

IN THE MATTER of the Resource Management Act 1991 (the Act)

AND

IN THE MATTER of applications for Resource Consents by the New Plymouth District Council to discharge municipal wastewater from the New Plymouth wastewater treatment plant through an existing marine outfall and other municipal wastewater through the Waitara marine outfall.

DECISION OF THE HEARING COMMISSIONERS

A. PREAMBLE

1. Independent Commissioners Rob van Voorthuysen (Chair), Richard Heerdegen and Buddy Mikaere were appointed by the Taranaki Regional Council (TRC) under section 34A(1) of the Resource Management Act (RMA) to hear and determine the resource consent applications described in paragraph 4 below.
2. At the outset we note that section 113(3) of the RMA states:

A decision prepared under subsection (1) may, -

 - (a) instead of repeating material, cross-refer to all or a part of -
 - (i) the assessment of environmental effects provided by the applicant concerned;
 - (ii) any report prepared under section 41C, 42A, or 92; or
 - (b) adopt all or a part of the assessment or report, and cross-refer to the material accordingly.
3. We record that we intend to adopt the approach enabled by section 113(3) in this Decision.

B. THE PROPOSAL

4. The New Plymouth District Council (NPDC) has applied for the following resource consents:

Consent	Description	Duration
0882-4	To discharge treated municipal wastewater from the New Plymouth wastewater treatment plant through a marine outfall structure into the Tasman Sea	30 years
7861-1	To discharge untreated municipal wastewater into the Tasman Sea via the Waitara Marine Outfall during high flow events at the Waitara Pump Station [previously the Waitara Wastewater Treatment Plant]	35 years
7862-1	To temporarily discharge screened and disinfected municipal wastewater into the Tasman Sea via the Waitara Marine Outfall during conversion of the Waitara Wastewater Treatment Plant to the Waitara Pump Station	12 weeks
3397-2	To discharge up to 11,950 m ³ /day [138 litres/second] of treated wastewater from the Waitara Wastewater Treatment Plant into the Tasman Sea via the Waitara Marine Outfall	5 years

5. The nature of the NPDC's proposal and its rationale was well summarised in the reports prepared by TRC staff under section 42A of the RMA (officers' reports), the application documents, the NPDC's opening and closing legal submissions and the evidence of Mr Manning and Ms Hope in particular.
6. Without repeating the detail of that material, by way of very brief overview we note that the NPDC wishes to convert the Waitara Wastewater Treatment Plant into a pumping station. During the twelve week conversion process partially treated wastewater will be discharged through the Waitara Marine Outfall (consent 7862-1). Once completed the Waitara pumping station will pump Waitara's wastewater to the existing wastewater treatment plant (WWTP) at New Plymouth. The NPDC has separate consents for the wastewater pipeline. Its construction has commenced and it is planned for completion in early 2014¹. In the meantime the Waitara WWTP will continue to discharge to the Tasman Sea through the Waitara Marine Outfall (consent 3397-2). Once the Waitara Pumping Station is completed it will continue to utilise the Waitara Marine Outfall for occasional wet weather overflow events (consent 7861-1).
7. The NPDC also plans to upgrade the New Plymouth WWTP in terms of its hydraulic capacity and load treatment capacity, whilst also undertaking a number of technical changes such as the use of diffused aeration instead of surface aeration, utilisation of de-nitrification in a new anoxic zone, faster-settling flocs, improvement of return activated sludge and foam removal facilities, longer sludge age and improved sludge thickening and drying.²
8. Consent 0882-4 has been sought for the ongoing discharge to the Tasman Sea from the New Plymouth WWTP.

C. THE HEARING

9. The hearing was held at the Grand Central Hotel in New Plymouth on 31st October and the 1st and 2nd of November 2011.
10. We conducted a site visit on the afternoon of Monday 31st October accompanied by the TRC's Consents Manager Colin McLellan with our guide being the NPDC's Site Manager Mr Nepia.
11. The hearing was closed on Friday 7 November 2011.

D. NOTIFICATION / SUBMISSIONS

12. All four applications were publicly notified. Ten submissions were received on consents 0882-4, 7861-1 and 7862-2 and thirty-one submissions were received on consent 3397-2.
13. The issues raised in the submissions were summarised in the officers' reports.³ We see no need to repeat that level of detail in this Decision and instead we address the relevant issues of contention in the Evaluation section.

¹ We advised submitters that we had no jurisdiction over the pipeline construction process as some, including the Friends of the Waitara River, wished to see the pipeline construction halted pending the outcome of this consent process.

² NPDC Opening Submissions, para 4.2(a).

³ Pages 26 to 29 and 21 to 26 respectively.

E. SUBMISSIONS AND EVIDENCE PRESENTED AT THE HEARING

14. At the hearing we heard from the NPDC, submitters and the TRC officers as follows.
15. For the applicant we heard from counsel J Winchester and M Conway, B Manning (Manager Water and Wastes at NPDC), J Kinloch (Senior Engineer Water and Wastes Projects at NPDC), G Poole (Manager Operations (Water and Wastes) at NPDC), G Morris (Optimisation Engineer Water and Wastes at NPDC), Garry McDonald (Technical Director for CH2M Beca Ltd), Dr D Roper (Regional Manager NIWA), G McBride (Principal Scientist NIWA) and K Hope (Manager Compliance Water and Wastes at NPDC).
16. We heard in person from the following submitters:

For the Friends of the Waitara River

- Dr Huirangi Waikerepuru
- Dr Leonie Pihama
- Tiki Raumati
- Fiona Clark
- Robert Taylor
- Trevor Dodunski
- Margaret Smith
- Michael Urwin
- Tipene Maxwell
- Ray Watembach
- Tamawareu Hunt
- Christopher Jury
- Andrea Moore

For Ngati Rahiri Hapu

- Tahu Rawiri
- Waikara Tapuke

For Te Ohu o Waitara, Ngati Kura me Ngati Maru ki Tai and Ngati Tawhirikura Hapu⁴

- Rata Pue
- Nigel Dwyer
- Te Aurere Skipper
- Iris Skipper
- Greg Skipper

For the Royal Forest and Bird Protection Society

- Elise Smith

For the Director-General of Conservation

- Sarah Ongley (counsel)
- Christopher Rendall (Ranger – Concessions and Resource Management Act)
- Fiona Clark (personal submission)
- Colin Johnston (personal submission)
- Joe Rauner (personal submission)

⁴ We received a tabled letter (dated 2 November 2011) from the Chairperson of Ngati Tawhirikura Hapu authorising Greg Skipper, Ngamata Skipper and Rata Pue to present evidence on behalf of Ngati Tawhirikura Hapu

17. For the record we note that we have read and considered all of the written submissions, not just those of the parties listed above.
18. For the TRC we heard from C McLellan, J Kitto (Scientific Officer), A Lenz (Policy Analyst) and K Giles (Consents Officer) who spoke to the officers' reports and to additional tabled material. Also in attendance was D Ladbrook (Senior Consents Administration Officer).
19. The written submissions, evidence and reports tabled and presented by all of the above parties are held on file at the TRC. We took our own notes of the verbal presentations and to any answers to our questions. We do not intend to record that material in any detail in this Decision. However, specific issues raised in the material are referred to as appropriate in the Evaluation section.

F. EVALUATION

Statutory Considerations

20. Consent 3397-2 is a restricted coastal activity. However, as noted by Ms Ongley, that consent application was publicly notified on 10 April 2010 after the Resource Management (Simplifying and Streamlining) Amendment Act 2009 came into effect.⁵ This means that the commissioners, acting under delegated authority from the TRC, are the decision makers on consent 3397-2 and not the Minister of Conservation.⁶
21. Section 104 of the RMA is the principal provision that sets out the matters we need to have regard to when determining the consent applications. We note that the section 104 matters are subject to the purpose and principles of the RMA as set out in Part 2.
22. Sections 105 and 107 of the RMA are also relevant and we address those matters later in this Decision.
23. We note that the TRC must inform all iwi authorities holding a statutory acknowledgment right of any resource consent applications received within the area of acknowledgement. We understand that at the time of notification no such acknowledgements existed.

Consent Category

24. As noted in paragraph 4 above the applications are all discretionary activities and consent 3397-2 is additionally a restricted coastal activity. The consent classifications outlined above were not disputed by any party. The consent applications must therefore be considered under section 104B of the RMA. That means we are able to grant or refuse the applications and impose conditions on the consents under section 108 of the RMA.

Matters of Contention

25. Section 113 of the RMA requires us to focus on the principal issues of contention and to state our main finding of facts in relation to those issues. We deal firstly with the matter of the NPDC's consultation with interested parties (particularly with Maori) and

⁵ Ongley, Submissions, para 3.

⁶ We note that under s117(7) of the RMA the hearings panel was required to include one member appointed by the Minister of Conservation. In this case that panel member was Commissioner Heerdegen.

then with potential effects of the proposed discharges on Maori interests and values as those matters are relevant to all four applications. We then deal with the individual consents.

