IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	Coastal Permit CRC101831 to discharge treated sewage and industrial wastewater into the coastal marine area, and Coastal Permit CRC101832 to erect and construct, and occupy and use the coastal marine area for a pipeline outfall structure
BETWEEN	**TIMARU DISTRICT COUNCIL** **Applicant**
AND	**CANTERBURY REGIONAL COUNCIL** **Respondent**

DECISION OF HEARINGS COMMISSIONER

Sharon McGarry

26th November 2010

Heard on the 4th November 2010, in the Council Chambers at the offices of the Canterbury Regional Council, Kilmore Street, Christchurch.

Representations and Appearances

Applicant:

Mr P. Whyte, Senior Planner (Beca Carter Hollings and Ferner Limited)

Mr A. Harper, District Services Manager (Timaru District Council)

Mr G. Hall, Drainage and Water Manager (Timaru District Council)

Mr P. Barter, Senior Marine Scientist (Cawthron Institute)

Mr H. Archer, Environmental Engineer (CH2M Beca Limited)

Submitters:

Mr D. Saunders, General Manager (South Canterbury By Products 2009 Limited)

Section 42A reporting officer:

Dr M. Freeman, Environmental Consultant (Freeman Environmental Limited)

It is the decision of the Canterbury Regional Council, pursuant to sections 104, 104B 104D 105, 107, 108 and 117, and subject to Part 2 of the Resource Management Act 1991, that the Timaru District Council be granted Coastal Permit CRC101831 to discharge wastewater into the coastal marine area; and Coastal Permit CRC101832 to erect and construct a discharge pipeline outfall structure, and occupy and use the coastal marine area; for consent durations of 35 years, subject to conditions set out in Annexure 1.

BACKGROUND AND PROCEDURAL MATTERS

1. This is the decision of Hearings Commissioner Sharon McGarry delegated authority by the Canterbury Regional Council ('ECan') to hear and decide an application by the Timaru District Council ('TDC' or 'the applicant') for resource consents associated with the discharge of treated sewage and industrial wastewater into the coastal marine area via an offshore outfall pipeline.

2. The application was lodged on 10th December 2009, after the 1st October 2009 enactment of the Resource Management (Simplifying and Streamlining) Amendment Act 2009, and is therefore subject to these provisions.

3. The coastal permits are deemed to be **restricted coastal activities** and accordingly, I have been nominated by the Minister of Conservation pursuant to section 117(7) of the Resource Management Act 1991 (the 'RMA' or 'the Act').

4. The TDC was originally granted resource consent in 1984 for the discharge of wastewater from Timaru into the ocean via a pipeline outfall. There is no record of any authorisation for the erection and construction of the pipeline outfall, or to occupy and use the coastal marine area.

5. The discharge from the Timaru wastewater treatment plant is currently authorised by resource consent **CRC971135.1**, which was granted on 2nd July 1999 and is due to expire on 1st December 2010. A change of conditions was granted on 24th January 2002 to authorise the additional discharge of wastewater from the townships of Geraldine, Temuka and Pleasant Point.

6. A preliminary report was produced pursuant to section (s) 42A of the Act by Mr Bruce Apperley, Principal Engineer with AECOM NZ Ltd. This report was reviewed by ECan officers and Dr Mike Freeman was subsequently engaged as the reporting officer to audit the application. Dr Freeman prepared and circulated a 's42 report' dated 9th July 2010, which provided an analysis of the matters requiring consideration and recommended the consents be granted, subject to conditions. However, he noted that in the event the recommended conditions are not imposed, he considered there would not be an adequate level of assurance about the level of adverse effects to justify the grant of a long-term duration (i.e 53 years).

7. In response to the s42A report, the applicant requested that the hearing scheduled for 9th July 2010 be deferred. The applicant responded the matters raised in the s42A report in writing on 20th September 2010, and outlined amendments to the recommended conditions of consent that were viewed by TDC as a 'bottom line' and which would be the subject of an appeal if imposed.

8. In light of the possibility of an appeal, I directed that a hearing be scheduled and that an addendum s42A report focussed on the matters in contention be prepared and circulated. An addendum s42A (dated 4th November 2010) was pre-circulated. The hearing

commenced at 9am on Thursday 4th November 2010 and was adjourned at 1.45pm the same day.

9. I did not consider it necessary to undertake a site visit.

10. The applicant provided a revised set of proposed conditions of consent on 8th November 2010, and the hearing was closed on 19th November 2010.

THE APPLICATION

11. The existing discharge pipeline outfall is located approximately 6 kilometres (km) north of Timaru and extends approximately 500 metres (m) offshore. The 1m diameter pipeline extends from a surge chamber 300m behind the beach and is buried at an average depth of 9m below ground. The seaward end of the pipeline is elevated on piles (0.4m above the seabed) to form a 100m long diffuser in a depth water of approximately 6m. Wastewater is discharged from 120 bell-mouthed ports of 75mm in diameter.

12. The current discharge of wastewater is comprised of oxidation pond treated domestic effluent from Geraldine, Temuka and Pleasant Point; domestic wastewater from Timaru, including commercial premises, leachate from Redruth Landfill, and two rendering plants and a foundry; and industrial wastewater from food processing industries (meat, fish, vegetables and fruit) and from by-products processing (wool scour and tanning).

13. The applicant has adopted the Timaru Wastewater Management Strategy, which provides for an upgrade of the wastewater system by 2013. The upgrade incorporates the following "Preferred Stage One Treatment Upgrade":
    - Completion of the installation of separate conveyance of 'domestic' (i.e. all domestic and some non-domestic) and industrial wastewater to the treatment plant;
    - Installation of fine screens to remove debris from the domestic stream to be dewatered and discharged to landfill;
    - Treatment of domestic wastewater in two primary ponds, with the possibility of an aeration basin between these two ponds; and
    - Further treatment of domestic wastewater in a series of maturation ponds and wetlands.

14. In recognition of the improvement in the treatment of Timaru's domestic wastewater following completion of the upgrades, the applicant proposes different effluent quality standards and consent limtis for pre and post 2013.

15. The applicant seeks retrospective consent for the erection and construction of the discharge pipeline outfall, and to occupy and use the coastal marine area.

NOTIFICATION AND SUBMISSIONS

16. The application was publicly notified in the Timaru Hearld newspaper on 13th March 2010, as follows:

> The Timaru District Council (TDC) has applied for the following two new resource consents related to the continued operation of the existing Timaru City wastewater outfall:
>
> CRC 101832: a coastal permit to occupy and use the seabed for an outfall structure.
>
> CRC 101831: to discharge treated domestic and industrial wastewater into the coastal marine area via the outfall structure.
>
> The outfall is sited approximately 6 kilometres northeast of Timaru City, at or about map reference NZMS 260 K38:734-507, and adjacent to the end of Seaforth Settlement Road, Washdyke.
>
> The TDC has had consent since 1984 to discharge up to 120,000 cubic metres per day (1,390 l/s) of milliscreened human sewage and trade waste (primarily food processing industry effluent) to the coastal marine area between 300 and 400 metres from the coastline. This existing consent expires on 1 December 2010. TDC has proposed that the separated domestic wastewater stream will undergo additional treatment, beyond that required by the existing consent, prior to being discharged. The TDC has also sought authorisation to discharge increased volumes of treated wastewater to reduce the possible need for wet weather sewer overflows. The contaminants in treated wastewater are known to include organic material, nitrogen, phosphorus, trace metals and micro-organisms
>
> The applicant has requested a duration of 35 years for each consent.

