Advice Note: *The purpose of certification is to ensure that effects on habitat and instream and riparian ecology are appropriately mitigated and that any temporary effects are appropriately remediated.*

6.2 For any construction or maintenance work that requires temporary damming or diversion of a river or stream, the consent holder must:

a) Ensure that the temporary damming or diversion does not adversely affect the ecology or habitat of a wetland to any more than a minor extent;

b) Ensure that the temporary damming or diversion does not cause water flow downstream to fall below the instream minimum flow (if there is one set in a regional plan), or adversely affect any authorised water take;

c) Effectively stabilise any erosion or scour that results from the temporary damming or diversion of the water;

d) Ensure that the temporary dam or diversion structure(s) is maintained in a sound condition for the purpose for which it was constructed and is kept clear of debris;

e) Ensure that machinery is kept out of the bed of rivers and streams where practicable and that no machinery refuelling or fuel storage occurs in a location where fuel can enter the water body;

f) Take all practicable measures to avoid vegetation, soil, slash or other debris being deposited in a water body and ensure that on completion of any work on the banks or within the bed of a stream, that all debris and construction materials are removed from the bed and banks of the water body;

g) Not cause a permanent net loss of aquatic habitat area or a permanent reduction in aquatic habitat quality. This includes degraded or modified aquatic habitat (see Advice Note 6);

h) Provide for fish passage;

i) Undertake any temporary damming or diversion works outside of the fish spawning and juvenile migration periods listed in the Regional Natural Resources Plan, unless written approval to do otherwise is provided by the Chief Executive of the Regional Council or delegate; and

j) Undertake any additional measures as required by the Chief Executive of the Regional Council or delegate, to avoid, remedy or mitigate any actual or potential adverse effects on the water body as a result of the proposed works.

6.3 The banks of a water body must be reinstated to their original contour after completion of the

temporary damming or diversion of water.

7 Signage

7.1 Prior to the commencement of any damming or diversion works under this consent, the consent holder must erect a prominent sign adjacent to the entrance of site works, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

a) The name of the project;

b) The name of the main site contractor;

c) A 24-hour contact telephone number for the consent holder or appointed agent;

d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on the environment as a result of the temporary damming or diversion of water, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to remediate any effect that was not anticipated at the time of granting consent.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent shall be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification shall include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 If no alternative measures can be implemented on site, habitat creation or enhancement nearby may be considered under a separate resource consent.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Use, place, reconstruct, alter or remove structures in or on the beds of various water bodies within the western catchments of the Western Bay District; and**
- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Disturb the beds of various waterbodies within the western catchments of the Western Bay District; and**
- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Deposit material in the beds of various waterbodies within the western catchments of the Western Bay District**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to:

a) To authorise stormwater related activities including the use, maintenance, installation and reconstruction of structures (in streams and rivers),

b) To authorise stormwater related activities including the use, maintenance and installation of stormwater treatment devices; and

c) Vegetation management, including vegetation removal, planting and weed control.

Advice Note: *The purpose of this consent does not include:*

a) The installation of stormwater infrastructure and treatment devices within greenfield development sites and new subdivisions;

b) The installation of new rock revetment, training groynes or any other permanent structure in any water body listed in Schedule 1 of the Regional Natural Resources Plan or within the Coastal Margin, unless authorised by a consent and transferred to this consent;

c) Vegetation removal authorised by Consent 67093 LC.

2 Location

2.1 The urban catchments covered by this consent includes

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater

Subcatchments - Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets which are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of the following work authorised under this consent:

a) Any stormwater infrastructure installation or structure reconstruction in the bed of a water body.

b) Any work in, or disturbance of, the bed of a water body.

Notification must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

5.2 Within 30 working days of the completion of any stormwater infrastructure installation or structure re-construction works authorised under this consent, the consent holder must submit a Statement, signed by a suitably qualified Charted Professional Engineer, to certify that:

a) the works have been undertaken in accordance with good engineering practice; and

b) that the structure(s) have been installed or re-constructed in accordance with the current version of the Bay of Plenty Regional Council's Hydrological and Hydraulic Guidelines, the Erosion and Sediment Control Guidelines and the requirements of this consent (see Advice Note 2).

6 Maintenance, Construction and Reconstruction Works

6.1 The consent holder must undertake inspection and maintenance of stormwater structures, ponds and outlets in accordance with information submitted with the application for this consent including:

a) The current Asset Management Plan; or

b) Any other maintenance plan, included in the Catchment Management Plans.

6.2 The consent holder must ensure that stormwater outlets and associated erosion protection structures are operated and maintained in an effective working order at all times

6.3 At the same time that the outlet structures are inspected under condition 6.1, erosion effects must be assessed and remedied in accordance with condition 6.4.

6.4 Any erosion or scour of the banks of a river or stream resulting from either the presence of a

stormwater outlet(s), the discharge from an outlet(s) or from works authorised by this consent must be effectively stabilised and remedied.

6.5 For any works authorised by this consent, including the installation, maintenance, demolition, alteration, upgrade or reconstruction of existing outlets or structures, the consent holder must submit an erosion and sediment control plan to the Chief Executive of the Regional Council or delegate no later than five working days prior to the commencement of the works, for certification.

Advice Note: *The purpose of certification is to ensure that the erosion and sediment control plan meets the requirements of the Regional Council's "Erosion and Sediment Control Guidelines for Land Disturbing Activities," or its successor.*

6.6 New stormwater infrastructure must be designed by a suitably qualified Charted Professional Engineer. Where the new stormwater infrastructure includes a pond, embankment, stopbank, floodgate, spillway or any detention structure, the consent holder must consult with the Chief Executive of the Regional Council or delegate prior to detailed design and provide to the Chief Executive of the Regional Council or delegate the final design, for certification, prior to commencement of works.

Advice Note: *The purpose of certification is to ensure that new stormwater infrastructure meets the current version of the Bay of Plenty Regional Council's Hydrological and Hydraulic Guidelines, the Erosion and Sediment Control Guidelines and the requirements of this consent.*

6.7 For any construction or maintenance work that requires work within the bed of a stream, the consent holder must:

a) Ensure that any temporary damming or diversion does not adversely affect the ecology or habitat of a wetland to any more than a minor extent;

b) Effectively stabilise any erosion or scour that results from the stormwater related activities or vegetation management;

c) Ensure that machinery is kept out of the bed of rivers and streams where practicable and that no machinery refuelling or fuel storage occurs in a location where fuel can enter the water body;

d) Take all practicable measures to avoid vegetation, soil, slash or other debris being deposited in a water body and ensure that on completion of any work on the banks or within the bed of a stream, that all debris and construction materials are removed from the bed and banks of the water body;

e) Not cause any decrease in the length of any stream or river channel or any more than localised increases in the slope of the stream or river bed;

f) Not cause a permanent net loss of aquatic habitat area or a permanent reduction in aquatic habitat quality. This includes degraded or modified aquatic habitat (see Advice Note 7);

g) Provide for fish passage;

h) Undertake any works outside of the fish spawning and juvenile migration periods listed in the Regional Natural Resources Plan, unless written approval to do otherwise is provided by the Chief Executive of the Regional Council or delegate; and

i) Limit any dredging required to maintain conveyance capacity at outlets or in water bodies to the minimum area and volume required for the clearance of accumulated sediments; and

j) Undertake any additional measures as required by the Chief Executive of the Regional Council or delegate, to avoid, remedy or mitigate any actual or potential adverse effects on the water body as a result of the proposed works.

6.8 The banks of the water body must be effectively stabilised after completion of the works.

7 Signage

7.1 Prior to the commencement of stormwater infrastructure installation, reconstruction or maintenance

works under this consent, the consent holder must erect a prominent sign adjacent to the site, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

a) The name of the project;

b) The name of the main site contractor;

c) A 24-hour contact telephone number for the consent holder or appointed agent;

d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on bed or banks of water bodies as a result of the presence of the stormwater infrastructure, its installation or maintenance, or as a result of vegetation management, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for a review of a Catchment Management Plan, conditions or to require remedial works, as appropriate.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 Streams and modified watercourses (including land drainage canals with ecological values) are as defined

in the Bay of Plenty Regional Natural Resources Plan.

7 If no alternative measures can be implemented on site, habitat creation or enhancement nearby may be considered under a separate resource consent.

8 Reference: Bay of Plenty regional Council Hydrological and Hydraulic Guidelines.

9 Where rivers or streams are integrated into the primary stormwater system, the design criteria downstream of that point must be as per the current version of the Hydrological and Hydraulic Guidelines.

10 Future review/update of the Development Code should take into account climate change effects to 2090.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 12(1)(c) and (d) of the Resource Management Act 1991 and Rule DD14 of the Regional Coastal Environment Plan to undertake a discretionary activity being disturbing, depositing material or dredging of the bed of the Coastal Marine Area**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise dredging and disturbance of the seabed and deposition of material in the Coastal Marine Area (CMA) associated with stormwater infrastructure maintenance or erosion protection.

Advice Note: *For clarity, this consent does not provide for any dredging, deposition or disturbance in a Coastal Biodiversity A area as identified in the Regional Coastal Environment Plan.*

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which disturbance, deposition on, or dredging of the seabed is authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any work resulting in the dredging or disturbance of the seabed or deposition of a substance in the coastal marine area (CMA). Notification at this time must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

Advice Note: *The CMA is defined as the foreshore, seabed, coastal water and airspace above the water of which the landward boundary is the line of mean high water spring, except where that line crosses a river, then the landward boundary is the lesser of one kilometre upstream or a distance five times the width of the river mouth.*

5.2 Within 30 working days of completion of any stormwater related works authorised under this consent, the consent holder must submit a Statement, signed by a suitably qualified person (e.g. coastal ecologist, Chartered Professional Engineer), to certify that the works have been undertaken in accordance with best practice.

6 Dredging, Disturbance and Deposition in the Coastal Marine Area

6.1 Any erosion or scour of the foreshore or seabed resulting from works authorised by this consent must be effectively stabilised.

6.2 Prior to the commencement of any dredging, disturbance and deposition works the consent holder must provide to the Chief Executive of the Regional Council or delegate a Works Plan, prepared and certified by a suitably qualified and experienced person(s). The Works Plan certification must include, but not be limited to confirmation that:

(a) The work methodology meets best practice;

(b) The work methodology minimises foreshore and seabed disturbance;

(c) The volume and area of any proposed dredging is appropriate;

(d) The disturbance is temporary in nature and that any potential adverse ecological effects will be appropriately avoided, remedied or mitigated.

6.3 Dredging provided for in condition 6.2 must be limited to the minimum area and volume required for the clearance of accumulated sediments at stormwater outlets to maintain their conveyance capacity and must not exceed 100 cubic metres per outlet for any single dredging event.

6.4 Works involving the dredging or disturbance of the seabed and deposition of material in the CMA must be overseen by a suitably qualified engineer, coastal ecologist or other suitably qualified person.

7 Signage

7.1 Prior to the commencement of works authorised under this consent, the consent holder must erect a prominent sign adjacent to the entrance of site works, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

(a) The name of the project;

(b) The name of the main site contractor;

(c) A 24 hour contact telephone number for the consent holder or appointed agent;

(d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on the environment as a result of any dredging, disturbance or deposition works in the CMA, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional mitigation, monitoring, or remedial works, as appropriate.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 12(2)(a) of the Resource Management Act 1991 and Rules SO10 and SO11 of the Regional Coastal Environment Plan to undertake a discretionary activity being to occupy space in the Coastal Marine Area**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise the occupation of space in the Coastal Marine Area by stormwater infrastructure.

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which the occupation of space in the Coastal Marine Area is authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Occupation of Space in the Coastal Marine Area (CMA)

5.1 The consent holder must ensure that discharge structures in the CMA authorised by this consent do not impede public access to the CMA, except where the restriction of access is necessary to ensure public health and safety.

5.2 The consent holder must maintain all discharge structures in the CMA authorised by this consent in a structurally sound state.

6 Term of Consent

6.1 This consent shall expire on 30 November 2054.

7 Resource Management Charges

7.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

8 The Consent

8.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 15(1)(b) of the Resource Management Act and Rule CD 6 of the pre-operative Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to discharge stormwater to coastal water**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R21 of the Bay of Plenty Regional Natural Resources Plan being a restricted discretionary activity to discharge stormwater to water within the western urban catchments of the Western Bay District; and**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R23 of the Bay of Plenty Regional Natural Resources Plan being a restricted discretionary activity to discharge stormwater to land where it may enter water within the western urban catchments of the Western Bay District; and**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R8 of the Bay of Regional Plenty Natural Resources Plan being a discretionary activity to discharge stormwater to water or to land where it may enter water within the western urban catchments of the Western Bay District; and**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to:

a) Authorise the discharge of stormwater from urban areas within the Western Catchments (refer to condition 2) of the Western Bay District; associated with the resource consents listed in Schedule 1 (as may be updated to include applicable consents which post-date the decision on this CSC); and

b) To authorise temporary discharges of sediment contaminated stormwater from earthworks related to the replacement of stormwater infrastructure; and

c) To incorporate existing stormwater discharges associated with the existing resource consents listed in Schedule 1: List of stormwater related consents in the Catchment Management Plans WSZ1, WSZ2 and WSZ3 submitted in support of this application (as updated on 23 January 2020).