Consultation

26. Some submitters were critical of the consultation undertaken by the NPDC.
27. Firstly we note that under section 36A of the RMA the NPDC had no duty to consult any person about the applications. In this case the NPDC chose to consult with parties prior to and after the applications were lodged. The consultation undertaken was outlined in the evidence of Mr Manning.⁷ We do not intend to summarise the consultation undertaken and there is no need for us to do so.
28. We also note that the purpose of consultation is to identify the relevant issues of concern to interested or affected parties. The purpose of consultation is not to reach agreement with those parties regarding their concerns. However, if that occurs then it is obviously beneficial. In this case we consider that all the relevant issues are squarely on the table before us.

Maori Interests and values

29. Maori interests in the consents were represented by a number of submitters appearing as individuals or on behalf of hapu/iwi groups as set out in the list of submitters. We were satisfied that these submitters were properly representative of tangata whenua interests.
30. The Maori submitters made it clear that the Waitara Marine Outfall in particular has been an on-going source of complaint from Maori and the Waitara community in general, for many years. Reference was particularly made to the Waitangi Tribunal claim that brought the issue of discharges into the Waitara River to national attention in the 1980's.
31. The main complaint in this respect related to the on-going pollution of kai moana resources in the area of the outfall and the general health risk said to be posed by the nature of the outfall discharge. The on-going discharge was described by submitters as being offensive to Maori cultural values and this point was acknowledged as such by the NPDC.
32. A similar position was taken by Maori submitters in respect of the discharge from the New Plymouth WWTP.

CONSENT 3397-2: WAITARA WWTP DISCHARGE

33. In our view there was almost universal support for the conversion of the Waitara WWTP to a pumping station and the discontinuation of the use of the Waitara Marine Outfall for permanent discharges of treated municipal wastewater. It also appeared to be accepted by most parties that the existing discharge (consent 3397-2) needed to continue in the meantime and that the existing method of treatment was appropriate for that intervening period.

⁷ Manning, EIC, paras 6.1 to 6.10, pages 15 to 18.

34. In that regard we note and accept the advice of Mr MacDonald:

“The current treatment process at the Waitara WWTP comprising high-lime disinfection (“HiLime”) of milliscreened wastewater is unique in New Zealand, and is only one of a few such plants in the world. This HiLime process was selected at the time to suit the very unusual nature of the combined wastewater stream from the neighbouring freezing works and the Waitara township – being dominated by the industrial flows and loads from the Borthwicks/AFFCO plant.

Extensive investigations and bench-scale and pilot trials established the viability of the 0.5mm fine screening and HiLime disinfection process for a full-scale combined treatment plant, thereby minimising the risk of sewage solids on the beaches and reefs and of pathogen contamination of shellfish in the Waitara embayment. The process has proved to be very reliable over the 20 years since commissioning, even though the freezing works has been decommissioned and the industrial flows and loads are now just a fraction of what the plant was designed to treat.”⁸

35. Consequently we find that consent 3397-2 should be granted for a duration of 5 years as sought (with the expiry period being expressed as 1 June 2017 to be consistent with Consent 7862-1) and that the conditions of consent agreed between the NPDC and the TRC reporting officers should be imposed. We note that at our suggestion those conditions include a requirement that the NPDC is to cease the existing discharge as soon as practicable once the existing Waitara WWTP is converted to a pumping station. In our view that should mitigate the concerns of some submitters who wished to see the cessation of permanent Waitara WWTP discharges instigated as soon as possible.⁹

36. We do not discuss consent 3397-2 any further.

CONSENT 7862-1: WAITARA WWTP DISCHARGE DURING CONVERSION

37. In our view it is unavoidable that some form of wastewater discharge from the existing Waitara WWTP needs to continue whilst that existing facility is converted into a pumping station. In that regard Mr MacDonald advised us:

“There will therefore be a period during the conversion when the incoming sewage will not be able to enter the plant, nor will it be able to be pumped to New Plymouth. During this period there will need to be a temporary discharge of sewage that has not been treated using the current treatment process, but will still have been milliscreened and disinfected ...” While the plant is being reconfigured it is proposed to provide a temporary dosing facility that releases sodium hypochlorite into the outfall chamber The estimated residence time of 3 hours and 56 minutes (at an average inflow rate of 3,392m³/day) between dosing at the plant and discharge through the outfall will be sufficient to achieve effective disinfection.”¹⁰

38. The conversion works will take twelve weeks to complete.

39. We are satisfied that the NPDC’s conversion proposal is a reasonable and practical option and that any adverse effects that do occur during the twelve week conversion process are a necessary and unavoidable consequence of achieving the long-term cessation of permanent discharges from the Waitara WWTP.

⁸ MacDonald, EIC, paras 4.1 and 4.2, page 4.

⁹ Including the Friends of the Waitara River and the Royal Forest and Bird Society.

¹⁰ MacDonald, EIC, paras 9.6 and 9.8, pages 25 and 26.

40. Consequently we find that consent 7862-1 should be granted with an expiry date of 1 June 2017 and that the conditions of consent agreed between the NPDC and the TRC reporting officers should be imposed.

41. We do not discuss consent 7862-1 any further.

CONSENT 7861-1: WAITARA PUMPING STATION OVERFLOW DISCHARGES

42. In our view the main issues of contention for the suite of NPDC's applications relate to the ongoing use of the Waitara Marine Outfall for overflow discharges from the new Waitara pumping station (Consent 7861-1) and the ongoing discharge from the New Plymouth WWTP (Consent 0882-4).

43. We deal with the Waitara pumping station first before turning to the New Plymouth WWTP.

44. Having been involved with many wastewater treatment plant consent applications around New Zealand the panel members are aware that at times the capacity of a wastewater pumping station will unavoidably be exceeded due to wet weather inflows¹¹ or mechanical failures¹². At such times most wastewater pumping stations utilise engineered outlets to discharge the wastewater overflow to the receiving environment in a controlled manner. In this case the NPDC wishes to continue using the Waitara Marine Outfall as the wastewater overflow conduit.

45. We note that the use of the Waitara Marine Outfall for that purpose is preferable to allowing the wastewater overflows to discharge directly to the Waitara River.

46. With regard to the Waitara Marine Outfall Mr MacDonald advised us:

"During times where inflow exceeds the pipeline capacity, the excess milliscreened inflow will be pumped to the existing batch treatment tanks. These will be converted to flow attenuation tanks providing 8,000 m³ of storage (equivalent to 110 hours of ADWF). Aeration will be provided in these tanks to prevent the wastewater turning septic and creating odours.

When high inflow subsides the attenuated wastewater will be returned to the main pump station to be pumped through to the NP WWTP. If both the pipeline and attenuation tank capacities are exceeded, milliscreened sewage will overflow from the wet well via the existing overflow pipe before being discharged to sea via the existing outfall."¹³

47. Some submitters questioned the Waitara to New Plymouth pipeline and pumping configurations insofar as they thought that a larger pipe or bigger pumps could avoid wastewater overflows at Waitara¹⁴. In that regard we note and accept the advice of Mr Manning who said:

"A 1998 Beca report had been commissioned to look at transfer options for Waitara's domestic sewage, post closure of the meat-works. The Beca report identified and evaluated several different pipeline route options in combination with various pumping regimes. The selected route and pump option was the one that required the least

¹¹ Where normal dry weather flows in a sewerage system increase by 3 to 6 times as a result of stormwater inflows and groundwater infiltration (commonly called inflow and infiltration or I&I for short). We note that ADWF means "average dry weather flow".

¹² Including power outages.

¹³ MacDonald, EIC, paras 9.2 and 9.3, page 24.

¹⁴ Including the Friends of the Waitara River.

pumping energy and most efficient long term cost, taking into account the capital to be committed.”¹⁵

48. We also accept the evidence of Mr MacDonald who told us:

“If a larger diameter transfer pipeline and bigger pumps were installed, just to provide for the very infrequent wet weather extreme flows, there would be several negative consequences:

- (a) the residence time of the milliscreened raw sewage in the pipeline during “normal” days would be much longer, resulting in high septicity conditions and high concentrations of hydrogen sulphide (H₂S) being released at the NP WWTP junction;
- (b) in the design and reconfiguration of the existing pumping station it would be very difficult – probably impossible - to include a set of low flow pumps and a set of extreme high-flow pumps in order to best match pump sizes and their optimum operating points to achieve energy efficiency across the wide range of hydraulic conditions a larger capacity pipeline would present; and
- (c) higher capital costs for additional high-flow pumps and larger diameter pipeline.”¹⁶

49. At our request Mr MacDonald provided supplementary evidence on the likely scale of the overflow discharges that might occur when the storage capacity of the proposed new Waitara pumping station would be exceeded. He firstly advised us that the proposed pumping rate of 125 L/s could be increased to 140 L/s when necessary by increasing the hertz rating of the variable speed pumps. He then advised, based on his further analysis of inflow records for the existing Waitara WWTP from 1 October 1995 to 1 October 2011 (a period of 16 years), and assuming that increased inflows were being received from Urenui and Onaero and that ANZCO was delivering 1000 cubic metres per day of trade waste, then at the increased rate of pumping there would have been four overflow events with the overflow occurring for around nine days in total. This equates to 0.16% of the time and 0.06% of the total inflow volume of wastewater over the 16-year period.