17. Notice of the application was also served on 15 potentially affected parties.

18. Nine submissions were received. Eight submissions were in support of the application and one submission by the Department of Conservation ('DOC') was in opposition.

19. The submissions were accurately summarised in the s42A report. DOC withdrew its right to be heard (dated 17th May 2010) following discussions with the applicant regarding proposed conditions of consent.

THE HEARING

Applicant's case

20. **Mr Paul Whyte**, conducted the applicant's case and called five witnesses, including himself. He briefly outlined the Timaru Wastewater Management Strategy (TWMS), pre 2013 and post 2013 conditions, and confirmed the focus of the evidence related to the areas of disagreement between Dr Freeman and TDC, as directed.

21. **Mr Ashley Harper** is the District Services Manager for Timaru District Council. He has a Bachelor of Engineering and a Masters of Business Administration and has been involved with Timaru's wastewater since the early 1990s. Mr Harper explained the scheme serves a population of 45,000 people and outlined TDC's strategic and wastewater planning. Mr Harper provided me with a copy of the TDC Bylaw – Chapter 7 – Water Services.

22. **Mr Grant Hall** is the Drainage and Water Manger for Timaru District Council. He has a Bachelor of Engineering (Civil) and a Masters of Science (Public health Engineering) and over 25 years experience in wastewater and stormwater management. Mr Hall gave evidence regarding the implementation of the TWMS, industrial wastewater, community consultation and proposed trigger limits. He highlighted TDC's preference for specific wording for beach signage, as he considered the recommended wording overstates any actual public health risk. He emphasised that the focus should be on controlling the discharge with consent conditions and not on "inputs".

23. **Mr Paul Barter** is a Senior Marine Scientist with the Cawthron Institute. He has a Bachelor of Science in Marine Biology, with over 20 years experience in assessing the impacts of discharges and has dived the outfall pipeline. Mr Barter table his written evidence and briefly summarised potential effect on the benthos and the water column. Overall, he considered the range and potential magnitude of effects from wastewater discharges (and other organic rich discharges) are well documented and understood. He considered that given the high energy, soft-bottom habitat and the type of waste

discharged, the primary consideration is potential enrichment effects in the sediments adjacent to the outfall. He confirmed that metal concentrations in the sediments were generally low (well below ANZECC 2000 ISQG-Low values[1]), the sediments were dominated by fine sand with low organic content and were aerobic, and benthic infaunal communities were sparse in both richness and abundance. He recorded a visible discharge plume (associated with water clarity and colour change), and elevated nutrient and bacterial levels within the plume and occasionally close to the shoreline. He undertook additional work into water clarity issues, shoreline water quality, and mixing zone recommendations.

24. Mr Barter noted general agreement with the guideline approach for setting consent limits, but highlighted concern regarding numerical value (versus narrative standards). He recommended the need to adopt a 90th percentile level of species protection (versus a 95th percentile level of species protection), and highlighted that the Regional Coastal Environment Plan (RCEP) limits are no longer applicable or current, as they are based on old ANZECC (1992) limits. He recommended the use of median and 90th percentile trigger values for determining compliance with limits (versus 99th percentile trigger value) and considered this is more statistically robust when only 12 samples are collected annually, referring to Chapter 13 of NZWERF (2002)[2]. He recommended the NZWERP (2002) approach for an allowable number of exceedances (versus a rolling average), so that compliance can be ascertained without waiting for an entire calendar year and noted that an exceedance will not continue to effect compliance until they 'fall out' of the rolling average calculation.

25. In summary, Mr Barter considered that there will be no more than minor changes to subtidal benthic habitats as a result of the discharge, primarily due to the assimilative capacity of the high energy coastline.

26. **Mr Humphrey Archer** is a Technical Director of Environmental Engineering with CH2M Beca Ltd. He has a Bachelor of Engineering (Civil), with over 35 years experience in wastewater treatment and disposal. Mr Archer's evidence focussed on the specific issues

[1] Australian and New Zealand Environment and Conservation Council 2000: 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality'
[2] New Zealand Water Environment Research Foundation 2002: 'New Zealand Municipal Wastewater Guidelines'

in contention, and confirmed the assessment of effects (AEE) was carried out during average to high contaminant loads and that wastewater quality was measured at the Milliscreen Plant. He highlighted differing trigger levels pre and post 2013; and acceptance of the trigger values proposed in the right hand column of Table 2 (Addendum s42A report), use of flow weighted averages for monthly sampling based on 24 hour composite samples, and the uses of median and percentile values with a number of exceedances (as recommended by Mr Barter). He noted new conditions have been proposed clarifying applicable conditions post 2013, the preference for use of the term *"...by a suitably qualified and experience engineer or scientist"*, limiting beach signage to the period 1st November to 30th April each year, and outlined areas of agreement on specific conditions and approaches.

27. **Mr Paul Whyte** is a Senior Planner with Beca with a Bachelor of Town Planning and 26 years experience in town planning and resource management. Mr Whyte's evidence stated the application should be considered as a non-complying activity under s104D of the Act, and he considered the application would meet both threshold tests and the requirement of s105 and s107 of the Act. He noted that the New Zealand Coastal Policy Statement (2010) will not come into effect until 3rd December 2010. In response to question, Mr Whyte confirmed both coastal permits sought were restricted coastal activities.

Submissions in Support

28. **Mr David Saunders,** General Manger for South Canterbury By Products 2009 Ltd, presented a submission in support of the application. Mr Saunders outlined the company's 2007 move to a site close to the outfall pipeline and its commitment to an ongoing waste improvement and reduction programme. He stressed the need for an industry based approach for wastewater minimisation and emphasised the potential implications of the increased costs associated with a centralised industrial wastewater treatment system, such as the relocation of industries.

Section 42A Report

29. **Dr Mike Freeman**, tabled his s42A report and addendum, and made the following main points:

(a) There is uncertainty regarding use of the wording "...*suitably qualified and experienced*" and he would prefer to see an example of the type of acceptable qualification added to provide a reference point;

(b) Condition 17(b) needs rewording to define the boundaries of Class CR waters;

(c) If the decision is not made before 3rd December 2010 the provisions of the NZCPS (2010) should be taken into account;

(d) Although technically the standards of ANZECC (2000) are most the relevant, consideration must be given to the provisions of the RCEP;

(e) Changes made to the proposed median and 90% percentile limits for contaminants meets the concerns raised;

(f) The question of whether the 90th percentile or 95th percentile level of species protection should apply must be considered by taking into account the provisions of the RCEP and NZCPS, and the provisions indicate 95th percentile level of species protection is the appropriate starting point;

(g) Given the ability of the receiving water to assimilate the contaminants, it would be appropriate to apply the 95th percentile level of species protection and to require compliance 90% of the time;

(h) A condition requiring the recycling of leachate would provide more certainty; and

(i) While it is positive the applicant has agreed to inform ECan of the five yearly review of TDC's Bylaw, it is important to note that ECan have no mechanism to ensure it is implemented.