Advice Notes: *The purpose of this consent does not include:*

a) Discharges of contaminated stormwater from industrial and trade premises. Contaminant discharges from industrial and trade premises are to be authorised by the Regional Council.

b) The discharge of stormwater from new urban development including greenfield development sites and new subdivisions. These activities will require authorisation by a third-party resource consent, which may be transferred to the Western Bay of Plenty District Council

2 Location

2.1 The urban catchments covered by this consent includes:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets from which discharges are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application together with the stormwater discharges listed in Schedule 1: List of stormwater related consents in the Catchment Management Plans WSZ1, WSZ2 and WSZ3 submitted in support of this application (as updated on 23 January 2020).

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, within 10 working days after the grant of this consent the details of who is responsible for management of the stormwater network and compliance with the conditions of this consent (see Advice Note 2).

5.2 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, of all spills, accidents or similar incidents that result in contaminants entering the stormwater network authorised under this consent. Such notification must be undertaken by contacting the Regional Council Pollution Hotline (see Advice Note 3).

6 Stormwater Management

6.1 Stormwater must be managed in general accordance with the latest version of the following standards and Guidelines:

a) The Regional Hydrological and Hydraulic Guidelines;

b) The Stormwater Strategy for the Bay of Plenty Region and the Stormwater Management Guidelines for the Bay of Plenty Region;

c) The New Zealand Building Code; or

d) Any alternative standards certified as appropriate by the Chief Executive of the Regional Council or delegate.

6.2 Discharges from all new stormwater infrastructure and any upgrades of existing stormwater infrastructure must meet the following design criteria:

a) Overland flow paths must allow the passage of a 2% AEP (Q50) storm event without floodwater entering buildings;

b) The primary reticulated stormwater network must have capacity to hold the 20% AEP (Q5) storm event, in accordance with the Western Bay of Plenty Development Code;

c) Stormwater infrastructure upgrades must not cause or exacerbate flooding by constricting waterways, recognised floodplains or overland flow-paths;

d) Stormwater model downstream design boundaries must meet the criteria set out in the Regional Hydrological and Hydraulic Guideline criteria;

e) Rainfall design must use NIWA HIRDS V4, or an alternative certified by the Chief Executive of the Regional Council or delegate, and include climate change to 2090;

f) Any upgrades of existing stormwater infrastructure must result in a peak design stormwater discharge of no more than 80% of the pre-development peak stormwater discharge for the 1% AEP (Q100) storm event;

g) Any upgrades of existing stormwater infrastructure must result in a peak design stormwater discharge of no more than 100% of the pre-development peak stormwater discharge for the 50%AEP (Q2) and 10% AEP (Q10) storm events;

h) Scour and erosion protection of outlets, streams, channels and overland flow paths must cater for at least the 5% AEP (Q20) storm event flows without damage to the erosion protection;

i) Upgrades of existing stormwater infrastructure involving ponds and embankments (and their foundations) used to hold water must be designed and certified by a Chartered Professional Engineer;

j) Where upgrades of existing stormwater infrastructure involve ponds, the ponds must be provided with a spillway to carry the 1% AEP (Q100) flood with a minimum of 0.5 metre embankment freeboard;

k) Any upgrades of existing stormwater infrastructure must result in stormwater system discharges being treated using a method consistent with the standards and guidelines in condition 6.1 that traps at least 75% of the contributing catchment's long-term sediment discharge;

l) Elevated water temperature in ponds and open channels must be mitigated where practical by riparian planting;

m) Structures in the beds of waterways must not restrict flows or cause more than localised increases in flow velocities to any more than a minor extent, nor impede fish passage;

n) Alterations to natural/existing waterways resulting from upgrades of existing stormwater infrastructure must be designed to avoid a net loss of aquatic habitat area or a reduction in aquatic habitat quality. This includes degraded or modified aquatic habitats. Where it is not practical to avoid a net loss of aquatic habitat or a reduction in aquatic habitat quality, the residual loss or reduction shall be offset through the creation or enhancement of aquatic habitat in the same catchment. Any proposed offsets must be certified by the Chief Executive of the Regional Council or delegate; or

o) Any alternative design criteria approved by the Chief Executive of the Regional Council or delegate.

6.3 New stormwater infrastructure must be designed by a suitably qualified Chartered Professional Engineer.

6.4 The consent holder must provide a signed completion certificate from a suitably qualified Chartered Professional Engineer to verify that any new stormwater infrastructure meets the design criteria set in condition 6.2 or any alternative design criteria approved by the Chief Executive of the Regional Council or delegate in accordance with condition 6.2(o).

6.5 The consent holder must implement the following general principles of stormwater management (refer Advice Note 6):

a) To encourage, and where appropriate for new development or redevelopment require, the use of Low Impact Design solutions as a preferred option to stormwater management where this is practicable;

Advice Note: *Examples of Low Impact Design Solutions may include, but are not limited to the use of grassed swales and rain gardens for stormwater treatment and flow attenuation.*

b) The avoidance or mitigation of erosion resulting from the discharge of stormwater;

c) The use of ground soakage as a preferred option for the disposal of stormwater from roofs of buildings where such soakage does not exacerbate subsurface instability;

d) The use of indigenous and site appropriate riparian planting to achieve improved water quality and habitat outcomes. Riparian planting should provide for erosion control while not impeding channel capacity, flows or stormwater system maintenance;

e) The creation, enhancement, protection and use of wetlands to achieve improved water quality and biodiversity outcomes;

f) The use of stormwater detention ponds to provide treatment and attenuation of stormwater where other low impact design solutions are not practicable.

6.6 The consent holder must undertake stormwater flood modelling on a catchment basis that includes climate change factors to 2090, to be included in the first six yearly review of the Catchment Management Plans (refer Advice Note 7).

6.7 The modelling required by condition 6.6 must be used as a tool to assess the effects of urban expansion, changes in stormwater management and stormwater infrastructure upgrades. Revised flood maps based on this modelling must be added to the CMP's as part of each six yearly CMP review.

6.8 Flood mitigation and reduction measures to address flood risks identified through the modelling required by condition 6.6, must be scheduled on a risk and priority basis in the consent holder's Long-Term Plan (budget) and the Asset Management Plan (works).

6.9 Any new urban development incorporated into this consent, must not increase downstream flooding and must provide for stormwater treatment prior to discharge into a water body.

6.10 All stormwater network assets authorised by this consent must be mapped in a GIS database, within 12 months of the granting of this consent, and be made available to the Chief Executive of the Regional Council or delegate on request.

6.11 The schedule of works identified in the Asset Management Plan must be linked to the GIS database required by condition 6.10 and be made available to the Chief Executive of the Regional Council or delegate on request.

6.12 The consent holder must ensure that all stormwater ponds are maintained so as to retain their initial design capacity at all times, to the satisfaction of the Chief Executive of the Regional Council or delegate.

6.13 The consent holder must ensure that all treatment devices, including, but not limited to debris deflectors, catchpits, swales and constructed wetlands are maintained in sound operating condition at all times, to the satisfaction of the Chief Executive of the Regional Council or delegate.

6.14 All sediment and debris removed from stormwater treatment systems and ponds as a result of maintenance operations must be removed off-site to an authorised facility or placed in a suitable location where it cannot re-enter a water body.

7 Catchment Management Plans

7.1 The consent holder must manage the catchment(s) in general accordance with the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of this application.

7.2 Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of this application, must be reviewed and updated to reflect land use changes and urban development within the catchments and the requirements of this consent, within 6 months after this consent is granted and

thereafter on a six yearly basis (calculated from the date of granting this consent).

7.3 The reviewed Stormwater Catchment Management Plans required under condition 7.2 must include:

a) Identification of catchment stormwater management issues.

b) Statutory and non-statutory mechanisms used in the Catchment Management Plan to achieve compliance with the conditions of this consent. These mechanisms may include:

i. Relevant objectives, policies and performance standards in the Long-Term Plan;
ii. Works and standards identified in the Annual Plan;
iii. Relevant bylaws; and
iv. Relevant codes, standards and guidelines;

c) An accurate asset register, which includes:

i. Location of stormwater outlets and treatment devices;
ii. All stormwater assets, including the reticulated network, all open channels, ponds, constructed wetlands, treatment devices and overland flow paths;
iii. An assessment of the condition of each asset;
iv. The flood conveyance capacity of the reticulated network, including all open channels and overland flow paths;
v. A priority rating for scheduled upgrades based on the asset condition (iii) and conveyance capacity (iv) or flood risk alleviation measures;
vi. Maintenance requirements for each stormwater asset; and
vii. An inspection, maintenance and works schedule planned for the next six years.

The asset register must be updated annually.

d) A Mitigation Plan that identifies all areas of the catchment, including the receiving environment, that require any form of mitigation from the effects of urban stormwater discharges. Mitigation may include, but is not limited to: low impact design upgrades, erosion protection, flood protection, and riparian planting. The identified mitigation must be prioritised and scheduled for the next 6 year period.

e) A Monitoring Plan, including monitoring locations, frequency of monitoring and reasonable mixing zones. The locations shall be provided on a map with GIS co-ordinates. The Monitoring Plan must include monitoring the discharge quality of representative stormwater discharges and representative receiving environment sediment and macroinvertebrate conditions.

f) Identification of areas developed for urban related activities in the past 6 year period and areas available for future urban development;

g) Updated flood maps and identification of measures undertaken to avoid, remedy, mitigate or manage any actual and potential adverse effects arising from the flood events (this may be included in the Mitigation Plan).

h) An incident management and reporting procedure.

i) A summary of any contaminant source investigations undertaken in the past 6 year period and how stormwater management will address both short and long term issues for any stormwater discharge quality trigger value exceedances.

j) Details of planned industry and community education and awareness programmes.

k) Where available and applicable, the cultural values of iwi and hapu with mana whenua within the catchment area and the related receiving environment, and details of how such cultural values are integrated into stormwater management in that area.

l) A list of discharge and structure consents which have been transferred to the consent holder, since this CSC consent was granted.

7.4 New stormwater infrastructure to be included in the CMP must clearly identified in each six-yearly review of the CMP.

7.5 The Monitoring Plan required by condition 7.3(e) must be prepared, and certified as appropriate, for the catchment and the receiving environment, by a suitably qualified environmental scientist(s).

7.6 Any update to the Monitoring Plan, Asset Management Plan or Mitigation Plan shall be forwarded to the Chief Executive of the Regional Council or delegate for certification prior to implementation.

***Advice Note**: Certification by the Regional Council will be undertaken by the following Regional Council staff or contracted staff:*

a) Plans relating to water quantity, e.g. Stormwater infrastructure design, modelling, erosion protection structures, will be certified by a suitably qualified engineer.

b) Proposals, plans and designs relating to stormwater treatment will be certified by a suitably qualified environmental engineer and/ or environmental specialist.

c) Monitoring Plans, monitoring results trend analysis and proposed mitigation relating to effects on the receiving aquatic environment and the coastal marine environment will be undertaken by a suitably qualified ecologist.

d) Monitoring Plans, monitoring results and trends relating to stormwater quality and instream water quality will be undertaken by a suitably qualified environmental specialist.

e) The overall Catchment Management Plan and plan reviews will be certified as complete by the Regional Council Compliance Officer after the various components listed in a) to d) above have been certified by the relevant experts.

8 Stormwater Quality

8.1 Where the quality of receiving waters into which stormwater is discharged exceeds the trigger levels listed Table 1 of Appendix A to this consent after reasonable mixing, the consent holder must implement the actions identified in condition 9.2.

8.2 Where sediment in the receiving environment into which stormwater is discharged exceeds the trigger levels listed in Table 2 of Appendix A to this consent, the consent holder must implement the actions identified in condition 9.2.

8.3 The consent holder may amend the trigger values in Appendix A to be consistent with any amendments to the water quality classifications in the Regional Natural Resources Plan or the inclusion of any new standard in the National Policy Statement for Freshwater Management or national environmental standards. However, prior to being applied, any amended Appendix A trigger values must be certified by the Regional Council Chief Executive or delegate.

8.4 No stormwater discharge resulting from the exercise of this consent shall result in any of the following after reasonable mixing:

a) The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;

b) Any conspicuous change in the colour or visual clarity;

c) Any emission of objectionable odour;

d) Any significant adverse effects on aquatic life;

e) The natural temperature of the water being changed by more than three degrees Celsius; or

f) Aquatic organisms being rendered unsuitable for human consumption by the presence of contaminants.