50. With those same high inflows and no increase in pumping rate (namely pumping at 125 L/s) the respective figures would be six overflow events for around 27 days in total equating to 0.47% of the time and 0.21% of the wastewater volume.

51. In our view these are extremely low frequencies and volumes of wastewater overflow.

52. When an overflow event does occur there will be temporary adverse effects on recreation and shellfish gathering activities. Mr McBride verbally advised that the main adverse effect arising from overflow events was the potential contamination of seawater and thereafter shellfish with human viruses. After each overflow event swimming might need to be avoided for up to a week and shellfish harvesting should be avoided for 8 to 10 weeks. Dr Simmons, the local Medical Officer of Health, agreed with Mr McBride.

53. We also acknowledge, as is discussed elsewhere in this Decision, that any discharge of human wastewater to the sea will have adverse cultural effects on Maori interests and values.

54. Some submitters suggested that additional storage should be provided at the Waitara pumping station so as to avoid any wastewater overflows occurring. We asked Mr

¹⁵ Manning, EIC, para 5.1, page 11.

¹⁶ MacDonald, EIC, para 10.5, page 28.

MacDonald about this and he advised that in his view the NPDC would need a third wastewater overflow tank that was of the same size and volume as the two existing hi-lime dosing tanks (which are to be converted to wastewater overflow storage tanks). Mr MacDonald's opinion was that the provision of that additional storage capacity would require around \$6 million of capital expenditure. We also note that additional land would need to be purchased for such a proposal and that additional resource consents might be required for it.

55. In our view the level of additional expenditure necessary to avoid any future wastewater overflows occurring through the Waitara Marine Outfall is not justified by the predicted infrequent nature of such overflows and the potential adverse effects that would arise from those discharges. In making that finding we acknowledge and accept the long history of community opposition to the Waitara Marine Outfall that was clearly and eloquently conveyed to us by many of the submitters at the hearing, Maori in particular. However, we need to set that history aside to some extent and focus instead on the actual effects of the discharge proposal before us (the intermittent and infrequent wastewater overflows from the proposed new Waitara pumping station) and the costs and benefits of avoiding those discharges. On a positive note, the future ongoing quality of the marine environment in the Waitara embayment will be substantially improved.
56. We also note that even if the new Waitara pumping station overflow discharges were avoided in their entirety, the Waitara Marine Outfall would continue to be used on a daily basis for the separately authorised Methanex Motonui discharge. As we observed at the hearing, any consideration of that separate Methanex discharge is outside the scope of our jurisdiction.
57. Nevertheless, having found that it would be unreasonable in the circumstances to require NPDC to avoid the Waitara pumping station overflow discharges occurring through the Waitara Marine Outfall, we accept that those overflow discharges should be minimised as far as is practicable through an ongoing programme of works at Waitara designed to reduce inflow and infiltration (I&I) to the wastewater reticulation system. We note that the increase in dry weather flows during wet weather is the result of inflow and infiltration.
58. In that regard Mr Pool told us:

"The money spent by the Council between 2006 and 2010 has had a positive impact on reducing I & I in Waitara reducing peak wet weather flows from 148l/s in 2006 to 72.8l/s in 2010. The proposed pumping station is designed in accordance with best practice for sewer systems and the proposed flows are similar to those anticipated if the township was being created from green fields.

Although my comments here indicate that the I & I problem may not be as significant a problem as previously thought, the Council has taken a precautionary approach and is seeking to reduce I & I on an ongoing basis. It remains a fact that the response to rainfall observed in Waitara is greater than the response at New Plymouth and any work done to reduce Inflow and Infiltration will have a positive benefit in reducing the frequency of overflows. The Council intends to continue work on reduction of I & I."¹⁷

59. We also note that the importance of reducing inflow and infiltration at Waitara was raised by several submitters. We consequently consider it appropriate to impose consent condition 5 as agreed between the NPDC and the TRC reporting officers which reads:

¹⁷ Pool, EIC, paras 6.42 and 6.43, page 16.

Before 30 June each year, the consent holder shall prepare and submit a report that includes, but is not necessarily limited to:

- (a) details of the proposed works, staging, and a timeline for reducing inflow and infiltration to achieve average dry weather flow volumes that are in line with the New Plymouth District Council Code of Practice for Infrastructure 2009, and to a level where the 'Waitara to New Plymouth sewer pipeline' will continue to meet the design specifications in achieving an overflow frequency discharge occurrence of 1% per year, averaged over a five year period; and
 - (b) in relation to 5(a) above, details of the progress undertaken towards achieving the specified works.
60. On balance, we find that consent 7861-1 should be granted for a duration of 30 years and that the conditions of consent agreed between the NPDC and the TRC reporting officers should be imposed. We have determined a consent duration of 30 years as that is the same duration sought for the New Plymouth WWTP (Consent 0882-4).
61. With regard to section 113(1)(b) of the RMA¹⁸, in our view the Waitara pumping station will be an integral component of the NPDC's wider wastewater treatment system and that the various component parts of that system should have concurrent consent expiry dates. In our view that better promotes integrated management.
62. We also note that the NPDC's final recommended conditions stated a duration of 30 years despite 35 years having been sought.¹⁹

CONSENT 0882-4: NEW PLYMOUTH WWTP DISCHARGE

63. Having dealt with the issue of the intermittent and infrequent wastewater overflows from the proposed new Waitara pumping station we now consider the long-term discharge consent sought for the upgraded New Plymouth WWTP.
64. By way of background Mr Manning told us:
- “[NPDC] has formulated a long term wastewater strategy for urbanised towns and villages on the North Taranaki coastline and within its jurisdiction. This strategy includes linking by pipeline all of the urban communities of New Plymouth, Bell Block, Inglewood and Waitara, and in the long term includes provision for the potential addition of Urenui and Onaero, Lepperton, Egmont Village and Omata. All contributing areas will ultimately be treated to a very high standard at the one facility, being the NP WWTP.”
65. In our view the upgraded New Plymouth WWTP forms the most substantive component of the suite of consent applications before us.
66. The technical details of the NPDC's proposed upgrading of the New Plymouth WWTP were fully described in the application documents, the officers' reports and the evidence of Mr Manning, Mr Pool, Mr Morris and Mr MacDonald. We note that the NPDC intends, appropriately in our view, to upgrade the New Plymouth WWTP “to address capacity requirements - driven by city growth and the planned connection of Waitara to the NP WWTP - and to significantly improve the efficiency of aeration.”²⁰

¹⁸ Which requires us to state the reasons for granting duration shorter than that sought.

¹⁹ NPDC Opening Submissions, para 4.1, page 5.

²⁰ MacDonald, EIC, para 4.7, page 5.

67. We do not repeat those technical details in this Decision as we focus instead on the actual and potential effects of the discharges. However, by way of overview, we note that the New Plymouth WWTP was described by Mr MacDonald as follows:

“... the NP WWTP is a relatively conventional secondary/biological treatment process, being an extended aeration activated sludge plant, operating in what is commonly referred to as a “racetrack” or “Carousel” configuration. There are several plants of this size in New Zealand – Porirua, Te Maunga (Tauranga) and Blenheim being other examples – and many hundreds of this type of plant installed around the world. This extended aeration process, followed by secondary sludge clarification, works very well at New Plymouth - as is evidenced by the effluent monitoring results - and is very appropriate for the medium strength municipal waste stream that it receives.

Although the core treatment unit process (the Carousel units) is commonplace, there are two unusual features at New Plymouth. The first is the lack of a primary sedimentation process ahead of the activated sludge process – with milliscreens and grit removal comprising the only upstream pretreatment. The second is the use of sodium hypochlorite for disinfection of the secondary clarified effluent.²¹

68. Having considered the application documents, the submissions, the evidence presented to the hearing and the officers’ report, we consider that the principal issues of contention in relation to consent 0882-4 for the New Plymouth WWTP are (noting that we have already discussed effects on Maori interests and values earlier in the Decision):

- Alternatives
- Effects on marine ecology
- Effects on public health
- Discharge standards
- Duration and review

69. We address each of these matters in turn.

Alternatives

70. Some submitters sought conversion of the New Plymouth WWTP to a land-based treatment and discharge system (namely with no discharge to the Tasman Sea) within five years. In addition we are aware that Clause 1(f)(ii) of Schedule 4 and section 105 of the RMA require consideration of any possible alternative methods of discharge, including discharge into any other receiving environment.