Applicant's Right of Reply

30. Mr Whyte gave a verbal right of reply. In summary, he made the following main points:

(a) It is important to take into account the views of the submitters in support of the application;

(b) The wording *"...suitably qualified and experienced*" is consistent with other similar consents and Dr Freeman's proposed wording is too confusing;

(c) Most of the additional conditions suggested by Dr Freeman are acceptable;

(d) It is appropriate to use the ANZECC (2000) guidelines and the 90th percentile level of species protection because of the low level of biodiversity, port dredging activities,

the proximity to river inputs and the receiving environment's ability to assimilate contaminants;

(e) Leachate from the landfill will be treated through the domestic system; and

(f) A revised suite of proposed conditions based on the agreement reached in the hearing will be provided following the adjournment.

ASSESSMENT

Status of the Application

31. In assessing the application, I have considered the application documentation and AEE, the s42A report and addendum, all submissions received and the evidence provided during and after the hearing.

32. The starting point for my assessment of the application is to determine the status of the activities. There is agreement between the parties that the discharge should be considered as a non-complying activity and a restricted coastal activity and that the application to occupy and use the coastal marine area is a discretionary and restricted coastal activity.

33. Given the occupation and use of the coastal marine area is an ancillary to the primary activity of the discharge of wastewater, I consider it appropriate to make an overall assessment of the activities as **non-complying activities** under s104D of the Act.

Statutory Considerations

34. In terms of my responsibilities for giving consideration to the discharge, I am required to have regard to the matters listed in sections 104, 104B, 104D, 105 and 107 of the Act.

35. In terms of s104(1), and subject to Part 2 of the Act, which contains the Act's purpose and principles, I must to have regard to-

(a) Any actual and potential effects on the environment of allowing the activity;

(b) Any relevant provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or a proposed regional policy statement, a plan or proposed plan; and

(c) Any other matters the consent authority considers relevant and reasonably necessary to determine the application.

36. In terms of sections 104B and 104D, where an applicant has sought consent for a non-complying activity, I may grant or refuse resource consent, and (if granted) may impose conditions under section 108. However, I am limited in that resource consent may only be granted for a non-complying activity if I am satisfied that **either**:

*(a) the adverse effects on the environment (other than any effect to which section 104(3)(b) applies), will be minor; **or***

(b) the application is for an activity that will not be contrary to the objectives and policies of the relevant plans.

37. For non-complying activities, even where one or both of the threshold tests in s104D(1) is met, I still retain an overall discretion as to whether to grant resource consent. That discretion is to be exercised having regard to the criteria set out in s104 and subject to Part 2 of the Act.

38. In terms of s105, when considering s15 (discharge) matters, I must, in addition to s104(1), have regard to-

(a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(b) The applicant's reason for the proposed choice; and

(c) Any possible alternative methods of discharge, including discharge to any other receiving environment.

39. In terms of s107(1), I am prevented from granting consent allowing any discharge into a receiving environment which would, after reasonable mixing, give rise to all or any of the following effects-

(c) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material:

(d) Any conspicuous change in the colour or visual clarity:

(e) Any emission of objectionable odour:

(f) The rendering of fresh water unsuitable for consumption by farm animals:

(g) Any significant adverse effects on aquatic life.

40. In terms of s104(2), I may grant a coastal permit to discharge that may allow any of the effects in s104(1)(c)-(g) if I am satisfied-

(a) That exceptional circumstances justify the granting of the permit; or

(b) That the discharge is of a temporary nature; or

(c) That the discharge is associated with necessary maintenance work- and that is is consistent with the purpose of this Act to do so.

Section 104(1)(a) - Actual and potential effects on the environment

41. The potential effects on the environment were assessed in the s42A report, and there is now general agreement that with the imposition of appropriate standards and limits the any actual and potential adverse environmental effects can be adequately avoid or mitigated to ensure they are no more than minor.

Section 104(1)(b) – Relevant planning provisions

42. An analysis of the relevant provisions of the NZCPS, RPS and RCEP was provided in the s42A report by Dr Freeman.

New Zealand Coastal Policy Statement

43. The purpose of the New Zealand Coastal Policy Statement (NZCPS) is to state policies to achieve the purpose of the Act, which is to promote the sustainable management of natural and physical resources. The NZCPS is the only mandatory policy statement under the Act and any regional policy statement or regional plan must be consistent with its policies.

44. In accordance with Schedule 1.10 of the NZCPS the discharge of human sewage into the coastal marine area, without passing through soil or a wetland, is a **restricted discretionary activity.** This is in recognition of potential irreversible adverse environmental effects.

45. The relevant policies of the NZCPS were set out by Dr Freeman and Mr Whyte. I note the particular relevance of **Policy 5.1.1, Policy 5.1.2, Policy 5.1.3, Policy 5.1.5 and Policy 5.1.7.**

46. Given proposed conditions of consent and the applicant's commitment to continue to reduce and improve the treatment of trade wastes, I consider that overall the application not contrary to the relevant policies of the NZCPS.

Canterbury Regional Policy Statement

47. The relevant objectives and policies of the Canterbury Regional Policy Statement (RPS) were set out by Dr Freeman. I note the particular relevance of Chapter 11 Objective 1, Policies 1 and 2, Objective 3, Policies 9 and 10, and Objective 2. Overall, I am satisfied the application not contrary to these provisions.

Regional Coastal Environment Plan for the Canterbury Region (RCEP)

48. The relevant objectives and polices of the RCEP were set out by Dr Freeman and Mr Whyte. I note the particular relevance of the Objective 7.1, and Policies 7.2, 7.4, 7.5, 7.6, 7.7 and 7.8 to the discharge; and Objective 8.1 and Policies 8.3, 8.5, 8.7 and 8.12 to the occupation and use of the coastal marine area. Overall, I am satisfied the application is consistent with these provisions.

Section 104(1)(c) - Other matters

49. No other matters were brought to my attention.

Section 105 and 107 Considerations

50. In making my assessment, I am required to have regard to the matters set out in sections 105 and 107 of the Act. I am satisfied with the applicant's reasons for the proposed choice and accept that other methods of discharge and discharge into other receiving environments have been adequately considered.

51. On the basis of the evidence presented, I accept that with the imposition of appropriate consent conditions and that after reasonable mixing the discharge is unlikely to give rise to any of the effects set out in s107(1)(c)-(g) of the Act.

Part 2 of the Act

52. All the considerations I have described are subject to Part 2 of the Act. In accordance with Part 2, I consider that the application is consistent with the purpose of the sustainable management of natural and physical resources, as defined in s5.

53. I consider the ongoing use of the pipeline outfall for the discharge of treated wastewater will continue to have positive social and economic benefits for the Timaru district. The evidence before me supports the view that the discharge is not causing irreversible degradation or any significant adverse environmental impact.