9 Discharge Monitoring and Reporting

9.1 The Monitoring Plan required by condition 7.3(e) must include the following specifications:

a) Representative samples of stormwater discharges must include the following locations:

(i) Upstream of “discharge”;
(ii) Downstream of the “discharge” in the freshwater receiving environment (after accounting for

reasonable mixing);
(iii) In coastal water (below MHWS).

b) Representative sediment samples must be taken at a depth of sediment not greater than 2cm and composed of not less than 10 sub-samples taken from a minimum of 5 metres of stream length at the discharge, upstream and downstream locations identified in condition 9.1(a). Analysis for metals shall be undertaken at trace detection level.

c) All sampling under (a) and (b) must be undertaken within 30 minutes of the commencement of a storm event, where practicable, but no later than 60 minutes after the commencement of a storm event.

d) Annual measurements of the stream channel width downstream of representative urban stormwater discharges into receiving freshwater streams as a stream bank erosion indicator. The exact location(s) of the channel measurements must be provided to the Regional Council Chief Executive or delegate within 12 months of granting this consent (map and GPS Co-ordinates). All subsequent measurements must be taken annually at the same location(s).

e) Investigations of the cause of streambank erosion or scour that has resulted in any increase of 5% or more in stream channel width from the grant of this consent.

f) All water and sediment analyses must be carried out by an IANZ registered laboratory.

g) All macroinvertebrate surveys must be undertaken by a suitably qualified and experienced ecologist.

9.2 In the event that receiving environment monitoring identifies that any water quality trigger value referred to in condition 8.1 is exceeded, a further sample shall be taken within 2 months. If any water quality trigger value referred to in condition 8.1 is exceeded in three consecutive sampling results for the same site, the consent holder must undertake a contaminant source investigation within 3 months of the third exceedance and submit a report to the Regional Council Chief Executive or delegate detailing:

a) The potential source(s) of high contaminant loads within the catchment of the respective network;

b) The options available to limit the further discharge of the high contaminant loads into the respective network;

c) The ability to implement potential remedial options as outlined in (b) above;

d) The selection of specific remedial option(s) to address the breach(es) in trigger levels;

e) Additional monitoring requirements to further characterise the discharge and/or post implementation of the remedial option(s) to establish compliance with trigger levels; and

f) The timeline for implementation of the selected remedial option(s) and/or monitoring.

9.3 The consent holder must implement the selected options as per the timeline identified in the report provided under condition 9.2.

9.4 The consent holder must submit to the Regional Council Chief Executive or delegate an annual report for the Waihī Beach and Katikati catchments, in November of each year, covering:

a) A summary report of any monitoring undertaken including an analysis of the monitoring results;

b) Any stormwater network or stormwater infrastructure upgrade works undertaken;

c) Any stormwater induced erosion, flood risk alleviation, or stormwater quality mitigation measures implemented;

d) Any incidents resulting in unanticipated contaminants entering the stormwater network, the investigation of the cause of the incidents and any remedial actions implemented to avoid a repeat occurrence of the incident;

e) An updated Asset Register; and

f) Any new structures to be included in the consent (Asset Register)

9.5 The consent holder must submit to the Regional Council Chief Executive or delegate a Catchment Management Overview Report to accompany the Catchment Management Plan review, on a 6-yearly basis, from the date of granting of this consent (Refer Advice Note 9). The Report must include, but not be limited to:

a) An assessment of the catchment flood risk indicating improvements made over time;

b) A summary of any stormwater network upgrades and mitigation measures implemented, including treatment devices and low impact design improvements and specifically progress in achieving the requirements of condition 6.2(k);

c) An assessment of the effectiveness of previous mitigation methods and identification of any changes from previous methods used;

d) State of the receiving environment monitoring and trends;

e) A list of consents transferred to this consent;

f) A schedule of any changes to the Catchment Management Plans.

10 Coastal Erosion

10.1 Should the training groynes at 3 Mile Creek (Consent 62914) or the dune enhancement works (Consent 62913) not be re-consented upon the expiry in 2032 of their current consents, the consent holder must provide a monitoring and mitigation report to the Regional Council Chief Executive or delegate for certification prior to the groynes being removed. The report must include the following:

a) A methodology for monitoring the adjacent shoreline at the stream mouth to assess the effect of the stormwater discharges authorised under this consent on coastal erosion of WBOPDC Reserves legally described as Lot 18 and 19 DPS 22035 and Lot 25 DPS 6534;

b) Measures to mitigate and/or remedy erosion of the adjacent shoreline at the stream mouth if the stormwater discharges authorised under this consent are, through monitoring, found to be exacerbating coastal erosion of WBOPDC Reserves legally described as Lot 18 and 19 DPS 22035 and Lot 25 DPS 6534. The mitigation and/or remedial measures must be supported by a pre-determined trigger for implementation which can be actively monitored through the methodology described above.

10.2 The consent holder must implement the monitoring set out in the report required under condition 10.1 within 1 month of receiving the Regional Council Chief Executive or delegate's certification.

10.3 The consent holder must implement any measures to mitigate and/or remedy erosion required under condition 10.1 as soon as practicable following the implementation trigger being met taking into account the measures may require resource consent. The report required by condition 10.1 must be prepared by appropriately qualified and experienced expert(s).

10.4 The consent holder must share the results of the monitoring and any mitigation proposed for implementation under condition 10.1 above with private property owners located on Glen Isla Place

10.5 The consent holder must apply for any consents required for the proposed erosion mitigation measures identified in condition 10.1.

11 Review of Conditions

11.1 The Regional Council may, on receipt of a 6 yearly Catchment Management Overview and Monitoring Report or upon receiving notice of any exceedance of the trigger values in Appendix A, serve notice on the consent holder under s.128(1)(a)(ii) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional monitoring or treatment of stormwater, or to require an environmental impact investigation, if appropriate.

11.2 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is a decline in the habitat quality or ecological value of the receiving environment, as a result of a stormwater discharge authorised by this CSC, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for a review of a Catchment Management Plan, or additional monitoring, treatment, discharge control conditions or erosion protection relating to stormwater discharges authorised by this CSC, as appropriate.

11.3 The Regional Council may serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review condition 6.2 of this consent, to align the design criteria for new infrastructure with any updated criteria required to manage climate change effects.

11.4 The Regional Council may serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the trigger limits set in Appendix A to this consent, to align with any limits set in National Policy Statement(s), National Environmental Standards or regulations, or an Operative Regional Plan.

11.5 The Regional Council may, on completion of any environmental impact investigation or compliance report that the stormwater discharge is causing erosion in the receiving environment, including stream channel widening or scour, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional monitoring, modelling and remedial action.

12 Term of Consent

12.1 This consent shall expire on 30 November 2054.

13 Resource Management Charges

13.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

14 The Consent

14.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification shall include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 It is recommended that the Western Bay District Council's Development Code be updated to require stormwater treatment and low impact design.

7 Modelling of stormwater should include a nested design storm that includes the full range of design intensities up to 24 hours and downstream boundary conditions should be selected in accordance with the BOPRC Hydrological and Hydraulic Guidelines. Note that this is at peak tide and a dynamic downstream boundary may be necessary for design of some systems.

8 Stormwater quality samples should be taken within the first 30 minutes of a storm event to capture the first flush and freshwater receiving environment sampling is the most representative if taken during the storm event, where it is practical to do so.

9 The Catchment Overview Report (condition 9.5) is intended as a summary of the catchment management outcomes for the past six years, whereas the CMP Review and updated CMP document how the catchment will be managed in the upcoming six year period.

10 This consent does not authorise discharges into the consent holder's system from high risk facilities/sites as identified in Schedule 4 of the Regional Natural Resources Plan unless a separate discharge consent is obtained, transferred to the consent holder, and included as part of this comprehensive stormwater consent.

11 Existing privately held stormwater discharge consents do not form part of this consent unless transferred to the consent holder.

12 On granting of this consent the consent holder is advised to provide a signed surrender form to the Regional Council for the surrender of all current consents held by the consent holder (listed in Appendix J of the Catchment Management Plans).

13 Where rivers or streams are integrated into the primary stormwater system, the design criteria downstream of that point must be as per the Hydrological and Hydraulic Guidelines.

14 Future review/update of the Development Code should take into account climate change effects to 2090.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 9(2)(a) of the Resource Management Act and Rule LM R 4 of the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity being to carry out earthworks in the coastal margin, between 0 to 20 metres from the Coastal Marine Area**
- **Under section 9(2)(a) of the Resource Management Act 1991 and Rule LM R8 of the Bay of Plenty Regional Natural Resources Plan to undertake a controlled activity being the land and soil disturbance by vegetation clearance in an ephemeral flow path not in the erosion hazard zone**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise earthworks required for the maintenance or reconstruction of stormwater infrastructure in the coastal margin and vegetation clearance in an ephemeral flow path that is not in the erosion hazard zone.

2 Location

2.1 The urban catchments covered by this consent includes:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which earthworks required for their maintenance or reconstruction are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any earthworks in the coastal margin or the start of any vegetation removal in an ephemeral flow path that is not in the erosion hazard zone. Notification at this time must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

5.2 The consent holder must notify the Chief Executive of the Regional Council or delegate within five working days of completion of any earthworks in the coastal margin and the completion of any vegetation removal in an ephemeral flow path that is not in the erosion hazard zone.

6 Earthworks and Vegetation Clearance

6.1 Earthworks in the coastal margin authorised by this consent must not exceed an area of 100 square metres and a volume of 50 cubic metres per "event" to install, maintain, or reconstruct stormwater related infrastructure.

6.2 For any earthworks or vegetation removal authorised by this consent, the consent holder must submit an erosion and sediment control plan to the Chief Executive of the Regional Council or delegate no later than five working days prior to the commencement of the works, for certification.

Advice Note: *The purpose of the certification of the erosion and sediment control plan is that it meets the requirements of the Regional Council's "Erosion and Sediment Control Guidelines for Land Disturbing Activities," or its successor.*

6.3 Erosion and sediment controls must be installed prior to the commencement of works.

6.4 Additional erosion and sediment controls must be installed, if required by the Chief Executive of the Regional Council or delegate.

6.5 The consent holder must ensure that there is no tracking of sediment off-site.

6.6 Any vegetation removed must either be removed from the site, or placed in a manner that ensures it will not be mobilised by stormwater into a watercourse, obstructs or diverts the flow of water, or causes erosion or instability of the banks or beds of watercourse.

6.7 For the removal of any exotic plant species that pose a biosecurity risk, the consent holder must submit a removal methodology and disposal plan to the Chief Executive of the Regional Council or delegate for certification.

6.8 Any earthworks site or vegetation removal site must be stabilised on completion of the works.

7 Review of Conditions

7.1 The Regional Council may, on completion of any environmental impact investigation or compliance report, that shows there is an adverse effect on the environment as a result of the works undertaken, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to provide for additional controls, as appropriate.

8 Term of Consent

8.1 This consent shall expire on 30 November 2054.

9 Resource Management Charges

9.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

10 The Consent

10.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 Except as provided for by consented activity (a) above, all other earthworks required for the maintenance or installation of the reticulated stormwater network, which is not authorised by this consent, shall be undertaken in accordance with the permitted earthworks Rules of the Regional Natural Resources Plan or be authorised through a resource consent.