71. We accept NPDC’s legal submission that it is not necessary for us to be satisfied that NPDC has chosen the best alternative means of treatment and discharge. In that regard we agree with Mr Winchester who submitted:

“... it is not appropriate to second guess whether the Council's proposal is the best possible option out of the range of alternatives. Investment decisions are for the Council to make, and to be tested against the RMA's framework.”

72. In other words, we need only be satisfied that NPDC has undertaken a reasonable assessment of alternatives and if that is the case we then proceed to consider the effects of the proposal that NPDC has chosen to advance, rather than speculating on

²¹ MacDonald, paras 4.3 and 4.4, page 5.

the effects of an alternative proposal (such as land-based disposal) that NPDC has not chosen to advance.

73. In this case we find that the NPDC has undertaken a reasonable assessment of alternatives, including the land-based disposal alternative favoured by some submitters. In that regard Mr Manning advised:

“... The equivalent [land-based disposal] area required in New Plymouth’s case would be in the order of 3,000 hectares of largely flat, forested land, free draining and ideally near the coast (where sandy soils predominate, and to preclude expensive pumping costs to an inland location).

In any case, inland soils tend to be silts or clays with lower permeability rates). There are obvious and in my view considerable problems from both a cost and availability perspective in securing sufficient suitable land for land-based disposal at the scale needed. The land secured would ideally be contiguous, within 1 to 5 kms of the NP WWTP and not at excessive elevation (to keep down pumping costs). In addition, screening and buffer zones around the perimeter of the site are likely to be required.

Despite these hurdles, the Council understands the submitters' desire to consider land-based disposal further. To that end, as noted below in my discussion of the consultation undertaken by the Council, the Council is prepared to consider a trial site for land-based disposal of treated effluent from NP WWTP, if such a site is available and can be consented. This consideration would take place as a separate work-stream after the presently sought consent applications have been determined. It is important to stress that, if a trial went ahead, it would still only take a small portion of the effluent from the NP WWTP.”²²

74. We note that Te Ohu o Waitara, Ngati Kura me Ngati Maru ki Tai and Ngati Tawhirikura Hapu offered the use of some of their land at Puketapu for a land-based disposal (as well as suggesting that airport land be used for that purpose). We were told that such use aligns with the fact that portions of the land are already used for the disposal of solid waste from the NP WWTP. Such an offer is generous, but Mr Kitto advised us that at most there was 311 hectares of land available at Puketapu and it was some 7 km distant from the New Plymouth WWTP. The land in question falls far short of the requirements identified by Mr Manning.

Effects on marine ecology

75. The issue of the potential adverse effects of the treated wastewater discharge on marine ecology was considered by Dr Roper. He advised:

“The AEE acknowledges however that the New Plymouth outfall does have the potential to adversely affect the marine environment. The extent to which this might be affecting the local ecology can be assessed from the monitoring that has been carried out, in particular measures of effluent quality, and monitoring of intertidal reef ecology, and trace metal accumulation in shellfish.”²³

“On the high-energy Taranaki coast, where there is good mixing and dilution of the effluent plume, suspended solids, BOD (biochemical oxygen demand) and nutrients are very unlikely to cause any issues.”

“Therefore, while chlorine may be leaving the WWTP at potentially toxic concentrations, further oxidation and rapid dilution is ensuring that no significant ecological effect is being caused. This is confirmed by the shoreline monitoring.”

²² Manning. EIC, paras 5.9 to 5.11, pages 14 and 15.

²³ Roper, para 4.1, page 3.

“Another measure of the potential impact that the New Plymouth discharge might be having is provided by the monitoring of trace metals in shellfish conducted by TRC.” “I agree with the general conclusion reached by the TRC that, based on this shellfish monitoring, there is no evidence of the outfall discharge causing any adverse effects on the receiving environment.”²⁴

76. The potential effects on marine ecology were also addressed in the officers’ report. Ms Giles explained the annual marine ecological surveys undertaken by TRC on the Waiwhakaiho and Mangati Reefs. The officers went on to conclude:

“Overall, all survey reports published between 1998 and 2010 [New Plymouth Wastewater Treatment Plant Outfall – Marine Ecological Surveys, January 1998 - January 2010] conclude that the discharge from the NP WWTP is not the cause of any fluctuations in ecological diversity in the local intertidal marine community.”²⁵

77. We note that some submitters considered that the marine ecology was degraded in the vicinity of the outfall and on the Waiwhakaiho Reef in particular. In that regard the officers noted:

“... species abundance and diversity are typically lower at the Waiwhakaiho reef sites [500 metres SW and 300 metres NE], however this does not necessarily correlate with sand inundation. Given that the substrate at the Waiwhakaiho reef sites is different to that at the other three sites, this is considered to be a key factor in the lower level of diversity recorded at the reef sites. The proximity of the freshwater input from the Waiwhakaiho River to the site 500 metres SW, may also affect the species abundance and diversity at this site.”

78. Dr Roper also advised:

“Differences between sites have been recorded and the latest monitoring found that richness and diversity were lowest at the Waiwhakaiho Reef site 300 m northeast of the outfall. Given the patterns of change that have occurred at sites in the past, however, it is not possible to attribute this observation to being definitely caused by the outfall discharge. I would agree with the general conclusion that these changes are more likely to be related to natural occurrences of sand inundation, the influence of freshwater from the Waiwhakaiho River and the fact that the shoreline at Waiwhakaiho Reef is different from that at the other sites, being composed of relatively small, smooth mobile cobbles. It is important to note too that the other site on the reef had richness and diversity measures comparable to the control sites.”

79. Based on the qualified evidence we find that the effects of the New Plymouth WWTP discharge on marine ecology are no more than minor.

80. However, we accept that ongoing monitoring of those potential effects is appropriate, particularly in light of the concerns expressed to us by submitters. We note that the NPDC has agreed to prepare a comprehensive Monitoring Plan in consultation with the Department of Conservation, Ngati Tawahirikura Hapu and interested community groups. The Monitoring Plan is to include monitoring of ecology in the intertidal zone approximately adjacent to the point of discharge, together with appropriate control sites.²⁶ We are satisfied that monitoring will enable any future adverse effects to be identified should they arise.

²⁴ Roper, EIC, paras 4.1, 4.3, 4.5, 4.9 and 4.10, pages 3 to 6.

²⁵ Officers’ report, para 150, page 43.

²⁶ Consent 0882-4 conditions 12 and 12A.

Effects on public health

81. Discharges of treated wastewater can have adverse effects on public health, both in terms of contact recreation and the gathering and consumption of shellfish. In our view these are the potential adverse effects of most concern for these applications. Ms Giles provided a helpful context for these effects:

“Viruses and other pathogens are commonly found in sewage discharges as they are excreted in faeces. If shellfish grow in water containing viruses they can subsequently become contaminated by consuming and retaining micro-organisms present in the surrounding water. This can pose a risk of infection to those who later consume the seafood. The risk associated with the consumption of shellfish is substantially greater than that associated with contact recreation.”²⁷

82. It appeared to us that the submitters were most concerned about potential effects on public health during what became known as “bypass flows”. These “bypass flows” occur when the inflow of effluent exceeds the treatment capacity of the aeration basins at the New Plymouth WWTP and so some of the effluent bypasses those basins. Mr Pool advised us:

“It is therefore likely that by the end of the consent period, bypasses at NP WWTP will occur for up to 7 days in total during the year.

Given the infrequency of the overflows, even as development progresses, the proposal has been made to allow the bypass of flows exceeding 880l/s any flow that is bypassed [is] to be dosed with sodium hypochlorite to disinfect [it] before the bypass is recombined with the treated effluent stream and discharged through the outfall pipe.

Because the milliscreens installed at Waitara have a ½ mm aperture, the sewage from Waitara will have a much higher proportion of solids physically removed and will have a higher proportion of stormwater compared to New Plymouth flows. It is therefore proposed that the NP WWTP upgrade includes the facility to preferentially bypass some or all of the Waitara flow around the aeration basins when the flow at New Plymouth exceeds 880l/s.”²⁸

83. In addition, when each of the existing two aeration basins is undergoing maintenance, “bypass flows” will also occur as only one aeration basin will be in operation at those times. Mr MacDonald advised that in such situations:

“It is proposed, therefore, that 50% of the incoming screened influent will be diverted to the operational aeration basin and will be treated to the limit of available capacity. The balance of the screened influent will bypass the aeration basin and clarifiers, be disinfected and then blended with the fully treated effluent before final disinfection in the chlorine contact basin and discharge through the outfall.”²⁹

84. We note that at all times the bypass flows will be screened and disinfected prior to being discharged. We find that to be acceptable.