54. In recognising and providing for the matters of national importance, set out in s6, I have no information to suggest the application is inconsistent with any of the matters set out.

55. In having particular regard to s7 matters, I am satisfied that none of the matters set out will be compromised by the granting of the application. I consider the applicant's commitment to TWMS and proposed upgrades should result in ongoing improvements, which is consistent with s7(f) - "*Maintenance and enhancement of the quality of the environment".*

56. In forming my opinion, s8 requires me to take into account the principles of the Treaty of Waitangi/Te Tiriti o Waitangi. I have no evidence to suggest the granting of this application would offend those principles. I accept that a significant level of consultation has occurred between the applicant and Te Runanga o Arowhenua.

Conditions

57. The hearing was focused on appropriate conditions of consent, and in particular on appropriate contaminant trigger levels and receiving environment standards. Overall, I consider that the revised set of proposed conditions (as provided by the applicant) for Coastal Permit CRC101831 reflects the agreements reached during the hearing. In particular, I note the addition (or rewording) of Conditions 10, 17, 17(a), 17,(b), 17 (b)(ii), 17(c)(i), 18, 21, 22(b), 26(c)(ii), 28(c), and 31.

58. I am not convinced that adding an example of the type of suitable qualification would add any certainty to the wording *"...suitably qualified and experienced*". I agree with the applicant that such an addition could be unreasonably limiting and may cause confusion. I agree with the applicant that it is preferable to impose the wording that is consistent with other similar consent.

59. I am mindful that the proposed conditions of consent require significant improvement in the treatment of domestic wastewater (and a small component of industrial wastewater),

but that the focus for ongoing improvement to the industrial stream is by implementation of the TDC's Bylaw and dilution with the treated domestic stream.

60. I accept the applicant's approach to focus on the conditions of consent and not to "go too far up the pipe", but this emphasises the need to ensure the receiving environment is adequately protected by setting appropriate contaminant limits in the discharge and standards in the receiving environment. There is now agreement regarding appropriate contaminant trigger levels pre and post 2013.

61. The remaining issue in contention is the appropriate level of species protection for the receiving environment. In considering the matter, I have referred to the provisions of the RCEP and the NZCPS, and the guidance of ANZECC (2000).

62. I note the provisions of the RCEP that the receiving waters are to be managed contact recreation (Class CR) and aquatic ecosystems (Class AE). I also note agreement regarding a 'zone of reasonably mixing' and I consider this is relatively generous.

63. I note the direction of the provisions of the NZCPS, RPS and RCEP are to maintain and enhance the existing quality of the receiving environment and to reduce contamination from trade wastes.

64. I note the definition of Condition (2) of the ANZECC (2000) guidelines for 'slightly to moderately disturbed ecosystems' and concur this is the appropriate category for the existing environment. I also note the 'default' level of species for this type of ecosystem is the 95th percentile, and that lower levels of species protection such as 80th or 90th percentile are considered to be intermediate levels of protection in situations were remediation and enhancement are the key objectives.

65. The applicant is wrong in stating that the level of species protection for Lyttelton Harbour is the 80th percentile, as this is only considered appropriate for the Port Zone Area. The recently granted resource consents for both the Governors Bay and the Diamond Harbour wastewater discharges require compliance with the 95th percentile level of species protection, as this was agreed to be the appropriate level for the wider area of Lyttelton Harbour.

66. Having considered the evidence presented, I strongly disagree with the applicant that the appropriate level of species protection is the 90th percentile based on anthropogenic impacts and the high energy nature of the receiving environment. I agree with Dr Freeman that the receiving environment's ability to assimilate contaminants is more appropriately recognised in providing for a 90 percent level of compliance.

67. I have therefore determined, based on the quality of the existing environment, the direction of the planning provisions and the 'end of pipe' approach to managing effects, that the appropriate level of species protection is the 95th percentile. This is consistent with other coastal waters around New Zealand. I have amended the proposed conditions for the discharge post 2013, Condition 23 and 29(a) accordingly.

Duration

68. On the basis of the mitigation of adverse environmental effects by the imposition of conditions and the commitment to ongoing upgrade of the wastewater system, I concur the appropriate duration of consent is 35 years.

Decision

69. **It is the decision of the Canterbury Regional Council, pursuant to sections 104, 104B, 104D 105, 107, 108 and 117, and subject to Part 2 of the Resource Management Act 1991, that the Timaru District Council be granted Coastal Permit CRC101831 to discharge wastewater into the coastal marine area; and Coastal Permit CRC101832 to erect and construct a discharge pipeline outfall structure, and occupy and use the coastal marine area; for consent durations of 35 years, subject to conditions set out in Annexure 1.**

Right of Appeal (Section 120)

70. The parties are advised there is a right of appeal to the Environment Court, which must be lodged within 15 working days of this decision.

Dated at Christchurch this 26th day of November 2010

Sharon McGarry
Hearings Commissioner

Annexure 1

Coastal Permit CRC101831 - To discharge treated wastewater into the coastal marine area from a submarine discharge pipeline outfall

Term of Consent

1. The term of this consent shall be 35 years from the date of commencement.

General Conditions

Outfall Diffuser

2. The discharge shall be via an outfall diffuser constructed in accordance with the layout shown in Figure 1, attached to and forming part of this consent, or a layout that is of equivalent performance to maximise the initial dilution of treated effluent discharged from the outfall.

3. The seaward end of the outfall diffuser shall be located not less than 400 metres from the shoreline at mean sea level, with the mid-point of the diffuser situated at or about map reference NZTM 1,463,417: 5,089,078.

Sampling and Analysis

4. All sampling required under this consent shall be undertaken by a suitably qualified and experienced person who has completed appropriate training (for example NZQA Unit Standard 17878, or a Certificate in Wastewater Treatment).

5. Water and wastewater samples required under these conditions shall be collected, stored, preserved and analysed in accordance with '*Standard Methods for the Examination of Water and Wastewater'* prepared and published by the American Waterworks Association and the Water Environment Federation (the latest Edition), or any other generally accepted methodology.

6. All samples taken shall be analysed by a laboratory that is accredited for that analysis. For the purpose of this condition, accreditation must be by International Accreditation New Zealand (IANZ) or an equivalent accreditation organisation that has a Mutual Recognition Arrangement with IANZ.

Complaints Register

7. A Complaint Register for all aspects of the discharge of treated effluent to the ocean shall be maintained. The register shall detail the date, time and type of complaint, cause of complaint and action taken by the Consent Holder in response to the complaint. The register shall be available to the Canterbury Regional Council upon request.

Annual Reporting

8. An annual monitoring report shall be provided to the Canterbury Regional Council; Attention RMA Compliance and Enforcement Manager by 31 August in each year. The report shall include a summary of the analyses and records collected to the end of June of the same year, in accordance with the conditions of this consent and as a minimum shall:
   (a) summarise all the data collected as required under the conditions of this consent, including graphical presentation and statistical summations as appropriate and analyse the information provided in terms of compliance with this consent;
   (b) highlight and discuss any important environmental trends in the results;
   (c) compare results obtained over the reporting period with the results obtained in previous reporting periods;

(d) report and discuss any operational difficulties, changes or improvements undertaken to the treatment plant or process, which may affect the quality of effluent discharged through the outfall;

(e) list any significant maintenance work undertaken or required to be undertaken to ensure compliance with consent conditions;

(f) report any complaints received during the reporting period regarding the ocean discharge and any action taken by the Consent Holder to address the complaints; and

(g) list any practical measures implemented to address standards or trigger value exceedances during the period.