2 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

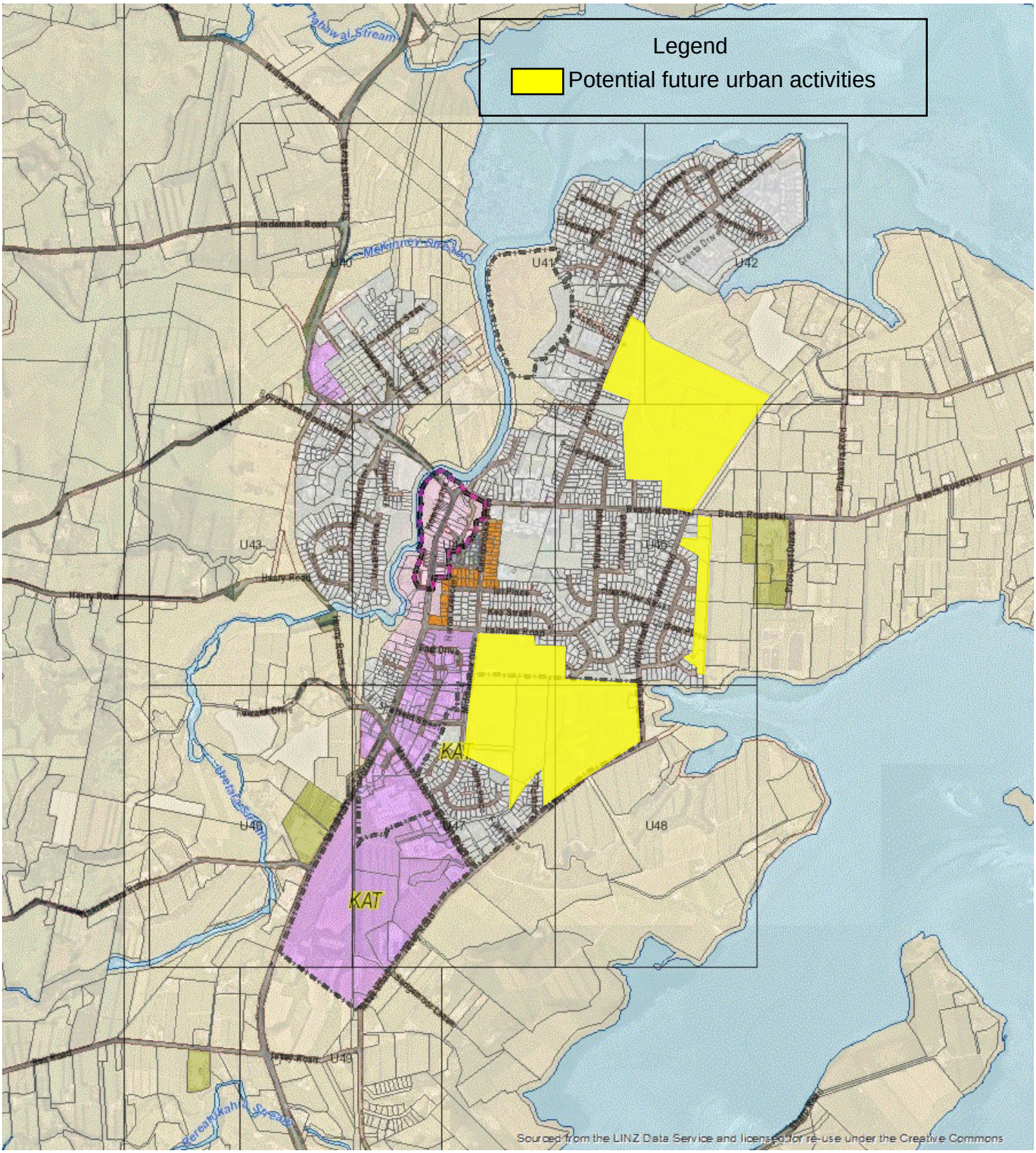
3 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

4 The Regional Council Pollution Hotline Number is 0800 884 883.

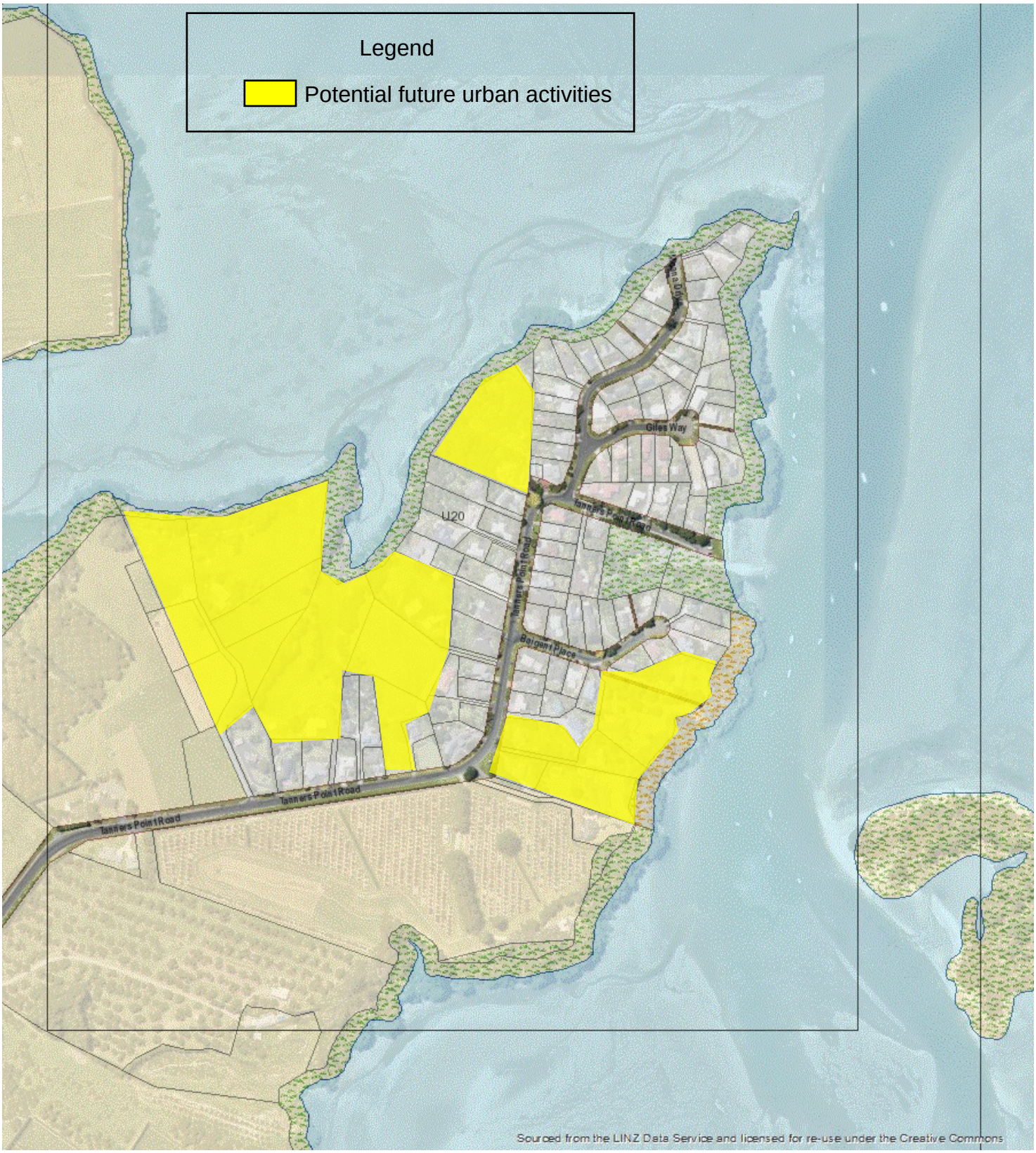
5 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

6 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

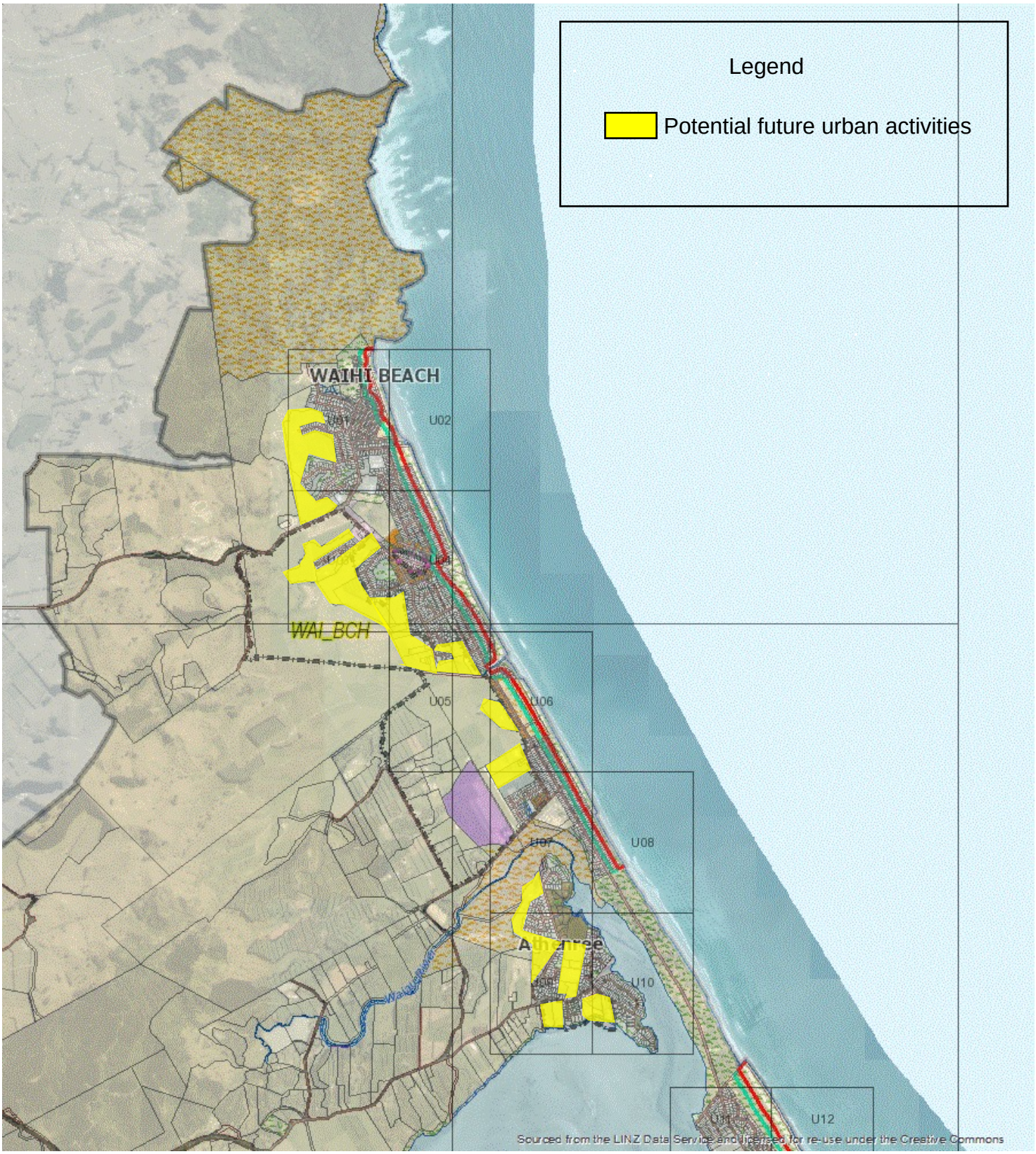
Appendix D: Urban development areas



Western Bay of Plenty District Council



Western Bay of Plenty District Council



Western Bay of Plenty District Council

Appendix E: Schedule of consents transferred into CDP

Permit Number	Permit Activity Type	Permit Status	Permit Granted	Permit Lapse Date	Permit Expiry Date	Permit Location
20219	Discharge - Stormwater	Current	4/12/1975		1/10/2026	PARK ROAD, KATIKATI
20327	Discharge - Stormwater	Current	7/07/1977	7/07/1982	1/10/2026	KATIKATI SD (TAURANGA COUNTY).
40252	Discharge - Stormwater	Current	16/01/1997	16/01/2002	30/11/2030	ONGARE POINT, KATIKATI
60478	Discharge - Stormwater	Current	22/03/2000		28/02/2035	KATIKATI
61367	Discharge - Stormwater	Current	15/11/2004	30/11/2009	31/10/2024	TWO MILE CREEK, WAIHI STREAM.
61901	Discharge - Stormwater	Current	5/03/2003	5/03/2008	30/06/2023	TRIBUTARY OF THE 3-MILE CREEK AND CITRUS AVENUE, WAIHI BEACH
62270	Discharge - Stormwater	Current	7/11/2003	7/11/2008	31/10/2023	50 OCEAN VIEW ROAD, WAIHI BEACH
62271	Discharge - Stormwater	Current	7/11/2003	7/11/2008	31/10/2023	2 OCEAN VIEW ROAD, WAIHI BEACH
62301	Discharge - Stormwater	Current	26/04/2004	26/04/2009	28/02/2039	WAIHI BEACH
62337	Discharge - Stormwater	Current	11/11/2003	11/11/2008	31/10/2028	WAIHI NORTH SD
62357	Discharge - Stormwater	Current			31/12/2028	Broadlands reserve
62784	Discharge - Stormwater	Current			30/12/2024	55 wilson rd
62980	Discharge - Stormwater	Current	23/06/2005	8/07/2010	30/06/2025	BEACH ROAD, KATIKATI
63126	Discharge - Stormwater	Current	18/05/2005	18/05/2010	30/04/2025	WEDGEWOOD STREET, KATIKATI
63308	Discharge - Stormwater	Current	1/12/2005	1/12/2010	31/10/2025	WILSON ROAD, WAIHI BEACH
63444	Discharge - Stormwater	Current	20/09/2007	20/09/2012	30/09/2027	49 PARK ROAD, KATIKATI
63448	Discharge - Stormwater	Current	26/04/2006	11/05/2011	30/04/2036	67 TO 71 ATHENREE ROAD, ATHENREE
63481	Discharge - Stormwater	Current	20/10/2006	4/11/2011	30/09/2026	83 MARSHALL ROAD, KATIKATI
63674	Discharge - Stormwater	Current	12/03/2007	12/03/2012	31/01/2027	HIGHFIELDS DRIVE, STATE HIGHWAY 2, KATIKATI
63743	Discharge - Stormwater	Current	17/07/2006	17/07/2011	31/05/2041	KATIKATI
63748	Discharge - Stormwater	Current	18/08/2006	18/08/2011	30/08/2026	EMERTON ROAD, WAIHI BEACH SOUTH
63750	Discharge - Stormwater	Current	23/05/2008	23/05/2013	30/04/2028	ESPLANADE ROAD, ONGARE POINT
63863	Discharge - Stormwater	Current	15/08/2006	15/08/2011	31/07/2026	TWO MILE CREEK, WAIHI BEACH
63864	Discharge - Stormwater	Current	20/11/2006	20/11/2011	31/07/2026	TWO MILE CREEK, WAIHI NORTH
64979	Discharge - Stormwater	Current			31/07/2027	Koutunui Road, Athenree
64994	Discharge - Stormwater	Current	10/04/2008	10/04/2013	31/03/2028	ONE MILE CREEK, WAIHI BEACH
64995	Discharge - Stormwater	Current			30/10/2027	Pohutukawa Park, 2 - 8 The Esplanade, Waihi Beach
65047	Discharge - Stormwater	Current			30/09/2027	Moana Dr Tanners Point
65065	Discharge - Stormwater	Current	15/02/2008	15/02/2013	31/01/2027	LEVLEY LANE, KATIKATI
65239	Discharge - Stormwater	Current	8/05/2008	8/05/2013	31/03/2043	TWO MILE CREEK
65337	Discharge - Stormwater	Current	8/08/2008	23/08/2013	30/09/2026	173 TETLEY ROAD, KATIKATI
65377	Discharge - Stormwater	Current	26/06/2008	26/06/2013	19/06/2028	THREE MILE CREEK, WAIHI BEACH
65388	Discharge - Stormwater	Current			31/05/2028	109 and 111 Park Road KK
65609	Discharge - Stormwater	Current	23/02/2009	23/02/2014	31/01/2029	CORONATION PARK, SHAW ROAD, WAIHI BEACH.
65613	Discharge - Stormwater	Current	20/03/2009	20/03/2014	28/02/2029	RORETANA DRIVE, ATHENREE.
65654	Discharge - Stormwater	Current	16/04/2009	1/05/2014	31/03/2029	ESPLANADE RESERVE OPPOSITE 27 AND 29 FRANCIS DRIVE, KATIKATI