85. With regard to the potential effects of the New Plymouth WWTP discharges on public health Mr McBride advised:

“Waterborne pathogens that can be present in wastewater are of four main categories—viruses, bacteria, protozoa and helminths (worms). Depending on the

²⁷ Officers' report, para 166, page 47.

²⁸ Pool, EIC, paras 7.15 to 7.17, page 20.

²⁹ MacDonald, EIC, para 8.6, page 23

health status of the contributing community, many of them are usually only present sporadically.”

“From the evidence presented I accept that the health risks to recreational users in proximity to the New Plymouth outfall are likely to be low provided that the treatment plant is operating as designed. Under normal conditions, risks to consumers of raw shellfish harvested from the New Plymouth area may be elevated ...[m]ore detailed quantitative microbial risk assessments would be necessary to quantify this.”³⁰

86. We also received evidence from Mr Hamill, an environmental scientist called as a witness by the Friends of the Waitara River. Mr Hamill did not address the effects of the New Plymouth WWTP directly, but he did identify one of the benefits of that plant’s proposed upgrade when he (appropriately in our view) concluded:

“The proposal to pipe wastewater from Waitara to Palmerston North (sic) [New Plymouth] Wastewater Treatment Plant will significantly reduce the risk of microbial contamination of shellfish due to sewage disposal in the Waitara area.”³¹

87. The officers’ report also addressed public health matters.

“In an attempt to determine the NP WWTP’s efficacy in deactivating viruses, NPDC carried out monitoring of viruses in the influent and effluent on three occasions in November and December 2010. The application states that the influent and effluent were sampled for enterovirus and adenovirus, which can be tested to determine whether these viruses are infectious. Infectiousness cannot currently be determined for norovirus, so no such tests were carried out.”

“The results indicate that the NP WWTP is effective at “deactivating” enterovirus and adenovirus prior to discharge, however there are no guidelines or standards relating to viruses so it is impossible to quantify the risks associated with residual virus levels in the effluent. Viruses are also known to be intermittent because of their ability to persist in the environment and shellfish tissue for an extended period of time. Therefore as the sampling was only undertaken over a number of weeks, the results are indicative.”³²

88. From the evidence we conclude that the risks to public health appear to be low but further monitoring is required to confirm this to be the case. Mr McBride recommended:

“More detailed Quantitative Microbial Risk Assessments (and associated studies on wastewater pathogen characterisation and oceanographic mixing and inactivation patterns) should be conducted to provide better assessment of the risks associated with these activities.”³³

89. In response to our questions Mr McBride advised that the Quantitative Microbial Risk Assessment (QMRA) that he recommended should not only focus on the bypass events described above, but also cover the regular discharge that occurs during periods of normal WWTP operation. He also advised that the results of the QMRA would assist with determining the adequacy of the current method of treatment (disinfection with sodium hypochlorite as opposed to the use of UV as advocated by some submitters) as well as the level of monitoring undertaken. He confirmed that the QMRA should be linked to a potential review of the consent conditions under section 128 of the RMA. The NPDC has accepted that a condition should be imposed accordingly on consent 0882-4 requiring the undertaking of a QMRA.

³⁰ McBride, EIC, paras 4.1 and 5.5, pages 4 and 9.

³¹ Hamill, EIC, para 6.1, page 9.

³² Officers’ report, paras 172 and 174, page 49.

³³ McBride, EIC, para 3.4, page 4.

90. On balance, we find that the potential adverse effects of the New Plymouth WWTP discharges on public health are minor, but that a QMRA should be undertaken to confirm that to be the case.

Discharge standards

91. The NPDC has offered consent conditions that impose discharge standards during the normal operation of the WWTP and at times when bypass flows occur. The discharge standards are to be achieved 95% of the time to allow for variations in the treatment process and also for periods when bypass flows occur as a result of the WWTP volumetric capacity being exceeded. We consider that to be appropriate and note that the reporting officers have agreed with the discharge standards suggested by the NPDC.

Duration and review

92. NPDC sought a consent duration of 30 years for the New Plymouth WWTP. We accept that a long duration is appropriate. The New Plymouth WWTP is a regional wastewater treatment facility that has performed well to date and the NPDC is about to expend a significant amount of money to upgrade it so that it can cope with increased effluent flows from the surrounding district out until 2040. The WWTP is a significant physical resource and the NPDC has a significant level of investment in it.³⁴
93. We have found that the effects of the discharge are minor and the NPDC and TRC reporting officers have agreed on the scope of a comprehensive monitoring programme. That monitoring will identify any unforeseen adverse effects that arise in the future. Section 128 review opportunities have been recommended to deal with any such unforeseen adverse effects. On balance we find that the 30 year duration sought is appropriate.
94. We note that Ms Ongley (legal counsel for the Director-General of Conservation) told us that she supported the consent durations sought by the NPDC provided that appropriate monitoring and review conditions were imposed. We agree with that proposition.
95. We note that some submitters sought a short three or five-year duration during which time the NPDC should move to a land-based disposal system.³⁵ In our view, based on the evidence before us regarding the efficacy of land-based disposal in New Plymouth's soil and climatic circumstances, such relief is both unreasonable and impractical.
96. We also note that the NPDC has agreed to undertake a land-based treated wastewater disposal trial. That is admirable, and met with the approval of some of the submitters, but it is not something that we would have otherwise imposed. Should the NPDC decide at some later point in time to move to a land-based disposal system then they would be free to do so and to seek the appropriate consents for such an activity at that time. We see no need to incentivise that in terms of consent duration or consent conditions. We have however imposed the Advice Note referring to the land-based disposal trial offered by the NPDC for consent 0882-4 as some form of reference to that trial on the face of the consents, given its importance to some submitters.

³⁴ Matters relevant under section 7(b) and section 104(2A) of the RMA.

³⁵ Including Te Ohu o Waitara, Ngati Kura me Ngati Maru ki Tai and Ngati Tawhirikura Hapu.

STATUTORY INSTRUMENTS

97. The relevant regional planning instruments are the Regional Policy Statement for Taranaki (RPS), the Regional Coastal Plan for Taranaki (RCP) and the New Zealand Coastal Policy Statement 2010 (NZCPS). These policy instruments were evaluated by the TRC reporting officers and by Ms Hope and Mr Rendall. We agree with the TRC reporting officers that the RCP expands on and refines the RPS policies and so we have given greater attention to the RCP provisions.³⁶
98. We see no need to repeat the planning evaluations referred to above in this Decision.
99. We agree with the view of the TRC officers that, in overall terms, the New Plymouth WWTP proposal is consistent with the RCP provisions and that the Waitara proposal is consistent with the majority of the RCP policies.³⁷ In the case of Waitara, we have had regard to the RCP policies that are not fully met (as we are required to do under section 104(1) of the RMA) and we find that in overall terms it better meets the sustainable management purpose of the RMA to enable the NPDC's Waitara proposal to proceed than to decline it.
100. Our attention was drawn to Policy 6 and 23 of the NZCPS.
101. We note that the NPDC's overall proposal is consistent with Policy 6 insofar as that policy "... recognises the importance of infrastructure and the rate at which it should grow to allow for population growth."³⁸
102. We note that in terms of Policy 23(2) of the NZCPS all of the proposed wastewater discharges will receive some form of treatment and in our view the NPDC has undertaken an adequate consideration of alternatives. We are also satisfied that we were sufficiently informed of tangata whenua interests and values, both by the iwi submitters and witnesses themselves and by the NPDC evidence and TRC officers' reports. We have discussed those interests and values earlier in this decision.

SECTIONS 105 AND 107

103. We must have regard to section 105(1) matters (including the sensitivity of the receiving environment and any alternative methods of discharge) and we must be sure that each of the four proposed discharges will not, after reasonable mixing, give rise to any of the adverse effects listed in section 107, unless we are satisfied that one or more of the exemptions set out in section 107(2) of the RMA apply.
104. With regard to section 105 matters we have already discussed alternatives and we have had regard to the receiving environment when considering the actual and potential effects of the proposed discharges.
105. We cannot grant consents if the section 107(1)(a), (b), (c) and (e) standards will be breached. The officers' reports advised respectively for the New Plymouth and Waitara proposals:

"Overflows and temporary discharges [from Waitara] are not expected to result in any of the effects listed under clauses (a), (b) or (c) after reasonable mixing. Long-term monitoring undertaken by the Council has shown no change in ecological diversity as

³⁶ Officers' report (Lenz), para 327, page 71.

³⁷ Officers' reports para 274 page 69 and para 325 and page 70 respectively.

³⁸ NPDC Opening Submissions, para 7.5, page 16.

a result of the discharge from the NP WWTP therefore the continued discharge is not expected to give rise to the effects under clause (e).³⁹

“The discharge is unlikely to result in any of the effects listed under clauses a, b or c after reasonable mixing, as outlined in section 9.5. The concentration of the constituents of the discharge after subsequent dilution fall within national guidelines, which are set to protect aquatic life, as outlined in section 9.1. Additionally, long-term monitoring by TRC has shown no change in ecological diversity as a result of the discharge (section 9.2). As such, the discharge will not give rise to the effects under clause e.”⁴⁰

106. We are satisfied on the evidence that the adverse water quality effects listed in section 107 of the RMA will not occur.