Review of Consent Conditions

9. The Canterbury Regional Council may once a year, on any of the last five working days of November in each year, serve notice of its intention to review the consent conditions for the purpose of:

(a) dealing with any adverse effect on the environment which may arise from the exercise of the consent;

(b) requiring the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment resulting from the discharge;

(c) reviewing the monitoring provisions in these conditions.

Specific Conditions Until 1 December 2013, Or Until The Commissioning Of The New Domestic Wastewater Treatment Plant

10. Conditions 11-17 apply until 1 December 2013, or until the commissioning of the new domestic wastewater treatment plant, whichever occurs first.

Flow Limits and Measurement

11. The discharge shall not exceed an average annual volume of 40,000 cubic metres per day and a maximum flow rate of 1,400 litres per second.

12. A continuous measurement of the flow discharged through the outfall shall be maintained within an accuracy of 10 percent. Such records shall be retained and be made available to the Canterbury Regional Council upon request.

Effluent Monitoring

13. The quality of the treated effluent discharged from the Timaru Wastewater Treatment Plant shall be sampled using the method and frequencies identified in this condition and these samples shall be analysed for the identified contaminants. The treated effluent shall be sampled at the existing flume immediately downstream of the Milliscreen.

Contaminant	Reported As	Sample Method	Frequency
pH	No units	24 hour composite	Monthly
Carbonaceous Biochemical Oxygen Demand	Grams/cubic metre	24 hour composite	Monthly
Total Suspended Solids	Grams/cubic metre	24 hour composite	Monthly
Fats, Oils and Grease	Grams/cubic metre	24 hour composite	Monthly
Ammoniacal Nitrogen	Grams/cubic metre	24 hour composite	Monthly
Faecal coliforms	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Enterococci	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Metals/Metalloids (arsenic, cadmium, chromium (total and VI), copper, lead, nickel, zinc, mercury)	Milligrams per cubic metre	24 hour composite	Monthly monitoring for 1 year to commence in June 2011
Semi Volatile Organic Compounds	Milligrams per cubic metre	24 hour composite	Monthly monitoring for 1 year to commence in June 2011

Sampling dates specified because of limited duration of this phase of the consent conditions (i.e. until 1 December 2013).

Effluent Trigger Values

14. (a) The results of sampling of treated effluent sampled in accordance with Condition 13 shall be compared with the following trigger values:

Contaminant	Reported As	Trigger Value [1]		Allowable No. of Exceedances[2]
pH	No units	5-9		Not applicable
Carbonaceous Biochemical Oxygen Demand	Grams per cubic metre	Median	1,700	8
Total Suspended Solids	Grams per cubic metre	Median	1,400	8
Total Fats, Oils and Grease	Grams per cubic metre	Median	650	8
Ammoniacal Nitrogen	Grams per cubic metre	Median	55[4]	8
		90%ile	72[4]	3
Metals/Metalloids[3]	Grams per cubic metre	90%ile	Cd-0.84[4] Cr (III)-2.92 Cr (VI) 1.2 Pb-0.396 Ni-12 Zn-1.38 Hg-0.042	3
Semi Volatile Organic Compounds (SVOCs)[3]	Grams per cubic metre	90%ile	1,2 4-[4] trichlorobenzene-8.4 Phenol 31.2	3

1 These trigger values are based on a calendar 12 month dataset
2 From Table 13.2 of New Zealand Water Environment Research Foundation (NZWERF, 2002), 'New Zealand Municipal Wastewater Monitoring Guidelines'
3 Metals/metalloids and SVOCs sampling programme as per Note 1 in Condition 13
4 Back-calculated from 90%ile level of species protection trigger values in Table 3.4.1 of 'Australian and New Zealand Guidelines for Fresh and Marine Water Quality' (ANZECC, 2000) times a dilution factor of 60:1

(b) If any of the trigger values identified in this condition are exceeded, the Consent Holder shall:

(i) As soon as possible, increase the frequency of effluent sampling to one grab sample per week at the Milliscreen and at the Queen Street Pump Station for a period of four weeks, for the contaminant for which the exceedance was recorded;

(ii) As soon as possible, advise the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager of the trigger value exceedance;

(iii) Determine (in conjunction with individual industry dischargers if necessary) the reason for the exceedance of the trigger value;

(iv) Prepare a report on the results of the additional sampling and any other investigations carried out and identify all practical measures to reduce the concentration of the contaminant in the final effluent to prevent a recurrence of the exceedance. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the exceedance and that the identified measures are appropriate to prevent a recurrence of the exceedance;

(v) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within two months of the end of the four week sampling period; and

(vi) The measures identified in the report required under Condition 14(b)(iv) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

Receiving Environment Standards and Monitoring

15. (a) The discharge shall not result in the production of any conspicuous scums, foams, fats or grease films on the beach as determined during beach surveys carried out under Condition 15(b).

(b) Monthly inspections for the presence of fats, oils and grease, on the beach adjacent to the outfall, shall be carried out between 1 November and 30 April in the following year. Inspections shall be carried out from the high tide mark to the lower beach, adjacent to the outfall structure and at 500 metre intervals, for a distance of five kilometres north and three kilometres south of the outfall.

(c) If evidence of fats, oils or grease is found on the beach at any of these locations, the Consent Holder shall:

(i) Record the date, location of the contamination, sea conditions and the state of the tide;

(ii) Take a grab sample of treated effluent as close to the time of inspection as possible and then at weekly intervals for four weeks thereafter;

(iii) On the same day as the weekly effluent samples are taken in accordance with Condition 15(c)(ii), inspect the beach at the location of the original contamination and at sites 500 metres north and south of this site for the presence of fats, oils and grease. Record the date, location of any fats, oils or grease found, sea conditions and the state of the tide at each visit;

(iv) Analyse the effluent samples for fats, oils and grease;

(v) Determine (in conjunction with individual industry dischargers, if necessary) the reason for any increased discharge of fats, oils and grease through the treatment plant;

(vi) Prepare a report on the results of the inspections, sampling and investigations required by Condition 15(c)(i)-(v) and identify all practical measures to reduce the discharge of fats, oils and grease through the outfall to prevent the recurrence of conspicuous fats, oils and grease on the beach. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the occurrence of fats, oils and grease on the beach and that the identified measures are appropriate to prevent a recurrence.

(d) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within two months of the end of the four week sampling period required under Condition 15(c)(ii).

(e) The measures identified in the report required under Condition 15 (c)(vi) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

16. (a) The discharge shall not result in any emission of offensive or objectionable odour at the adjacent shoreline.