Appendix F: Copy of Western Catchments CDP

Resource Consent

Resource Consent 67093-AP

Following the processing of the Application received on the 9 May 2012, the Bay of Plenty Regional Council has granted the applicant(s):

Western BOP District Council

Consent(s) to:

67093-BC.02	Beds Damming and Diversion	Expiry	30 November 2054
67093-BC.03	River Structure	Expiry	30 November 2054
67093-CC.01	Disturb Coastal Habitat or Plants	Expiry	30 November 2054
67093-CC.02	Occupy Coastal Space	Expiry	30 November 2054
67093-DC.01	Discharge to Water	Expiry	30 November 2054
67093-LC.01	Earthworks or Excavation	Expiry	30 November 2054

The consent(s) are subject to the conditions specified on the attached schedule(s) for each activity. Advice notes are also provided as supplementary guidance, and to specify additional information to relevant conditions.

The Resource Consent hereby authorised is granted under the Resource Management Act 1991 does not constitute an authority under any other Act, Regulation or Bylaw.

DATED at Whakatane this 27th day of November 2020

For and on behalf of The Bay of Plenty Regional Council

Fiona McTavish
Chief Executive

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 14(2) of the Resource Management Act 1991 and Rule WQ R21 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to temporarily divert and/ or dam water in various waterbodies within the western urban catchments of the Western Bay District**

subject to the following conditions:

1 Purpose

1.1 To authorise the temporary damming or diversion of water where it is associated with urban stormwater management and maintenance activities.

Advice Note: *For clarity, the purpose of this consent does not include any permanent damming, diversion or re-alignment of any water body listed in Schedule 1 of the Regional Natural Resources Plan, including the construction of stop banks and dams.*

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 subcatchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets which are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any work in a freshwater body that will cause damming or diversion of the water. Notification must include details of who is responsible for on site management and ensuring compliance with consent conditions (see Advice Note 2).

5.2 Within 5 working days of completion of damming or diversion works authorised under this consent, the consent holder must notify the Chief Executive of the Regional Council or delegate.

Advice Note: *The purpose of the notification is to set up a final inspection meeting to verify compliance with the Damming and Diversion Plan required by condition 6.1.*

6 Damming and Diversion of Water

6.1 The consent holder shall provide to the Chief Executive of the Regional Council or delegate, for certification, a Damming and Diversion Plan, one month prior to any damming or diversion works commencing. The Plan must be prepared by a suitably qualified environmental engineer or environmental specialist and include the proposed work methodology and mitigation measures.

Advice Note: *The purpose of certification is to ensure that effects on habitat and instream and riparian ecology are appropriately mitigated and that any temporary effects are appropriately remediated.*

6.2 For any construction or maintenance work that requires temporary damming or diversion of a river or stream, the consent holder must:

a) Ensure that the temporary damming or diversion does not adversely affect the ecology or habitat of a wetland to any more than a minor extent;

b) Ensure that the temporary damming or diversion does not cause water flow downstream to fall below the instream minimum flow (if there is one set in a regional plan), or adversely affect any authorised water take;

c) Effectively stabilise any erosion or scour that results from the temporary damming or diversion of the water;

d) Ensure that the temporary dam or diversion structure(s) is maintained in a sound condition for the purpose for which it was constructed and is kept clear of debris;

e) Ensure that machinery is kept out of the bed of rivers and streams where practicable and that no machinery refuelling or fuel storage occurs in a location where fuel can enter the water body;

f) Take all practicable measures to avoid vegetation, soil, slash or other debris being deposited in a water body and ensure that on completion of any work on the banks or within the bed of a stream, that all debris and construction materials are removed from the bed and banks of the water body;

g) Not cause a permanent net loss of aquatic habitat area or a permanent reduction in aquatic habitat quality. This includes degraded or modified aquatic habitat (see Advice Note 6);

h) Provide for fish passage;

i) Undertake any temporary damming or diversion works outside of the fish spawning and juvenile migration periods listed in the Regional Natural Resources Plan, unless written approval to do otherwise is provided by the Chief Executive of the Regional Council or delegate; and

j) Undertake any additional measures as required by the Chief Executive of the Regional Council or delegate, to avoid, remedy or mitigate any actual or potential adverse effects on the water body as a result of the proposed works.

6.3 The banks of a water body must be reinstated to their original contour after completion of the

temporary damming or diversion of water.

7 Signage

7.1 Prior to the commencement of any damming or diversion works under this consent, the consent holder must erect a prominent sign adjacent to the entrance of site works, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

a) The name of the project;

b) The name of the main site contractor;

c) A 24-hour contact telephone number for the consent holder or appointed agent;

d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on the environment as a result of the temporary damming or diversion of water, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to remediate any effect that was not anticipated at the time of granting consent.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent shall be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification shall include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 If no alternative measures can be implemented on site, habitat creation or enhancement nearby may be considered under a separate resource consent.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Use, place, reconstruct, alter or remove structures in or on the beds of various water bodies within the western catchments of the Western Bay District; and**
- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Disturb the beds of various waterbodies within the western catchments of the Western Bay District; and**
- **Under section 13(1) of the Resource Management Act 1991 and Rule BW R 36 of the Bay of Plenty Regional Natural Resources Plan being a discretionary activity to: Deposit material in the beds of various waterbodies within the western catchments of the Western Bay District**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to:

a) To authorise stormwater related activities including the use, maintenance, installation and reconstruction of structures (in streams and rivers),

b) To authorise stormwater related activities including the use, maintenance and installation of stormwater treatment devices; and

c) Vegetation management, including vegetation removal, planting and weed control.

Advice Note: *The purpose of this consent does not include:*

a) The installation of stormwater infrastructure and treatment devices within greenfield development sites and new subdivisions;

b) The installation of new rock revetment, training groynes or any other permanent structure in any water body listed in Schedule 1 of the Regional Natural Resources Plan or within the Coastal Margin, unless authorised by a consent and transferred to this consent;

c) Vegetation removal authorised by Consent 67093 LC.

2 Location

2.1 The urban catchments covered by this consent includes

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater

Subcatchments - Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets which are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of the following work authorised under this consent:

a) Any stormwater infrastructure installation or structure reconstruction in the bed of a water body.

b) Any work in, or disturbance of, the bed of a water body.

Notification must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

5.2 Within 30 working days of the completion of any stormwater infrastructure installation or structure re-construction works authorised under this consent, the consent holder must submit a Statement, signed by a suitably qualified Charted Professional Engineer, to certify that:

a) the works have been undertaken in accordance with good engineering practice; and

b) that the structure(s) have been installed or re-constructed in accordance with the current version of the Bay of Plenty Regional Council's Hydrological and Hydraulic Guidelines, the Erosion and Sediment Control Guidelines and the requirements of this consent (see Advice Note 2).

6 Maintenance, Construction and Reconstruction Works

6.1 The consent holder must undertake inspection and maintenance of stormwater structures, ponds and outlets in accordance with information submitted with the application for this consent including:

a) The current Asset Management Plan; or

b) Any other maintenance plan, included in the Catchment Management Plans.

6.2 The consent holder must ensure that stormwater outlets and associated erosion protection structures are operated and maintained in an effective working order at all times

6.3 At the same time that the outlet structures are inspected under condition 6.1, erosion effects must be assessed and remedied in accordance with condition 6.4.

6.4 Any erosion or scour of the banks of a river or stream resulting from either the presence of a

stormwater outlet(s), the discharge from an outlet(s) or from works authorised by this consent must be effectively stabilised and remedied.

6.5 For any works authorised by this consent, including the installation, maintenance, demolition, alteration, upgrade or reconstruction of existing outlets or structures, the consent holder must submit an erosion and sediment control plan to the Chief Executive of the Regional Council or delegate no later than five working days prior to the commencement of the works, for certification.

Advice Note: *The purpose of certification is to ensure that the erosion and sediment control plan meets the requirements of the Regional Council's "Erosion and Sediment Control Guidelines for Land Disturbing Activities," or its successor.*

6.6 New stormwater infrastructure must be designed by a suitably qualified Charted Professional Engineer. Where the new stormwater infrastructure includes a pond, embankment, stopbank, floodgate, spillway or any detention structure, the consent holder must consult with the Chief Executive of the Regional Council or delegate prior to detailed design and provide to the Chief Executive of the Regional Council or delegate the final design, for certification, prior to commencement of works.

Advice Note: *The purpose of certification is to ensure that new stormwater infrastructure meets the current version of the Bay of Plenty Regional Council's Hydrological and Hydraulic Guidelines, the Erosion and Sediment Control Guidelines and the requirements of this consent.*

6.7 For any construction or maintenance work that requires work within the bed of a stream, the consent holder must:

a) Ensure that any temporary damming or diversion does not adversely affect the ecology or habitat of a wetland to any more than a minor extent;

b) Effectively stabilise any erosion or scour that results from the stormwater related activities or vegetation management;

c) Ensure that machinery is kept out of the bed of rivers and streams where practicable and that no machinery refuelling or fuel storage occurs in a location where fuel can enter the water body;

d) Take all practicable measures to avoid vegetation, soil, slash or other debris being deposited in a water body and ensure that on completion of any work on the banks or within the bed of a stream, that all debris and construction materials are removed from the bed and banks of the water body;

e) Not cause any decrease in the length of any stream or river channel or any more than localised increases in the slope of the stream or river bed;

f) Not cause a permanent net loss of aquatic habitat area or a permanent reduction in aquatic habitat quality. This includes degraded or modified aquatic habitat (see Advice Note 7);

g) Provide for fish passage;

h) Undertake any works outside of the fish spawning and juvenile migration periods listed in the Regional Natural Resources Plan, unless written approval to do otherwise is provided by the Chief Executive of the Regional Council or delegate; and

i) Limit any dredging required to maintain conveyance capacity at outlets or in water bodies to the minimum area and volume required for the clearance of accumulated sediments; and

j) Undertake any additional measures as required by the Chief Executive of the Regional Council or delegate, to avoid, remedy or mitigate any actual or potential adverse effects on the water body as a result of the proposed works.

6.8 The banks of the water body must be effectively stabilised after completion of the works.

7 Signage

7.1 Prior to the commencement of stormwater infrastructure installation, reconstruction or maintenance

works under this consent, the consent holder must erect a prominent sign adjacent to the site, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

a) The name of the project;

b) The name of the main site contractor;

c) A 24-hour contact telephone number for the consent holder or appointed agent;

d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on bed or banks of water bodies as a result of the presence of the stormwater infrastructure, its installation or maintenance, or as a result of vegetation management, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for a review of a Catchment Management Plan, conditions or to require remedial works, as appropriate.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 Streams and modified watercourses (including land drainage canals with ecological values) are as defined

in the Bay of Plenty Regional Natural Resources Plan.

7 If no alternative measures can be implemented on site, habitat creation or enhancement nearby may be considered under a separate resource consent.