PART 2 MATTERS

107. Our considerations are subject to Part 2 of the RMA. A consideration of Part 2 matters was helpfully undertaken in pages 62 to 65 of the Giles officers' report and pages 72 to 76 of the Lenz officers' report. Part 2 matters were also addressed by Ms Hope and the NPDC legal submissions. We accept that enabling the appropriate treatment and disposal of wastewater produced by the New Plymouth and wider district communities is in accordance with section 5(2) of the RMA.
108. We find sections 6(a), 6(e) and 8 of the RMA to be relevant. In terms of section 6(a) we have had regard to the natural character of the marine environment and based on the evidence we find that the potential effects on that environment will be no more than minor. With regard to sections 6(e) and 8 we have discussed the matters of Maori interests and values earlier in this Decision.
109. We also find the provisions of sections 7(a), (aa), (b), (c), (d) and (f) to be relevant, but consider that those provisions are mirrored in the policies of the regional planning instruments and we have already found the NPDC's proposal to be appropriate in light of those provisions. Conditions requiring consultation and discussion with tangata whenua interests adequately address section 7(a) and (aa) concerns in particular.
110. In overall terms our consideration of Part 2 matters supports the granting of the applications. We expect that some submitters, tangata whenua in particular, will find our consideration of the issues unacceptable. However that will always be the case when an opposing “absolute” position is adopted. We find that overall the proposals in respect of Waitara in particular represent an incremental improvement to the treatment and disposal of wastewater with the potential to provide a consequent enhancement to the local marine environment. In that regard we note and agree with the NPDC's opening submissions which stated:

“There is no realistic option for the Council to “start again” and [NPDC] is not required to do so under the RMA. Under almost any scenario, a discharge to the sea is inevitable in the New Plymouth district. Considerable weight must be given to the significant existing investment in wastewater infrastructure which will be maintained and enhanced by the current proposals.”

“In a New Zealand context, the quality of treatment being proposed by the Council is very high compared to other large scale municipal treatment plants. Given the nature of wastewater treatment and disposal, some risks and adverse effects are unavoidable, but such matters (including cultural concerns) have been

³⁹ Officers' report (Giles), para 258, page 66.

⁴⁰ Officers' report (Lenz), para 314, page 68.

appropriately addressed through the design of the proposals and proposed conditions.”

“Some in the community still perceive a discharge to the sea as unacceptable, and have sought that the Council pursue land disposal. That perception needs to be seen in light of the proposal significantly decreasing discharges of contaminants to the sea, and the impracticability of land-based discharge. Land disposal has been investigated and is not a viable means of removing the discharge from the sea entirely.”⁴¹

G. DETERMINATION

111. Pursuant to the powers delegated to us by the Taranaki Regional Council under section 34A of the Resource Management Act 1991, we record that having regard to the application documents, the officers’ reports, the submissions and the evidence presented at the hearing, and having considered the various requirements of the RMA, we are satisfied that:
- i. The NPDC has undertaken an appropriate assessment of the potential adverse effects that might arise from the Waitara and New Plymouth wastewater treatment and discharge proposals.
 - ii. The potential adverse effects of those discharges are either minor or can be adequately avoided, remedied or mitigated by the imposition of conditions under section 108 of the Resource Management Act.
 - iii. The effects of the proposed discharge activities, when managed in accordance with those conditions, will not be inconsistent with the overall scheme of the Regional Policy Statement for Taranaki, the Regional Coastal Plan for Taranaki and the New Zealand Coastal Policy Statement 2010.
 - iv. The activity is consistent with the Purpose and Principles of the Resource Management Act.
112. We therefore **grant** the resource consent applications sought by the NPDC subject to the imposition of the conditions set out in Appendix 1.

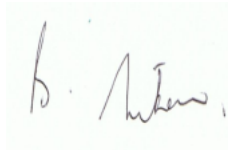
⁴¹ NPDC Opening Submissions, paras 3.3 to 3.5, page 4

Conditions

113. The applicant volunteered a suite of conditions and detailed amendments to these conditions were recommended by the TRC reporting officers and submitters (particularly the witnesses for the Director General of Conservation and the Friends of the Waitara River). We are very grateful for the assistance provided in that regard.
114. We have adopted the conditions finally agreed by the NPDC and the TRC reporting officers subject only to some very minor wording changes⁴². We have retained the numbering of the final agreed conditions submitted to us as part of the NPDC's closing submissions (which used numbers such as 12A to accommodate conditions inserted during the course of the hearing), but note that the TRC may wish to rationalise that numbering in due course.



Rob van Voorthuysen
Chair



Buddy Mikaere
Commissioner



Richard Heerdegen
Commissioner

15 November 2011

⁴² For example Condition 15 of Consent 0882-4 is expanded to deal with the situation where the consent holder declines to accept monitoring programme peer review recommendations, and Condition 14 of Consent 3397-2 refers to mussel shellfish (as opposed to shellfish generally).

Appendix 1 – Conditions

Consent 0882-4 [6803] – New Plymouth discharge

That application 6803, to discharge treated municipal wastewater from the New Plymouth wastewater treatment plant through a marine outfall structure into the Tasman Sea, be approved for a period to 1 June 2041, subject to the following conditions:

General Condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

Special Conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The discharge shall occur through a multiport diffuser system that ensures a minimum dilution of 13:1 at the sea surface at chart datum under dry weather discharge flow and calm sea conditions.
3. Constituents in the effluent discharged shall meet the standards shown in the table below.

Constituent	Standard
Zinc	Concentration not greater than 0.2 gm ⁻³
Chromium	Concentration not greater than 0.15 gm ⁻³
Cadmium	Concentration not greater than 0.04 gm ⁻³
Lead	Concentration not greater than 0.1 gm ⁻³
Nickel	Concentration not greater than 0.15 gm ⁻³
Copper	Concentration not greater than 0.1 gm ⁻³
Mercury	Concentration not greater than 0.002 gm ⁻³
Cyanide	Concentration not greater than 0.1 gm ⁻³
Phenols [including chlorinated phenols]	Concentration not greater than 1.0 gm ⁻³

4. Subject to condition 5 below, at least 95% of effluent discharge samples shall meet the standards shown in the table below.

Constituent	Standard
Suspended solids	Concentration not greater than 25 gm ⁻³
5-day Biochemical oxygen demand	Concentration not greater than 25 gm ⁻³

5. During:
 - (a) two periods, occurring before 30 June 2015, during which one of the aeration basins is off-line while being upgraded; and
 - (b) periods not exceeding 14 days, occurring no more than once per year, when one of the aeration basins is off-line for planned maintenance purposes;

Condition 4 shall not apply and samples shall instead meet the following standards:

Constituent	Standard
Suspended solids	Concentration not greater than 110 gm ⁻³
5-day Biochemical oxygen demand	Concentration not greater than 130 gm ⁻³

- 5A. The consent holder shall publicly notify its intention to exercise condition 5(a) at least five working days prior to taking an aeration basin off-line. The public notice shall detail the health and safety risks, reasons why the basin is being taken off line, and associated potential effects.
6. Notwithstanding any duration specified in condition 5 above, the periods when aeration basins are off-line shall be of the minimum duration necessary to achieve the purpose.
7. The consent holder shall give at least 30 working days notice to the Chief Executive, Taranaki Regional Council of the intention to take an aeration basin off-line. Notice shall be given by email to worknotification@trc.govt.nz and shall include:
- (a) The intended dates that the aeration basin will be off line; and
 - (b) Documentation demonstrating the off-line period complies with the requirement to be the minimum necessary.
8. The consent holder shall erect and maintain signs for a period beginning on the date that an aeration basin goes off-line, as described in condition 5(a), and ending 14 days after the date that the off-line period ends. The signs shall advise the public of the discharge of sewage that has not been fully treated and inform them of the potential health risks, and are to be placed in a prominent location at:
- Fitzroy Beach; and
 - Bell Block Beach.
9. The total available chlorine in the effluent, prior to entering the outfall pipe, shall be no less than 0.3 gm⁻³.
10. All effluent discharged shall have passed through a screen with an aperture no more than 3 mm, except that during periods when the milli-screen is non-operational for maintenance purposes, effluent may pass through a screen with an aperture no more than 6 mm.
11. The consent holder shall undertake sampling and testing necessary to:
- (a) Determine compliance with the conditions of this consent; and
 - (b) Characterise the effluent to the extent necessary to identify the nature and scale of its effects on the environment, during normal operation and at times when all the effluent is not being fully treated. In particular, monitoring must occur at times when an aeration basin is off-line, and be discussed at the annual meeting required by special condition 14.