(b) If a complaint about offensive or objectionable odour at the shoreline is received, the Consent Holder shall notify the Canterbury Regional Council: Attention RMA: Compliance and Enforcement Manager within 48 hours of receipt of the complaint.

(c) If two or more odour complaints are received within a two week period and the Canterbury Regional Council confirms that those complaints appear to be valid, plus two independent experts, one appointed by the Consent Holder and one appointed

by the Canterbury Regional Council, both agree that the odour was likely to have been caused by the discharge, the following shall be commenced within four weeks of the most recent validated complaint:

(i) Increase the sampling frequency of the effluent to weekly for four weeks and analyse the samples for Carbonaceous Biochemical Oxygen Demand (CBOD) to assess effluent organic loading;

(ii) Determine (in conjunction with individual industry dischargers, if necessary) the reason for any increase in the CBOD effluent concentrations;

(iii) Prepare a report on the results of the sampling and investigations required by Condition 16(c)(i)-(ii) and identify all practical measures to reduce the discharge of CBOD through the outfall to prevent the recurrence of objectionable odour on the beach. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the occurrence of offensive or objectionable odour on the beach and that the identified measures are appropriate to prevent a recurrence;

(iv) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within 30 days of the end of the sampling period specified in Condition 16(c)(i); and

(v) The measures identified in the report required under Condition 16(c)(iii) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

17. (a) The discharge shall not cause an exceedance of the trigger value of 280 *Enterococci* per 100 millilitres (Ministry for Environment, Bacteriological Water Quality Guidelines for Marine and Freshwater Recreational Areas (MfE), 2003) on the shoreline at the immediate boundary of the Class Coastal CR and AE waters, north and south of the outfall, as identified in attached Figure 2.

(b) At monthly intervals, between 1 November and 30 April in each year, a grab sample of seawater shall be collected from the shoreline at the immediate boundary of the Class Coastal CR and AE waters, north and south of the outfall, as identified in attached Figure 2. The samples shall be analysed for faecal coliforms (reported as

organisms per 100 millilitres), *Enterococci* (reported as organisms per 100 millilitres), and Escherichia coli (reported as organisms per 100 millilitres). If any sample exceeds a trigger value of 280 *Enterococci* per 100 millilitres (as per MfE, 2003), the following shall be carried out:

(i) Notify the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager and the Medical Officer of Health South Canterbury within 48 hours of detection of the exceedance;

(ii) Place and maintain a sign on the beach at the boundary of the Class Coastal CR waters that recorded the exceedance that includes a "No swimming" circular pictogram as shown below, at least 30 centimetres in diameter and wording that states: "Warning: This beach may be unsafe for swimming" The sign shall be readable from a distance of five metres. The sign shall be maintained for at least one month or until a sample complies with the trigger standard specified in Condition 17(a), during the period of 1 November and 30 April in the following year.

(c) The following shall be carried out if two independent experts, one appointed by the Consent Holder and one appointed by the Canterbury Regional Council, both agree that the exceedance of the trigger value was likely to have been caused by the discharge:

(i) Increase the sampling frequency of the effluent and of seawater as specified in Condition 17(b) on the immediate shoreline boundary of the Class Coastal CR and AE waters that recorded the exceedance, to weekly for four weeks (one grab sample per week);

(ii) Prepare a report on the results of analyses of sampling as required by Condition 17(d)(i) that assesses the likely reason for the exceedance, assesses the risk to public health arising from the exceedance and identifies all practical measures to prevent a recurrence of the exceedance. This report shall be certified by a suitably qualified and experienced engineer or scientist,

as being a thorough assessment of the cause of the exceedance and that the identified measures are appropriate to prevent a recurrence.

(d) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager and the Medical Officer of Health South Canterbury within 20 working days of receipt from the laboratory of the additional sampling results required by Condition 17(d)(i).

(e) The measures identified in the report required under Condition 17(d)(ii) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

Specific Conditions From 1 December 2013, Or From Commissioning Of The New Domestic Wastewater Treatment Plant

18. Conditions 19 – 31 apply from 1 December 2013 or from commissioning of the new domestic wastewater treatment plant, whichever occurs first, for the duration of consent.

Flow Limits and Measurement

19. The discharge shall not exceed an average annual volume of 40,000 cubic metres per day and a maximum flow rate of 2,200 litres per second.

20. A continuous measurement of the flows discharged from the Industrial Treatment Plant, the Domestic Treatment Plant and the Inland Towns pipeline, shall be maintained within an accuracy of 10 percent.

Effluent Monitoring

21. The quality of the treated effluent discharged from the Industrial Wastewater Treatment Plant and the treated effluent discharged from the Domestic Wastewater Treatment Plant shall be sampled using the method and frequencies identified in this condition and these samples shall be analysed for the following identified contaminants. The Industrial Treatment Plant effluent shall be sampled at the existing flume immediately downstream of the Milliscreens. The Domestic Wastewater Treatment Plant effluent, including the Inland Towns wastewater flows, shall be sampled at the end of the process train.

Industrial Wastewater Treatment Plant

Contaminant	Reported As	Sample Method	Frequency
pH	No units	24 hour composite	Monthly
Carbonaceous Biochemical Oxygen Demand	Grams per cubic metre	24 hour composite	Monthly
Total Suspended Solids	Grams per cubic metre	24 hour composite	Monthly
Total Fats, Oils and Grease	Grams per cubic metre	24 hour composite	Monthly
Ammoniacal Nitrogen	Grams per cubic metre	24 hour composite	Monthly
Faecal coliforms	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Enterococci	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Escherichia coli	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Metals/Metalloids (arsenic, cadmium, chromium (Total and VI), copper, lead, nickel, zinc, mercury)	Grams per cubic metre	24 hour composite	[1]Monthly monitoring for 1 year to coincide with requirements of Condition 28
Semi Volatile Organic Compounds	Grams per cubic metre	24 hour composite	[1]Monthly monitoring for 1 year to coincide with requirements of Condition 28

1 Sampling to commence 11 months prior to month in which outfall benthic and water quality survey is carried out in accordance with the requirements of Condition 28.

Domestic Wastewater Treatment Plant

Contaminant	Reported As	Sample Method[1]	Frequency
pH	No units	Grab or 24 hour composite	Monthly
Carbonaceous Biochemical Oxygen Demand	Grams per cubic metre	Grab or 24 hour composite	Monthly
Total Suspended Solids	Grams per cubic metre	Grab or 24 hour composite	Monthly
Total Fats, Oils and Grease	Grams per cubic metre	Grab or 24 hour composite	Monthly
Ammoniacal Nitrogen	Grams per cubic metre	Grab or 24 hour composite	Monthly
Faecal coliforms	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Enterococci	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April

Contaminant	Reported As	Sample Method[1]	Frequency
Escherichia coli	Number per 100 millilitres	Grab	Fortnightly between 1 November and 30 April
Metals/Metalloids (arsenic, cadmium, chromium (Total and VI), copper, lead, nickel, zinc, mercury)	Grams per cubic metre	Grab or 24 hour composite	Monthly monitoring for 1 year to coincide with requirements of Condition 28 [2]

1.a.i.1.1.1.1. Grab samples if ponds/wetlands constructed due to the averaging in the long retention system and 24 hour composite if an "in-tank" treatment system is constructed.