8 Reference: Bay of Plenty regional Council Hydrological and Hydraulic Guidelines.

9 Where rivers or streams are integrated into the primary stormwater system, the design criteria downstream of that point must be as per the current version of the Hydrological and Hydraulic Guidelines.

10 Future review/update of the Development Code should take into account climate change effects to 2090.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 12(1)(c) and (d) of the Resource Management Act 1991 and Rule DD14 of the Regional Coastal Environment Plan to undertake a discretionary activity being disturbing, depositing material or dredging of the bed of the Coastal Marine Area**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise dredging and disturbance of the seabed and deposition of material in the Coastal Marine Area (CMA) associated with stormwater infrastructure maintenance or erosion protection.

Advice Note: *For clarity, this consent does not provide for any dredging, deposition or disturbance in a Coastal Biodiversity A area as identified in the Regional Coastal Environment Plan.*

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which disturbance, deposition on, or dredging of the seabed is authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any work resulting in the dredging or disturbance of the seabed or deposition of a substance in the coastal marine area (CMA). Notification at this time must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

Advice Note: *The CMA is defined as the foreshore, seabed, coastal water and airspace above the water of which the landward boundary is the line of mean high water spring, except where that line crosses a river, then the landward boundary is the lesser of one kilometre upstream or a distance five times the width of the river mouth.*

5.2 Within 30 working days of completion of any stormwater related works authorised under this consent, the consent holder must submit a Statement, signed by a suitably qualified person (e.g. coastal ecologist, Chartered Professional Engineer), to certify that the works have been undertaken in accordance with best practice.

6 Dredging, Disturbance and Deposition in the Coastal Marine Area

6.1 Any erosion or scour of the foreshore or seabed resulting from works authorised by this consent must be effectively stabilised.

6.2 Prior to the commencement of any dredging, disturbance and deposition works the consent holder must provide to the Chief Executive of the Regional Council or delegate a Works Plan, prepared and certified by a suitably qualified and experienced person(s). The Works Plan certification must include, but not be limited to confirmation that:

(a) The work methodology meets best practice;

(b) The work methodology minimises foreshore and seabed disturbance;

(c) The volume and area of any proposed dredging is appropriate;

(d) The disturbance is temporary in nature and that any potential adverse ecological effects will be appropriately avoided, remedied or mitigated.

6.3 Dredging provided for in condition 6.2 must be limited to the minimum area and volume required for the clearance of accumulated sediments at stormwater outlets to maintain their conveyance capacity and must not exceed 100 cubic metres per outlet for any single dredging event.

6.4 Works involving the dredging or disturbance of the seabed and deposition of material in the CMA must be overseen by a suitably qualified engineer, coastal ecologist or other suitably qualified person.

7 Signage

7.1 Prior to the commencement of works authorised under this consent, the consent holder must erect a prominent sign adjacent to the entrance of site works, and maintain it throughout the period of the works. The sign must clearly display, as a minimum, the following information:

(a) The name of the project;

(b) The name of the main site contractor;

(c) A 24 hour contact telephone number for the consent holder or appointed agent;

(d) A clear explanation that the contact telephone number is for the purpose of receiving complaints and information from the public about dust nuisance or any other problem resulting from the exercise of this consent.

8 Review of Conditions

8.1 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is an adverse effect on the environment as a result of any dredging, disturbance or deposition works in the CMA, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional mitigation, monitoring, or remedial works, as appropriate.

9 Term of Consent

9.1 This consent shall expire on 30 November 2054.

10 Resource Management Charges

10.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

11 The Consent

11.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 12(2)(a) of the Resource Management Act 1991 and Rules SO10 and SO11 of the Regional Coastal Environment Plan to undertake a discretionary activity being to occupy space in the Coastal Marine Area**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise the occupation of space in the Coastal Marine Area by stormwater infrastructure.

2 Location

2.1 The urban catchments covered by this consent include:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which the occupation of space in the Coastal Marine Area is authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Occupation of Space in the Coastal Marine Area (CMA)

5.1 The consent holder must ensure that discharge structures in the CMA authorised by this consent do not impede public access to the CMA, except where the restriction of access is necessary to ensure public health and safety.

5.2 The consent holder must maintain all discharge structures in the CMA authorised by this consent in a structurally sound state.

6 Term of Consent

6.1 This consent shall expire on 30 November 2054.

7 Resource Management Charges

7.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

8 The Consent

8.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 15(1)(b) of the Resource Management Act and Rule CD 6 of the pre-operative Bay of Plenty Regional Coastal Environment Plan to undertake a discretionary activity being to discharge stormwater to coastal water**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R21 of the Bay of Plenty Regional Natural Resources Plan being a restricted discretionary activity to discharge stormwater to water within the western urban catchments of the Western Bay District; and**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R23 of the Bay of Plenty Regional Natural Resources Plan being a restricted discretionary activity to discharge stormwater to land where it may enter water within the western urban catchments of the Western Bay District; and**
- **Under section 15(1) of the Resource Management Act 1991 and Rule DW R8 of the Bay of Regional Plenty Natural Resources Plan being a discretionary activity to discharge stormwater to water or to land where it may enter water within the western urban catchments of the Western Bay District; and**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to:

a) Authorise the discharge of stormwater from urban areas within the Western Catchments (refer to condition 2) of the Western Bay District; associated with the resource consents listed in Schedule 1 (as may be updated to include applicable consents which post-date the decision on this CSC); and

b) To authorise temporary discharges of sediment contaminated stormwater from earthworks related to the replacement of stormwater infrastructure; and

c) To incorporate existing stormwater discharges associated with the existing resource consents listed in Schedule 1: List of stormwater related consents in the Catchment Management Plans WSZ1, WSZ2 and WSZ3 submitted in support of this application (as updated on 23 January 2020).

Advice Notes: *The purpose of this consent does not include:*

a) Discharges of contaminated stormwater from industrial and trade premises. Contaminant discharges from industrial and trade premises are to be authorised by the Regional Council.

b) The discharge of stormwater from new urban development including greenfield development sites and new subdivisions. These activities will require authorisation by a third-party resource consent, which may be transferred to the Western Bay of Plenty District Council

2 Location

2.1 The urban catchments covered by this consent includes:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets from which discharges are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application together with the stormwater discharges listed in Schedule 1: List of stormwater related consents in the Catchment Management Plans WSZ1, WSZ2 and WSZ3 submitted in support of this application (as updated on 23 January 2020).

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, within 10 working days after the grant of this consent the details of who is responsible for management of the stormwater network and compliance with the conditions of this consent (see Advice Note 2).

5.2 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, of all spills, accidents or similar incidents that result in contaminants entering the stormwater network authorised under this consent. Such notification must be undertaken by contacting the Regional Council Pollution Hotline (see Advice Note 3).

6 Stormwater Management

6.1 Stormwater must be managed in general accordance with the latest version of the following standards and Guidelines:

a) The Regional Hydrological and Hydraulic Guidelines;

b) The Stormwater Strategy for the Bay of Plenty Region and the Stormwater Management Guidelines for the Bay of Plenty Region;

c) The New Zealand Building Code; or

d) Any alternative standards certified as appropriate by the Chief Executive of the Regional Council or delegate.

6.2 Discharges from all new stormwater infrastructure and any upgrades of existing stormwater infrastructure must meet the following design criteria:

a) Overland flow paths must allow the passage of a 2% AEP (Q50) storm event without floodwater entering buildings;

b) The primary reticulated stormwater network must have capacity to hold the 20% AEP (Q5) storm event, in accordance with the Western Bay of Plenty Development Code;

c) Stormwater infrastructure upgrades must not cause or exacerbate flooding by constricting waterways, recognised floodplains or overland flow-paths;

d) Stormwater model downstream design boundaries must meet the criteria set out in the Regional Hydrological and Hydraulic Guideline criteria;

e) Rainfall design must use NIWA HIRDS V4, or an alternative certified by the Chief Executive of the Regional Council or delegate, and include climate change to 2090;

f) Any upgrades of existing stormwater infrastructure must result in a peak design stormwater discharge of no more than 80% of the pre-development peak stormwater discharge for the 1% AEP (Q100) storm event;

g) Any upgrades of existing stormwater infrastructure must result in a peak design stormwater discharge of no more than 100% of the pre-development peak stormwater discharge for the 50%AEP (Q2) and 10% AEP (Q10) storm events;

h) Scour and erosion protection of outlets, streams, channels and overland flow paths must cater for at least the 5% AEP (Q20) storm event flows without damage to the erosion protection;

i) Upgrades of existing stormwater infrastructure involving ponds and embankments (and their foundations) used to hold water must be designed and certified by a Chartered Professional Engineer;

j) Where upgrades of existing stormwater infrastructure involve ponds, the ponds must be provided with a spillway to carry the 1% AEP (Q100) flood with a minimum of 0.5 metre embankment freeboard;

k) Any upgrades of existing stormwater infrastructure must result in stormwater system discharges being treated using a method consistent with the standards and guidelines in condition 6.1 that traps at least 75% of the contributing catchment's long-term sediment discharge;

l) Elevated water temperature in ponds and open channels must be mitigated where practical by riparian planting;

m) Structures in the beds of waterways must not restrict flows or cause more than localised increases in flow velocities to any more than a minor extent, nor impede fish passage;

n) Alterations to natural/existing waterways resulting from upgrades of existing stormwater infrastructure must be designed to avoid a net loss of aquatic habitat area or a reduction in aquatic habitat quality. This includes degraded or modified aquatic habitats. Where it is not practical to avoid a net loss of aquatic habitat or a reduction in aquatic habitat quality, the residual loss or reduction shall be offset through the creation or enhancement of aquatic habitat in the same catchment. Any proposed offsets must be certified by the Chief Executive of the Regional Council or delegate; or

o) Any alternative design criteria approved by the Chief Executive of the Regional Council or delegate.

6.3 New stormwater infrastructure must be designed by a suitably qualified Chartered Professional Engineer.

6.4 The consent holder must provide a signed completion certificate from a suitably qualified Chartered Professional Engineer to verify that any new stormwater infrastructure meets the design criteria set in condition 6.2 or any alternative design criteria approved by the Chief Executive of the Regional Council or delegate in accordance with condition 6.2(o).

6.5 The consent holder must implement the following general principles of stormwater management (refer Advice Note 6):

a) To encourage, and where appropriate for new development or redevelopment require, the use of Low Impact Design solutions as a preferred option to stormwater management where this is practicable;

Advice Note: *Examples of Low Impact Design Solutions may include, but are not limited to the use of grassed swales and rain gardens for stormwater treatment and flow attenuation.*

b) The avoidance or mitigation of erosion resulting from the discharge of stormwater;

c) The use of ground soakage as a preferred option for the disposal of stormwater from roofs of buildings where such soakage does not exacerbate subsurface instability;

d) The use of indigenous and site appropriate riparian planting to achieve improved water quality and habitat outcomes. Riparian planting should provide for erosion control while not impeding channel capacity, flows or stormwater system maintenance;

e) The creation, enhancement, protection and use of wetlands to achieve improved water quality and biodiversity outcomes;

f) The use of stormwater detention ponds to provide treatment and attenuation of stormwater where other low impact design solutions are not practicable.

6.6 The consent holder must undertake stormwater flood modelling on a catchment basis that includes climate change factors to 2090, to be included in the first six yearly review of the Catchment Management Plans (refer Advice Note 7).

6.7 The modelling required by condition 6.6 must be used as a tool to assess the effects of urban expansion, changes in stormwater management and stormwater infrastructure upgrades. Revised flood maps based on this modelling must be added to the CMP's as part of each six yearly CMP review.

6.8 Flood mitigation and reduction measures to address flood risks identified through the modelling required by condition 6.6, must be scheduled on a risk and priority basis in the consent holder's Long-Term Plan (budget) and the Asset Management Plan (works).

6.9 Any new urban development incorporated into this consent, must not increase downstream flooding and must provide for stormwater treatment prior to discharge into a water body.

6.10 All stormwater network assets authorised by this consent must be mapped in a GIS database, within 12 months of the granting of this consent, and be made available to the Chief Executive of the Regional Council or delegate on request.

6.11 The schedule of works identified in the Asset Management Plan must be linked to the GIS database required by condition 6.10 and be made available to the Chief Executive of the Regional Council or delegate on request.

6.12 The consent holder must ensure that all stormwater ponds are maintained so as to retain their initial design capacity at all times, to the satisfaction of the Chief Executive of the Regional Council or delegate.

6.13 The consent holder must ensure that all treatment devices, including, but not limited to debris deflectors, catchpits, swales and constructed wetlands are maintained in sound operating condition at all times, to the satisfaction of the Chief Executive of the Regional Council or delegate.

6.14 All sediment and debris removed from stormwater treatment systems and ponds as a result of maintenance operations must be removed off-site to an authorised facility or placed in a suitable location where it cannot re-enter a water body.