Until the Monitoring Plan required by condition 12 is submitted to Taranaki Regional Council, monitoring will continue in accordance with the existing monitoring plan prepared under consent 0882-3.

- 11A. Within one year of the commencement of this consent, the consent holder shall submit to the Chief Executive, Taranaki Regional Council a Quantitative Microbial Risk Assessment (QMRA) of the discharge under this consent (focusing primarily on bypass discharges).
12. Within six months of the provision of the QMRA under condition 11A, the consent holder shall prepare, and submit to the Chief Executive, Taranaki Regional Council for certification, a 'Monitoring Plan' detailing the sampling, testing and measuring that will be undertaken to achieve compliance with condition 11. The Plan shall include, but not necessarily be limited to:
- (a) Details of the measuring and sampling to be undertaken including: sampling location, frequency and methodology; and
 - (b) Documentation of how the measuring and sampling described in 12(a) above, adequately characterises the effluent at all times.

As a minimum, the Monitoring Plan will require:

- (c) Monitoring of the effluent to determine compliance with conditions 3, 4 and 5;
 - (d) Monitoring of ecology in the intertidal zone approximately adjacent to the point of discharge, with appropriate control sites; and
 - (e) Monitoring of microbiological contamination within shellfish.
- 12A. In preparing the Monitoring Plan, the consent holder shall issue a draft Monitoring Plan and then carry out reasonable consultation with the Department of Conservation, Ngati Tawhirikura Hapu and interested community groups, allowing at least one month for a response from those groups on the draft Plan.
- 12B. Before submitting the Monitoring Plan to Taranaki Regional Council for certification, the consent holder shall have the Monitoring Plan peer reviewed by an independent, suitably qualified expert.
- 12C. The consent holder shall provide any comments received from the Department of Conservation, Ngati Tawhirikura Hapu and interested community groups under condition 12A, and the peer review under condition 12B, to the Chief Executive, Taranaki Regional Council, at the time the final Monitoring Plan is submitted for certification under condition 12. In the event that the consent holder declines to adopt any recommendations provided by the peer reviewer under condition 12B, the consent holder shall also provide, at the same time, its written reasons for declining to follow those recommendations.
- 12D. By 31 March in the years 2017, 2022, 2027, 2032 and 2037, the consent holder shall provide to the Chief Executive, Taranaki Regional Council the results of a peer review of the Monitoring Plan by an independent, suitably qualified expert to ensure that the monitoring programme is still appropriate. The results of the peer review shall also be made publicly available. In the event that the consent holder declines to adopt any recommendations provided by the peer reviewer under this condition, the consent holder shall also provide,

at the same time, its written reasons for declining to follow those recommendations.

- 12E. By 31 March in the years 2027 and 2037, the consent holder shall provide to the Chief Executive, Taranaki Regional Council a Technology Report covering:
- (a) A summary of any improvements made to the reticulation, treatment or disposal system since the granting of this consent;
 - (b) An outline of technological changes and advances in relation to wastewater management, treatment, disposal and technologies which may be available to address any residual adverse effects; and
 - (c) An assessment of whether any such options or combination of options represent the Best Practicable Option to minimise the effects of the discharge and whether the consent holder intends to incorporate such changes.

The Technology Report shall also be made publicly available. The Regional Council may obtain an independent peer review of the Technology Report, and may charge the consent holder for the actual and reasonable cost of obtaining this peer review.

- 12F. By 31 July each year, the consent holder shall provide to the Chief Executive, Taranaki Regional Council a report covering:
- (a) details of the progress made towards reducing inflow and infiltration reduction over the past year;
 - (b) the consent holder's target for reduction of inflow and infiltration in the coming year; and
 - (c) details of the works proposed in order to meet that target.
13. The consent holder shall maintain a Contingency Plan for the wastewater treatment plant site that shall be adhered to in the event of a spill or emergency. The Plan shall be approved by the Chief Executive, Taranaki Regional Council, acting in a certification capacity and shall detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.
14. At least once every year, the consent holder shall convene a meeting with representatives of the Taranaki Regional Council, Ngati Taw hirikura Hapu, and interested submitters on application 6803, to discuss any matter relating to the operation or monitoring of this consent.⁴³
- 14A. In the years 2027 and 2037, the consent holder shall use the meeting required by condition 14 as a means of collaborating with the community and stakeholders about the strategy for the future management of wastewater in New Plymouth district.
15. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by

⁴³ For the avoidance of doubt, this meeting can be combined with the annual meetings required under consents 7861-1 and 3397-2.

giving notice of review within three months of the receipt of the QMRA required by condition 11A and/or during the month of June 2017 and/or June 2022 and/or June 2027 and/or June 2032 and/or June 2037 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time. Reviews may also be undertaken at the dates listed above to enable the Taranaki Regional Council to deal with the consequences of the consent holder declining to accept the Peer Reviewer's recommendations under condition 12 D.

Advice note: The consent holder intends to establish a collaborative approach with Maori to investigate a trial of land-based disposal of treated wastewater. The commencement of such a trial will be subject to the consent holder being satisfied that

- (a) the owner(s) of land which has been offered for that purpose consent to its use for effluent disposal over the period of the trial and appropriate arrangements for its use are able to be satisfactorily resolved; and
- (b) the disposal is technically, economically and environmentally feasible (including addressing relevant RMA requirements).

Consent 7861-1 [6794] – Waitara high flow discharge

That application 6794, to discharge screened untreated municipal wastewater into the Tasman Sea via the Waitara Marine Outfall during high flow events at the Waitara Pump Station [previously the Waitara Wastewater Treatment Plant [WWWTP]], be approved for a period to 1 June 2041, subject to the following conditions:

General Condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

Special Conditions

1. The discharge shall occur as a consequence of high rainfall events when the instantaneous inflow to the Waitara Pump Station exceeds 280 litres per second, or when the inflow to the pump station exceeds 18,800m³ in the previous 24-hour period, or when the storage tanks at the Waitara Pump Station are full and the inflow to the Waitara Pump Station exceeds the transfer pumping rate of 140 litres per second.
2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
3. All effluent discharged shall have passed through a screen with an aperture no more than 0.5 mm.
4. The discharge shall occur through a multiport diffuser system that ensures a minimum dilution of 100:1 at the sea surface at chart datum under dry weather discharge flow and calm sea conditions.
5. Before 30 June each year, the consent holder shall prepare and submit a report that includes, but is not necessarily limited to:
 - (a) details of the proposed works, staging, and a timeline for reducing inflow and infiltration to achieve average dry weather flow volumes that are in line with the New Plymouth District Council Code of Practice for Infrastructure 2009, and to a level where the 'Waitara to New Plymouth sewer pipeline' will continue to meet the design specifications in achieving an overflow frequency discharge occurrence of <1% per year, averaged over a five year period; and
 - (b) in relation to 5(a) above, details of the progress undertaken towards achieving the specified works.
6. For each discharge event the consent holder shall record the date and time that the discharge started and finished. This record shall be provided to the Chief Executive, Taranaki Regional Council on request.
7. The consent holder shall notify the Chief Executive, Taranaki Regional Council of the occurrence of any discharge. Notice shall be given by sending an email to worknotification@trc.govt.nz as soon as practicable but no more than 24 hours after the consent holder became aware the discharge was occurring.

8. Subject to Section 36 of the Resource Management Act [1991], monitoring, including physicochemical, bacteriological and ecological monitoring of the wastewater treatment system and receiving waters shall be undertaken, as deemed reasonably necessary by the Chief Executive, Taranaki Regional Council, to identify the effects of the discharge.
9. As soon as practicable, but within 24 hours of any discharge commencing, the consent holder shall erect and maintain signs on or near the shoreline in the following areas:
 - (a) Waitara West Beach – Marine Park and the termination of Brown Street Extension; and
 - (b) Waitara East Beach – near the Waitara Swimming and Surf Life Saving Club and the termination of the access walkway by the Waitara Golf Club.

The consent holder shall consult with Taranaki District Health Board regarding the wording of the signs to ensure that the signs advise the public of the discharge of untreated sewage and appropriately inform the community of the potential health risks.

10. At least once every year the consent holder shall convene a meeting with representatives of the Taranaki Regional Council, Otaraua, Manukorihi, Ngati Rahiri, and other interested submitters on application 6794, to discuss any matter relating to the operation or monitoring of this consent and in particular to review the progress in inflow and infiltration reduction and whether this has had an effect on the frequency of overflows.⁴⁴
11. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2017 and/or June 2022 and/or June 2027 and/or June 2032 and/or June 2037 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

⁴⁴ For the avoidance of doubt, this meeting can be combined with the annual meetings required under consents 0882-4 and 3397-2.