1.a.i.1.1.1.2. Sampling to commence 11 months prior to month in which outfall benthic and water quality survey is carried out in accordance with the requirements of Condition 28.

Effluent Trigger Values for the Domestic Wastewater Treatment Plant

22. (a) The results of sampling of treated effluent sampled in accordance with Condition 21 shall be compared with the following trigger values as the median for the sampling period 1 November to 30 April. A trigger value for *Enterococci* will only apply if the treatment of separated domestic flows is by "in-tank" processes rather than in a pond-based system.

Contaminant	Reported As	Trigger Values	Allowable No. of Exceedances[1, 2]
Faecal coliforms	Organisms per 100millilitres	5,000	9
Escherichia coli	Organisms per 100millilitres	5,000	9
Enterococci	Organisms per 100millilitres	5,000	9

1 From Table 13.2 of NZWERF (2002)
2 Based on 13 samples taken fortnightly between 1 November and 30 April in the following year

(b) The Consent Holder shall advise the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager of the domestic wastewater treatment process to be implemented prior to 1 December 2013.

Effluent Trigger Values For The Combined Industrial And Domestic Wastewater Treatment Plant

23. The effluent quality discharged to the ocean shall be calculated on a 24 hour flow-weighted average (on day of sampling) of both the Industrial and Domestic Wastewater Treatment Plants' effluent results sampled in accordance with Condition 21. The combined results shall be compared with the following trigger values:

Contaminant	Reported As	Trigger Values[1]			Allowable No. of Exceedances[2]
pH	No units	5-9			Not applicable
Carbonaceous Biochemical Oxygen Demand	Grams per cubic metre	Median	1,300		8
		90%ile	1,600		3
Total Suspended Solids	Grams per cubic metre	Median	1,200		8
		90%ile	1,400		3
Total Fats Oils and Grease	Grams per cubic metre	Median	420		8
		90%ile	1,000		3
Ammoniacal Nitrogen	Grams per cubic metre	Median	42[4]		8
		90%ile	55[4]		3
Metals / Metalloids[3]	Grams per cubic metre	90%ile	Cd	0.33[4]	3
			Cr (iii)	1.644[4]	
			Cr (iv)	0.264[4]	
			Pb	0.264[4]	
			Ni	4.2[4]	
			Zn	0.9[4]	

Contaminant	Reported As	Trigger Values[1]			Allowable No. of Exceedances[2]
			Hg	0.024[4]	
Semi Volatile Organic Compounds (SVOCs)	Grams per cubic metre	90%ile	1, 24 - trichlorobenzene	4.8[4]	3
			Phenol	24[4]	

1 These trigger values are based on a calendar 12 month dataset.
2 From Table 13.2 of NZWERF, (2002)
3 Metals/metalloids and SVOCs sampling programme as per Note 1 in Condition 21
4 Back-calculated from 95%ile level of species protection trigger values in Table 3.4.1 of ANZECC (2000) times a dilution factor of 60:1

24. (a) If any of the trigger values identified in Conditions 22 and 23 are exceeded, the Consent Holder shall:

(i) As soon as possible, increase the frequency of effluent sampling to one grab sample per week for a period of four weeks, for the contaminant for which the exceedance was recorded;

(ii) As soon as possible, advise the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager of the trigger value exceedance;

(iii) Determine (in conjunction with individual industry dischargers if necessary) the reason for the exceedance of the trigger value;

(b) Prepare a report on the results of the additional sampling and any other investigations carried out and identify all practical measures to reduce the concentration of the contaminant in the final combined effluent to prevent a recurrence of the exceedance. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the exceedance and that the identified measures are appropriate to prevent a recurrence of the exceedance;

(c) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within two months of the end of the four week sampling period required by Condition 24(a)(i); and

(d) The measures identified in the report required under Condition 24(b) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

Receiving Environment Monitoring

25. (a) The discharge shall not result in the production of any conspicuous scums, foams, fats or grease films, in the area specified in Condition 25(b).

(b) Monthly inspections for the presence of fats, oils and grease, on the beach adjacent to the outfall, shall be carried out between 1 November and 30 April in the following year. Inspections shall be carried out from the high tide mark to the lower beach, opposite the outfall structure and at 500 metre intervals, for a distance of five kilometres north and three kilometres south of the outfall. If evidence of fats, oils or grease is found on the beach at any of these locations, the Consent Holder shall:

(i) Record the date, location of the contamination, sea conditions and the state of the tide;

(ii) Take a grab sample of treated effluent as close to the time of inspection as possible and then at weekly intervals for four weeks thereafter;

(iii) On the same day as the weekly effluent samples are taken in accordance with Condition 25(b)(ii) inspect the beach at the location of the original contamination and at sites 500 metres north and south of this site for the presence of fats, oils and grease. Record the date, location of any fats, oils or grease found, sea conditions and the state of the tide at each visit;

(iv) Analyse the effluent samples for fats, oils and grease; and

(v) Determine (in conjunction with individual industry dischargers, if necessary) the reason for the any increased discharge of fats, oils and grease through the treatment plant;

(c) Prepare a report on the results of the inspections, sampling and investigations required by Condition 25(b)(i)-(v) and identify all practical measures to reduce the

discharge of fats, oils and grease through the outfall to prevent the recurrence of conspicuous fats, oils and grease on the beach. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the occurrence of fats, oils and grease on the beach and that the identified measures are appropriate to prevent a recurrence.

(d) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within two months of the end of the four week sampling period required under Condition 25(b)(ii).

(e) The measures identified in the report required under Condition 25(c) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

26. (a) The discharge shall not cause an exceedance of the trigger value of 280 *Enterococci* per 100 millilitres (MfE 2003) at the immediate boundary of the Class Coastal CR and AE waters, north and south of the outfall, as identified in attached Figure 2.

(b) At monthly intervals, between 1 November and 30 April in the following year, a grab sample of seawater shall be collected from the shoreline at the immediate boundaries of the Class Coastal CR and AE waters, north and south of the outfall, as identified in attached Figure 2. The samples shall be analysed for faecal coliforms (reported as organisms per 100 millilitres) *Enterococci* (reported as organisms per 100 millilitres) and *Escherichia coli* (reported as organisms per 100 millilitres).

(c) If any sample recorded within Class Coastal CR waters in accordance with Condition 26 (b) exceeds a trigger value of 280 *Enterococci* per 100 millilitres (as per Ministry for Environment Bacteriological Water Quality Guidelines for Marine and Freshwater Recreational Areas, 2003), the Consent Holder shall:

(i) Notify the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager and the Medical Officer of Health South Canterbury within 48 hours of detection of the exceedance;

(ii) Place and maintain a sign on the beach at the boundary of the Class Coastal CR waters that recorded the exceedance that includes a “No swimming” circular

pictogram as shown below, at least 30 centimetres in diameter and wording that states: “Warning: This beach may be unsafe for swimming” The sign shall be readable from a distance of five metres. The sign shall be maintained for at least one month, or until a sample complies with the trigger standard specified in Condition 26(a), during the period of 1 November and 30 April in each year.