7 Catchment Management Plans

7.1 The consent holder must manage the catchment(s) in general accordance with the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of this application.

7.2 Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of this application, must be reviewed and updated to reflect land use changes and urban development within the catchments and the requirements of this consent, within 6 months after this consent is granted and

thereafter on a six yearly basis (calculated from the date of granting this consent).

7.3 The reviewed Stormwater Catchment Management Plans required under condition 7.2 must include:

a) Identification of catchment stormwater management issues.

b) Statutory and non-statutory mechanisms used in the Catchment Management Plan to achieve compliance with the conditions of this consent. These mechanisms may include:

i. Relevant objectives, policies and performance standards in the Long-Term Plan;
ii. Works and standards identified in the Annual Plan;
iii. Relevant bylaws; and
iv. Relevant codes, standards and guidelines;

c) An accurate asset register, which includes:

i. Location of stormwater outlets and treatment devices;
ii. All stormwater assets, including the reticulated network, all open channels, ponds, constructed wetlands, treatment devices and overland flow paths;
iii. An assessment of the condition of each asset;
iv. The flood conveyance capacity of the reticulated network, including all open channels and overland flow paths;
v. A priority rating for scheduled upgrades based on the asset condition (iii) and conveyance capacity (iv) or flood risk alleviation measures;
vi. Maintenance requirements for each stormwater asset; and
vii. An inspection, maintenance and works schedule planned for the next six years.

The asset register must be updated annually.

d) A Mitigation Plan that identifies all areas of the catchment, including the receiving environment, that require any form of mitigation from the effects of urban stormwater discharges. Mitigation may include, but is not limited to: low impact design upgrades, erosion protection, flood protection, and riparian planting. The identified mitigation must be prioritised and scheduled for the next 6 year period.

e) A Monitoring Plan, including monitoring locations, frequency of monitoring and reasonable mixing zones. The locations shall be provided on a map with GIS co-ordinates. The Monitoring Plan must include monitoring the discharge quality of representative stormwater discharges and representative receiving environment sediment and macroinvertebrate conditions.

f) Identification of areas developed for urban related activities in the past 6 year period and areas available for future urban development;

g) Updated flood maps and identification of measures undertaken to avoid, remedy, mitigate or manage any actual and potential adverse effects arising from the flood events (this may be included in the Mitigation Plan).

h) An incident management and reporting procedure.

i) A summary of any contaminant source investigations undertaken in the past 6 year period and how stormwater management will address both short and long term issues for any stormwater discharge quality trigger value exceedances.

j) Details of planned industry and community education and awareness programmes.

k) Where available and applicable, the cultural values of iwi and hapu with mana whenua within the catchment area and the related receiving environment, and details of how such cultural values are integrated into stormwater management in that area.

l) A list of discharge and structure consents which have been transferred to the consent holder, since this CSC consent was granted.

7.4 New stormwater infrastructure to be included in the CMP must clearly identified in each six-yearly review of the CMP.

7.5 The Monitoring Plan required by condition 7.3(e) must be prepared, and certified as appropriate, for the catchment and the receiving environment, by a suitably qualified environmental scientist(s).

7.6 Any update to the Monitoring Plan, Asset Management Plan or Mitigation Plan shall be forwarded to the Chief Executive of the Regional Council or delegate for certification prior to implementation.

***Advice Note**: Certification by the Regional Council will be undertaken by the following Regional Council staff or contracted staff:*

a) Plans relating to water quantity, e.g. Stormwater infrastructure design, modelling, erosion protection structures, will be certified by a suitably qualified engineer.

b) Proposals, plans and designs relating to stormwater treatment will be certified by a suitably qualified environmental engineer and/ or environmental specialist.

c) Monitoring Plans, monitoring results trend analysis and proposed mitigation relating to effects on the receiving aquatic environment and the coastal marine environment will be undertaken by a suitably qualified ecologist.

d) Monitoring Plans, monitoring results and trends relating to stormwater quality and instream water quality will be undertaken by a suitably qualified environmental specialist.

e) The overall Catchment Management Plan and plan reviews will be certified as complete by the Regional Council Compliance Officer after the various components listed in a) to d) above have been certified by the relevant experts.

8 Stormwater Quality

8.1 Where the quality of receiving waters into which stormwater is discharged exceeds the trigger levels listed Table 1 of Appendix A to this consent after reasonable mixing, the consent holder must implement the actions identified in condition 9.2.

8.2 Where sediment in the receiving environment into which stormwater is discharged exceeds the trigger levels listed in Table 2 of Appendix A to this consent, the consent holder must implement the actions identified in condition 9.2.

8.3 The consent holder may amend the trigger values in Appendix A to be consistent with any amendments to the water quality classifications in the Regional Natural Resources Plan or the inclusion of any new standard in the National Policy Statement for Freshwater Management or national environmental standards. However, prior to being applied, any amended Appendix A trigger values must be certified by the Regional Council Chief Executive or delegate.

8.4 No stormwater discharge resulting from the exercise of this consent shall result in any of the following after reasonable mixing:

a) The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;

b) Any conspicuous change in the colour or visual clarity;

c) Any emission of objectionable odour;

d) Any significant adverse effects on aquatic life;

e) The natural temperature of the water being changed by more than three degrees Celsius; or

f) Aquatic organisms being rendered unsuitable for human consumption by the presence of contaminants.

9 Discharge Monitoring and Reporting

9.1 The Monitoring Plan required by condition 7.3(e) must include the following specifications:

a) Representative samples of stormwater discharges must include the following locations:

(i) Upstream of “discharge”;
(ii) Downstream of the “discharge” in the freshwater receiving environment (after accounting for

reasonable mixing);
(iii) In coastal water (below MHWS).

b) Representative sediment samples must be taken at a depth of sediment not greater than 2cm and composed of not less than 10 sub-samples taken from a minimum of 5 metres of stream length at the discharge, upstream and downstream locations identified in condition 9.1(a). Analysis for metals shall be undertaken at trace detection level.

c) All sampling under 9.1 (a) must be undertaken within 30 minutes of the commencement of a storm event, where practicable, but no later than 60 minutes after the commencement of a storm event.

d) Annual measurements of the stream channel width downstream of representative urban stormwater discharges into receiving freshwater streams as a stream bank erosion indicator. The exact location(s) of the channel measurements must be provided to the Regional Council Chief Executive or delegate within 12 months of granting this consent (map and GPS Co-ordinates). All subsequent measurements must be taken annually at the same location(s).

e) Investigations of the cause of streambank erosion or scour that has resulted in any increase of 5% or more in stream channel width from the grant of this consent.

f) All water and sediment analyses must be carried out by an IANZ registered laboratory.

g) All macroinvertebrate surveys must be undertaken by a suitably qualified and experienced ecologist.

9.2 In the event that receiving environment monitoring identifies that any water quality trigger value referred to in condition 8.1 is exceeded, a further sample shall be taken within 2 months. If any water quality trigger value referred to in condition 8.1 is exceeded in three consecutive sampling results for the same site, the consent holder must undertake a contaminant source investigation within 3 months of the third exceedance and submit a report to the Regional Council Chief Executive or delegate detailing:

a) The potential source(s) of high contaminant loads within the catchment of the respective network;

b) The options available to limit the further discharge of the high contaminant loads into the respective network;

c) The ability to implement potential remedial options as outlined in (b) above;

d) The selection of specific remedial option(s) to address the breach(es) in trigger levels;

e) Additional monitoring requirements to further characterise the discharge and/or post implementation of the remedial option(s) to establish compliance with trigger levels; and

f) The timeline for implementation of the selected remedial option(s) and/or monitoring.

9.3 The consent holder must implement the selected options as per the timeline identified in the report provided under condition 9.2.

9.4 The consent holder must submit to the Regional Council Chief Executive or delegate an annual report for the Waihī Beach and Katikati catchments, in November of each year, covering:

a) A summary report of any monitoring undertaken including an analysis of the monitoring results;

b) Any stormwater network or stormwater infrastructure upgrade works undertaken;

c) Any stormwater induced erosion, flood risk alleviation, or stormwater quality mitigation measures implemented;

d) Any incidents resulting in unanticipated contaminants entering the stormwater network, the investigation of the cause of the incidents and any remedial actions implemented to avoid a repeat occurrence of the incident;

e) An updated Asset Register; and

f) Any new structures to be included in the consent (Asset Register)

9.5 The consent holder must submit to the Regional Council Chief Executive or delegate a Catchment Management Overview Report to accompany the Catchment Management Plan review, on a 6-yearly basis, from the date of granting of this consent (Refer Advice Note 9). The Report must include, but not be limited to:

a) An assessment of the catchment flood risk indicating improvements made over time;

b) A summary of any stormwater network upgrades and mitigation measures implemented, including treatment devices and low impact design improvements and specifically progress in achieving the requirements of condition 6.2(k);

c) An assessment of the effectiveness of previous mitigation methods and identification of any changes from previous methods used;

d) State of the receiving environment monitoring and trends;

e) A list of consents transferred to this consent;

f) A schedule of any changes to the Catchment Management Plans.

10 Coastal Erosion

10.1 Within one month following the commencement of this consent, the consent holder shall submit to the Bay of Plenty Regional Council a comprehensive monitoring programme for certification that it meets the following purpose and information requirements:

a) The purpose of the monitoring programme is to assess the degree to which stormwater discharges authorised under this consent might be causing or contributing to coastal erosion of WBOPDC Reserves legally described as Lot 18 and 19 DPS 22035 ("the Reserves") with the training groynes authorised by coastal permit RC 62914 in situ ("the Training Groynes"); and

b) The comprehensive monitoring programme shall include, but not be limited to, monitoring and analysis of the beach profile of the Reserves using surveying techniques and visual observations.

10.2 The monitoring programme required by condition 10.1 must be prepared by a suitably qualified and experienced expert(s).

10.3 The consent holder shall submit an annual report to the Bay of Plenty Regional Council of the monitoring undertaken under this coastal permit commencing on the first anniversary of the commencement of this consent. The report shall include the results of the monitoring carried out under the monitoring programme required by condition 10.1 and an assessment of whether the monitoring results demonstrate that stormwater discharges authorised under this consent are causing or contributing to coastal erosion of the Reserves with the Training Groynes in situ.

10.4 Upon the first occurrence of any one of the following circumstances then condition 10.5 applies:

a) The training groynes at 3 Mile Creek are not re-consented upon the expiry in 2032 of coastal permit RC 62914;

b) The training groynes at 3 Mile Creek are removed;

c) The training groynes at 3 Mile Creek sustain structural damage to a degree that their stability is compromised in the opinion of a suitably qualified and experienced expert; and

d) The annual report required under condition 10.3 concludes that the results of the monitoring required under condition 10.1 demonstrate that stormwater discharges from 3 Mile Creek are causing or contributing to coastal erosion of the Reserves with the Training Groynes in situ.

10.5 Within two months following the first occurrence of any one of the circumstances in condition 10.4 (a) to (d), the consent holder shall submit a coastal erosion management options report to the Bay of Plenty Regional Council for certification that it contains:

a) The results of the monitoring programme described under condition 10.1 to the extent relevant to the assessment required under paragraph (b) of this condition;

b) An assessment as to:

(i) Whether and if so the degree to which the results of the monitoring programme demonstrate that the stormwater discharges authorised under this consent are causing or contributing to coastal erosion of the Reserves with the Training Groynes in situ (Causation Assessment); and
(ii) If one of the circumstances identified in condition 10.4(a), (b) or (c) has occurred, how that might affect the conclusions reached in the Causation Assessment;

c) A description of all reasonably practicable options (RPOs) available to manage coastal erosion:

(i) identified under the Causation Assessment required by paragraph (b)(i) of this condition; and
(ii) taking into account, where applicable, the assessment relating to the Training Groynes required under paragraph (b)(ii) of this condition; and

d) An analysis of the environmental effects and feasibility of the RPOs identified.

10.6 The report required by condition 10.5 must be prepared by a suitably qualified and experienced expert(s).

10.7 Within two months following receipt of the report required by Condition 10.5 the consent holder shall prepare and submit a report to the Bay of Plenty Regional Council for certification that it contains:

a) An assessment of the feasibility of implementing each of the RPOs identified in the report required under condition 10.5 including any resource consent requirements and any other consents or approvals required;

b) An assessment of the costs and benefits of each of the RPOs identified in the report required by Condition 10.5 based on the findings of that report and the assessment required under paragraph (a) of this Condition;

c) The selection of a specific option(s) from the RPOs identified in the report required by Condition 10.5, which it intends to implement, drawing on the assessment required in paragraph (b) above; and

d) A timeline for implementation of the selected option(s) that takes into account the current coastal erosion risk.

10.8 The consent holder must implement the option(s) selected in the report required by condition 10.7 within the timeframe identified in that report, subject to all necessary consents and approvals, including funding approvals if required, first being obtained.