Consent 7862-1 [6795] – Waitara temporary discharge

That application 6795, to temporarily discharge screened and disinfected municipal wastewater into the Tasman Sea via the Waitara Marine Outfall during conversion of the Waitara Wastewater Treatment Plant to the Waitara Pump Station, be approved for a period to 1 June 2017, subject to the following conditions:

General Condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

Special Conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. All effluent discharged shall have passed through a screen with an aperture no more than 0.5 mm.
3. All screened effluent shall be dosed with sodium hypochlorite. Up to a flow rate of 50 litres per second, the dose rate shall be no less than 15 g/m³.
4. The discharge shall occur through a multiport diffuser system that ensures a minimum dilution of 100:1 at the sea surface at chart datum under dry weather discharge flow and calm sea conditions.
5. Subject to Section 36 of the Resource Management Act [1991], monitoring, including physicochemical, bacteriological and ecological monitoring of the wastewater treatment system and receiving waters shall be undertaken, as deemed reasonably necessary by the Chief Executive, Taranaki Regional Council, to identify the effects of the discharge.
6. The consent holder shall give at least 30 working days notice to the Chief Executive, Taranaki Regional Council of the intention to discharge. Notice shall be given by email to worknotification@trc.govt.nz and shall include:
 - (a) The intended dates and duration of the discharge; and
 - (b) Documentation demonstrating that the works period is the minimum necessary to achieve the purpose.
7. For a period beginning at least 2 days before the discharge commences and ending at least 14 days after the discharge ends, the consent holder shall erect and maintain signs on or near the shoreline in the following areas:
 - (a) Waitara West Beach – Marine Park and the termination of Brown Street Extension; and
 - (b) Waitara East Beach – near the Waitara Swimming and Surf Life Saving Club and the termination of the access walkway by the Waitara Golf Club.

The consent holder shall consult with Taranaki District Health Board regarding the wording of the signs to ensure that the signs advise the public of the discharge of untreated sewage and appropriately inform the community of the potential health risks.

8. The consent holder shall publicly notify its intention to discharge at least five working days prior to it occurring. The public notice shall detail the health and safety risks, reasons why the discharge is occurring, and associated potential effects.

Consent 3397-2 [5011] – Waitara short term main discharge

The application 5011; to discharge up to 11,950m³/day (138 litres/second) of treated wastewater from the Waitara Wastewater Treatment Plant into the Tasman Sea via the Waitara marine Outfall; be approved approved for a period to 1 June 2017, subject to the following conditions:

General condition

- a) The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

Special conditions

Effluent quality and standards

1. The discharge volume over any 24-hour period shall not exceed 11,950m³ and the rate of discharge shall not exceed 138 litres/second.
- 1A. The consent holder shall cease the discharge authorised by this consent as soon as practicable after the Waitara to New Plymouth pipeline is commissioned to pump Waitara wastewater to the New Plymouth Wastewater Treatment Plant for treatment, bearing in mind the requirements of condition 14.
2. The pH of the discharge shall be within the range of pH 6 to pH 12 in at least 98% of the monitoring samples undertaken over any 12 month period ending 30 June.
3. On the basis of 24-hour flow proportioned composite samples, constituents of the discharge shall not exceed the following concentrations:

Constituent	Maximum concentration (g/m ³)
Suspended solids	1000
Chemical oxygen demand	800
Oil and grease	200
Ammoniacal nitrogen	50

4. On the basis of grab samples taken, the concentration of faecal coliforms in the discharge shall not exceed 50,000 per 100 millilitres.
5. The discharge authorised by this consent shall not give rise to any of the following effects in the Tasman Sea beyond a mixing zone of 200 metres from the centre line of the outfall diffuser:
 - (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; and
 - (d) any significant effects on aquatic life.

Monitoring and reporting requirements

6. The consent holder shall monitor and record the parameters of the discharge to demonstrate that the conditions of this consent are being complied with. This record shall be in an electronic format and submitted to the Taranaki Regional Council on a monthly basis. The consent holder is to consult with the Taranaki Regional Council as to the record format. Following this consultation, the record format is to be undertaken as advised by the Chief Executive, Taranaki Regional Council.
7. The consent holder shall prepare and submit an Annual Report to the Chief Executive, Taranaki Regional Council, by 31 July each year that includes, but is not necessarily limited to, the following information:
 - (a) details of any plant maintenance undertaken and an overview of the plant performance;
 - (b) details of any outfall or pump station(s) maintenance undertaken and an overview of the performance of the outfall and pump stations;
 - (c) details of any overflow events and/or system failures which result in untreated or partially treated wastewater discharges at the plant and/or pump stations; and
 - (d) details of any complaints received in accordance with condition 12.

Overflow contingency plan

8. The consent holder shall review and update the *NPDC Sewer System Emergency Contingency Plan* (dated August 2008) in consultation with the Taranaki District Health Board. The updated Plan shall detail measures and procedures to be undertaken to prevent the discharge of partially or untreated wastewater from the Waitara wastewater reticulation network or treatment plant not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a discharge. The plan shall be submitted for approval to the Chief Executive, Taranaki Regional Council, acting within a certification capacity, within three months of the date of commencement of this consent.

The consent holder shall operate in accordance with the approved Plan.

Inflow and Infiltration, and transfer pipeline construction

9. The consent holder shall prepare and submit a report (annually for the information required by subconditions (a) and (b), and quarterly for the information required by subconditions (c) and (d)) that includes, but is not necessarily limited to, the following information:
 - (a) details of the proposed works, staging and a timeline for reducing inflow and infiltration to a level where the 'Waitara to New Plymouth sewer pipeline' will continue to meet the design specifications in achieving an overflow frequency discharge occurrence of <1% per year, averaged over a five year period;
 - (b) in relation to a) above, details of the progress undertaken towards achieving the specified works;
 - (c) details of the proposed works, staging and a timeline for constructing and commissioning the 'Waitara to New Plymouth sewer pipeline'; and
 - (d) in relation to c) above, details of the progress undertaken towards achieving the specified works.

The report in (a) and (b) shall be submitted to the Chief Executive, Taranaki Regional Council, by 15 December of each year.

The report in (c) and (d) shall be submitted to the Chief Executive, Taranaki Regional Council, by 31 March, 30 June, 30 September, and 15 December of each year until implementation is complete.

Trade waste agreements

10. The consent holder shall notify and consult with the Taranaki Regional Council if any new trade waste agreements are formed and/or any existing trade waste agreements are modified, for which it may be appropriate or necessary to place limits on the concentrations of the treated wastewater of any toxic or hazardous contaminants which may be contained in that trade waste. If such limits are considered necessary, a review of the consent conditions may be undertaken in accordance with condition 15 of this consent.

Signage

11. The consent holder shall maintain four signs placed on or near the shoreline in the following areas:
 - (a) Waitara West Beach – Marine Park and Battiscombe Terrace Reserve; and
 - (b) Waitara East Beach – near the Waitara Swimming and Surf Life Saving Club and the termination of the access walkway by the Waitara Golf Club;

The consent holder shall consult with Taranaki District Health Board regarding the wording of the signs to ensure that the signs advise the public of the discharge of untreated sewage and appropriately inform the community of the potential health risks.

Complaints

12. The consent holder shall keep a record of any complaints that are received. The record shall contain the following details, where practicable:
 - (a) name and address of the complainant;
 - (b) identification of the nature of the complaint;
 - (c) date and time of the complaint and of the alleged event;
 - (d) weather conditions at the time of the complaint; and
 - (e) any measures taken to address the cause of the complaint.

The consent holder shall notify the Taranaki Regional Council of any complaints relating to the exercise of this consent, and forward on any details recorded in relation to any complaint[s] received, as soon as practicable.

The consent holder shall also provide details of any complaints received in the Annual Report required by condition 7.

Note: For notification purposes, at the grant date of this consent, the Taranaki Regional Council's phone number is 0800 736 222 [24 hour service].

Community liaison

13. At least once a year the consent holder shall convene a meeting of representatives of Taranaki Regional Council, Otaraua, Manukorihi, Ngati Rahiri, and other interested submitters on application 5011, to discuss any matter relating to the operation or monitoring of this consent.⁴⁵

Virus monitoring

14. The consent holder shall survey for microbiological contamination within mussel shellfish from two impact sites and one control site on one occasion and as soon as practicable following the commissioning of the 'Waitara to New Plymouth sewer pipeline'. The results of the survey shall be provided to the Taranaki Regional Council and the Taranaki District Health Board. The consent holder shall consult with the Taranaki Regional Council in regards to the survey methodology, timing of the survey and reporting requirements.

The consent holder shall not surrender this consent prior to the requirements of this condition being fulfilled.

Review

15. In accordance with sections 128 and 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice within one month of receiving notification of a new and/or modified trade waste agreement required under condition 10 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, and in particular to address any more than minor adverse effects relating to coastal water quality.

⁴⁵ For the avoidance of doubt, this meeting can be combined with the annual meetings required under consents 0882-4 and 7861-1.