10.9 In the event that all necessary consents and approvals, including funding approvals, are not able to be obtained to implement the RPO(s) initially selected in the report required by condition 10.7, the consent holder will consider whether there is an alternative RPO identified in the report, that addresses the feasibility issues identified with the RPO initially selected by the consent holder. If so, the consent holder will update the report to identify the alternative RPO selected and the proposed timeframe for implementation of that option. The updated report will be submitted to the Bay of Plenty Regional Council and the parties identified in condition 10.10. Condition 10.8 will apply to the alternative option selected.

10.10 The consent holder must provide copies of the reports required under conditions 10.3, 10.5 and 10.7 to the private property owners located on Glen Isla Place

10.11 The consent holder shall apply for resource consent for the training groynes at Three Mile Creek (RC62914) at least two years prior to the expiry of the current consent unless an option has been implemented pursuant to clause 10.7 which would avoid the need for a replacement consent for the groynes.

11 Review of Conditions

11.1 The Regional Council may, on receipt of a 6 yearly Catchment Management Overview and Monitoring Report or upon receiving notice of any exceedance of the trigger values in Appendix A, serve notice on the consent holder under s.128(1)(a)(ii) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional monitoring or treatment of stormwater, or to require an environmental impact investigation, if appropriate.

11.2 The Regional Council may, on completion of any environmental impact investigation or compliance report that shows there is a decline in the habitat quality or ecological value of the receiving environment, as a result of a stormwater discharge authorised by this CSC, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for a review of a Catchment Management Plan, or additional monitoring, treatment, discharge control conditions or erosion protection relating to stormwater discharges authorised by this CSC, as appropriate.

11.3 The Regional Council may serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review condition 6.2 of this consent, to align the design criteria for new infrastructure with any updated criteria required to manage climate change effects.

11.4 The Regional Council may serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the trigger limits set in Appendix A to this consent, to align with any limits set in National Policy Statement(s), National Environmental Standards or regulations, or an Operative Regional Plan.

11.5 The Regional Council may, on completion of any environmental impact investigation or compliance report that the stormwater discharge is causing erosion in the receiving environment, including stream channel widening or scour, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to assess the need for additional monitoring, modelling and remedial action.

12 Term of Consent

12.1 This consent shall expire on 30 November 2054.

13 Resource Management Charges

13.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

14 The Consent

14.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

2 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email

notify@boprc.govt.nz, this notification shall include the consent number 67093.

3 The Regional Council Pollution Hotline Number is 0800 884 883.

4 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

5 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

6 It is recommended that the Western Bay District Council's Development Code be updated to require stormwater treatment and low impact design.

7 Modelling of stormwater should include a nested design storm that includes the full range of design intensities up to 24 hours and downstream boundary conditions should be selected in accordance with the BOPRC Hydrological and Hydraulic Guidelines. Note that this is at peak tide and a dynamic downstream boundary may be necessary for design of some systems.

8 Stormwater quality samples should be taken within the first 30 minutes of a storm event to capture the first flush and freshwater receiving environment sampling is the most representative if taken during the storm event, where it is practical to do so.

9 The Catchment Overview Report (condition 9.5) is intended as a summary of the catchment management outcomes for the past six years, whereas the CMP Review and updated CMP document how the catchment will be managed in the upcoming six year period.

10 This consent does not authorise discharges into the consent holder's system from high risk facilities/sites as identified in Schedule 4 of the Regional Natural Resources Plan unless a separate discharge consent is obtained, transferred to the consent holder, and included as part of this comprehensive stormwater consent.

11 Existing privately held stormwater discharge consents do not form part of this consent unless transferred to the consent holder.

12 On granting of this consent the consent holder is advised to provide a signed surrender form to the Regional Council for the surrender of all current consents held by the consent holder (listed in Appendix J of the Catchment Management Plans).

13 Where rivers or streams are integrated into the primary stormwater system, the design criteria downstream of that point must be as per the Hydrological and Hydraulic Guidelines.

14 Future review/update of the Development Code should take into account climate change effects to 2090.

Bay of Plenty Regional Council

Resource Consent

Pursuant to the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 4 February 2020, **hereby grants**:

A resource consent:

- **Under section 9(2)(a) of the Resource Management Act and Rule LM R 4 of the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity being to carry out earthworks in the coastal margin, between 0 to 20 metres from the Coastal Marine Area**
- **Under section 9(2)(a) of the Resource Management Act 1991 and Rule LM R8 of the Bay of Plenty Regional Natural Resources Plan to undertake a controlled activity being the land and soil disturbance by vegetation clearance in an ephemeral flow path not in the erosion hazard zone**

subject to the following conditions:

1 Purpose

1.1 The purpose of this resource consent is to authorise earthworks required for the maintenance or reconstruction of stormwater infrastructure in the coastal margin and vegetation clearance in an ephemeral flow path that is not in the erosion hazard zone.

2 Location

2.1 The urban catchments covered by this consent includes:

i. The Waihī Beach Catchment as indicated on the CPG Waihī Beach Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/1, including:

- Waihī Beach (8 sub-catchments)
- Bowentown/ Pios Shores
- Anthenree (6 sub-catchments)

ii. The Small Coastal Communities Catchments as indicated on the CPG Stormwater Subcatchments – Small Communities Drawing SC SCS1, Revision A Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/2, including:

- Tanners Point
- Tuapiro
- Ongare Point
- Te Kauri Village

iii. The Katikati Catchment (27 sub-catchments) as indicated on the CPG Katikati Urban Limits Overall Layout Plan, referenced as B.O.P.R.C. Plan No. RC 67093/3.

3 Map Reference

3.1 Stormwater structures, ponds and outlets for which earthworks required for their maintenance or reconstruction are authorised under this consent are listed in Appendix C: Overview of the stormwater reticulation and Appendix D: Overview of Discharge Points in the Catchment Management Plans WSZ1, WSZ2 and WSZ3, submitted in support of the application.

4 Legal Description

4.1 Various within the boundaries shown on the Plans referenced in Section 2 above.

5 Notifying the Regional Council

5.1 The consent holder must notify the Chief Executive of the Regional Council or delegate, in writing, no less than five working days prior to the start of any earthworks in the coastal margin or the start of any vegetation removal in an ephemeral flow path that is not in the erosion hazard zone. Notification at this time must include details of who is responsible for on site management and compliance with consent conditions (see Advice Note 2).

5.2 The consent holder must notify the Chief Executive of the Regional Council or delegate within five working days of completion of any earthworks in the coastal margin and the completion of any vegetation removal in an ephemeral flow path that is not in the erosion hazard zone.

6 Earthworks and Vegetation Clearance

6.1 Earthworks in the coastal margin authorised by this consent must not exceed an area of 100 square metres and a volume of 50 cubic metres per "event" to install, maintain, or reconstruct stormwater related infrastructure.

6.2 For any earthworks or vegetation removal authorised by this consent, the consent holder must submit an erosion and sediment control plan to the Chief Executive of the Regional Council or delegate no later than five working days prior to the commencement of the works, for certification.

Advice Note: *The purpose of the certification of the erosion and sediment control plan is that it meets the requirements of the Regional Council's "Erosion and Sediment Control Guidelines for Land Disturbing Activities," or its successor.*

6.3 Erosion and sediment controls must be installed prior to the commencement of works.

6.4 Additional erosion and sediment controls must be installed, if required by the Chief Executive of the Regional Council or delegate.

6.5 The consent holder must ensure that there is no tracking of sediment off-site.

6.6 Any vegetation removed must either be removed from the site, or placed in a manner that ensures it will not be mobilised by stormwater into a watercourse, obstructs or diverts the flow of water, or causes erosion or instability of the banks or beds of watercourse.

6.7 For the removal of any exotic plant species that pose a biosecurity risk, the consent holder must submit a removal methodology and disposal plan to the Chief Executive of the Regional Council or delegate for certification.

6.8 Any earthworks site or vegetation removal site must be stabilised on completion of the works.

7 Review of Conditions

7.1 The Regional Council may, on completion of any environmental impact investigation or compliance report, that shows there is an adverse effect on the environment as a result of the works undertaken, serve notice on the consent holder under s.128(1)(a)(i) and/or (iii) of the Resource Management Act 1991 of its intention to review the conditions of this consent. The purpose of such a review is to provide for additional controls, as appropriate.

8 Term of Consent

8.1 This consent shall expire on 30 November 2054.

9 Resource Management Charges

9.1 The consent holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

10 The Consent

10.1 The Consent hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

Advice Notes

1 Except as provided for by consented activity (a) above, all other earthworks required for the maintenance or installation of the reticulated stormwater network, which is not authorised by this consent, shall be undertaken in accordance with the permitted earthworks Rules of the Regional Natural Resources Plan or be authorised through a resource consent.

2 This consent does not authorise the holder to modify or disturb any archaeological or historic sites within the area affected by this consent. Should any artefacts, bones or any other sites of archaeological or cultural significance be discovered within the area affected by this operation, written authorisation should be obtained from the Heritage New Zealand Pouhere Taonga before any damage, modification or destruction is undertaken.

3 Reporting and notification required by conditions of this consent must be directed (in writing) to the Manager Pollution Prevention, Bay of Plenty Regional Council, PO Box 364, Whakatane or fax 0800 884 882 or email notify@boprc.govt.nz, this notification must include the consent number 67093.

4 The Regional Council Pollution Hotline Number is 0800 884 883.

5 The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.

6 The consent holder is advised that non-compliance with consent conditions may result in enforcement action against the consent holder and/or their contractors.

Appendix G: Pre-heavy rainfall inspection checklist

Pre Heavy Rain Inspection

CCR 284046

0 Date 3/9/19

Waihi Beach

	Site	Location	Description	Clear	Blocked	Photo	Comments
1	Earth Dam	Pacific rd	check spillway	yes			all clear
2	Upper Level of One Mile	Pacific Rd to Beac	check for blockages and clear if	yes			all clear
3	One Mile creek	11 Beach rd	check sand level, open or closed, check	yes			clear
4	Jenkinson st	12 Jenkinson st	check outlet structure and trash	yes			clear
5	Beach Rd	54 Beach Rd	check culvert under rd, and inside box	yes			all good
6	Browns drive pond outlet	Outlet structure,	check grill for blockage, clear if	yes			clear
7	Maranui pond outlet	91 Beach rd	check outlet structure, grill and scruffy	yes			all good
8	Beach Haven Holiday park	21a Leo St	Check main outlet grill behind gate in	yes			all clear
9	Darley Drain	Ocean view	check for blockages, (logs etc) and	yes		yes	has one log againt side
10	Storm water pump station	37 Shaw rd	check operation of pumps, check flow	yes			all good
11	Two Mile Creek	Dillon st/	check sand level(open or closed) check	yes			all good
12	seaforth rd outlet into 2 mile	Between #1	check for blockages and clear if	yes			all good
13	Three mile creek	Seaforth rd near	check sand Level (open or closed)	yes			clear
14	Storm water pump station	Marlin Ave(cnr	check operation of pumps, check flow	yes			all good
15	Storm water pump station	9 Papuanahi rd	check operation of pump, check flow	yes			all clear
16	Swale and Outlet behind 477	behind 477 Seafo	check outlet from swale, access from	yes			all clear
17	Storm water pump station	Opposite #10	check operation of pump, check flow	yes			all clear
18	Storm water pump station	56 Bowentown	check operation of pump, check flow	yes			all clear
19	Otawhiwhi Marae inlet	452 Seaforth rd	check outlet to drain for blockage, clear	Yes			All good
20	Storm water pump station	449 Seaforth rd	check operation of pump, check flow is	Yes			All good
21	Storm water pump station	Pio rd/Tatai Rd	check operation of pump, check flow at	Yes			All good

Katikati

	Site	Location	Description	Clear	Blocked	Photo	Comments
1	Marshall rd Pond outlets	56 and 60	check and clear scruffy domes	Yes			All good
2	Fairview Rd	George vessey	check and clear grates either side,	Yes			All good

3	Bransley dr	storm water	check and clear grill, and high level	Yes			All good
4	More park	grill	check and clear grill in park behind 11 Robinson st	Yes all			All good

Appendix H: Incident management and reporting procedure

Contractor/Downer	1. Assess situation and take immediate measures to minimise the contaminants entering the stormwater network 2. Contact Western Bay of Plenty District Council Network Team Leader
WBOPDC Network Team Leader	1. If discharge of contaminants enter the stormwater network, advise WBOPDC Utilities Operations Manager and 3 Waters Compliance Team Leader. 2. If discharge of contamination of stormwater network has occurred, advise the BoPRC pollution hotline on 0800 884 883. 3. Investigate the cause of the incident and undertake remedial actions to avoid a repeat occurrence
Utilities Operations Manager	1. Provide additional resources and support to Network Engineers as required.
3 Waters Compliance Team Leader	1. Develop incident monitoring plan, undertake any necessary sampling. 2. Include details of incidents in the annual report including the investigation of the cause of the incidents and any remedial actions implemented to avoid a repeat occurrence of the incident

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