(d) The following shall be carried our if two independent experts, one appointed by the Consent Holder and one appointed by the Canterbury Regional Council, both agree that the exceedance of the trigger value was likely to have been caused by the discharge:

(i) Increase the sampling frequency of the effluent and of seawater as specified in Condition 26(b) at the shoreline boundary of the Class Coastal CR waters that recorded the exceedance, to weekly for four weeks (one grab sample per week);

(ii) Prepare a report on the results of analyses of sampling as required by Condition 26(d)(i) that assesses the likely reason for the exceedance, assesses the risk to public health arising from the exceedance and identifies all practical measures to prevent a recurrence of the exceedance;

(e) This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the exceedance and that the identified measures are appropriate to prevent a recurrence;

(f) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager and the Medical Officer of Health South Canterbury within 20 working days of receipt from the laboratory of the additional sampling results required by Condition 26(d)(i);

(g) The measures identified in the report required under Condition 26(d)(ii) shall be implemented as soon as practicable and a report provided on that implementation to

the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

27. If a widespread community epidemic caused by a virus occurs, as determined by the Medical Officer of Health South Canterbury, the Consent Holder will place a sign on the beach at the immediate boundary of the Class Coastal CR and AE waters north and south of the outfall, pursuant to the requirements of Condition 26(c)(ii).

28. (a) **Surveys**

Surveys shall be conducted in the receiving environment as specified in Condition 28(b) and (c) to assess the ecological and water quality effects of the wastewater discharge from the outfall. An initial survey shall be carried out within two years of commissioning of the Domestic Wastewater Treatment Plant upgrade, but not less than 12 months from commissioning. A further survey shall be carried out within five years of commissioning of the treatment upgrade, but not less than four years from commissioning. Thereafter, surveys shall be carried out at five yearly intervals.

(b) **Seabed ecology and sediment quality**

Sixteen stations shall be sampled at discrete distances from the outfall out to a distance of 1000 metres (see table below). Four stations shall be located on a straight transect line representing an approximate isobath running across the end of the diffuser section, at 50 metres and 1000 metres from the outfall, to the northeast and southwest of the midpoint of the diffuser section. In addition, four transects (two each radiating slightly inshore and offshore respectively) shall be arranged around the diffuser with stations at distances of 175 metres, 350 metres and 500 metres from the most seaward riser (see attached Figure 3).

Station ID	Station Name	NZTM E	NZTM N	Replicates per station	
				Infauna	Sediment Chemistry
1KN-Iso	1000 N Isobath	1,464,020	5,089,874	3	4
500N-In	500 N Inshore	1,463,538	5,089,561	3	4
500N-Off	500 N Offshore	1,463,851	5,089,326	3	4
350N-In	350 N Inshore	1,463,511	5,089,441	3	4
350N-Off	350 N Offshore	1,463,749	5,089,271	3	4
175N-In	175 N Inshore	1,463,458	5,089,248	3	4
175N-Off	175 N Offshore	1,463,572	5,089,159	3	4
50N-Iso	50 N Isobath	1,463,447	5,089,118	3	4

Station ID	Station Name	NZTM E	NZTM N	Replicates per station	
50S-Iso	50 S Isobath	1,463,387	5,089,038	3	4
175S-In	175 S Inshore	1,463,260	5,089,001	3	4
175S-Off	175 S Offshore	1,463,384	5,088,906	3	4
350S-In	350 S Inshore	1,463,086	5,088,885	3	4
350S-Off	350 S Offshore	1,463,331	5,088,708	3	4
500S-In	500 S Inshore	1,462,983	5,088,829	3	4
500S-Off	500 S Offshore	1,463,295	5,088,593	3	4
1KS-Iso	1000 S Isobath	1,462,814	5,088,280	3	4

Infauna shall be collected via 130 millimetre diameter cores (approximately 100 millimetre depth) and samples shall be processed using a 0.5 millimetre sieve with taxa collected, counted and identified to the lowest practicable taxonomic level.

Sediment samples shall be collected via 60 millimetre (minimum) diameter cores manually driven into the benthic sediments to a depth of 100 – 150 millimetres. The colour and the visible presence/absence of any anoxic patches or layers within the cores shall be recorded. One of the four replicate cores per station shall be split and photographed to provide a permanent visual record. The top 50 millimetres of the remaining three cores shall be sub-sampled for analysis of the following:

- Sediment texture - particle grain size distribution;
- Organic content (total organic carbon or ash-free dry weight);
- Metals/metalloids – arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), nickel (Ni), lead (Pb), and zinc (Zn);
- Ammoniacal Nitrogen; and
- Nutrients: (Total Nitrogen, Total Phosphorus).

  The sub-samples for each station shall be composited for analysis of nutrients and metals/metalloids but analysed as individual replicates for grain-size and organic content.

(c) **Water Quality**

As near as possible to the time that the seabed surveys are carried out, near surface (0.5 metre depth) water quality samples shall be taken at the following sites: located at the boil and at 25, 50, 175, 350 and 500 metres from the outfall. A control station located at least 500 metres offshore of the seaward end of the diffuser and in the opposite direction of the effluent plume shall also be sampled. The positioning

of the stations within the effluent plume shall be established by the deployment of drifter released at the outfall and tracked as it drifts down-current. Water quality at each sampling site shall be assessed for:

- visual observations for scums, foams and other floatable material; and
- presence of any offensive or objectionable odour.

One grab water sample shall be taken at each site and analysed for the following:

- Biochemical oxygen demand (BOD);
- Total suspended solids (TSS);
- Faecal Coliforms, *Enterococci*;
- Metals/metalloids (*i.e.* As, Cd, Cr, Cu, Hg, Pb, Ni, Zn);
- Ammoniacal nitrogen;
- Nutrients (total nitrogen, total phosphorus,); and
- pH, temperature, dissolved oxygen, salinity and turbidity.

Note: Detection limits for trace metals/metalloids shall be significantly less than the corresponding ANZECC (2000) trigger value.

(d) **Reporting**

The objective of the five yearly monitoring programme is to provide a scientifically rigorous and defensible description of the effects of the wastewater discharge on the aquatic receiving environment. A report shall be prepared by a suitably qualified and experienced scientist within three months of the benthic and water quality survey that:

(i) Summarises the data collected as required under Conditions 28(b) and (c) of this consent (including graphical presentation and statistical summations of monitoring data) and interpret the results in terms of the level of any effects on the receiving environment. This shall include an assessment of the extent of effects on the colour and clarity of the water;

(ii) Highlights and discusses any significant trends in the results;

(iii) Compare results obtained over the reporting period with the results obtained from previous reporting periods and provide interpretation of any significant differences, changes or trends; and

(iv) Includes a conclusion on whether the wastewater discharge has resulted in a significant adverse effect on aquatic life outside of the mixing zone specified in Condition 29(a).

(e) **Changes/modifications**

The monitoring programme specified in Condition 28(b) and (c) may be modified provided that:

(i) Such a modification is certified in writing by a suitably qualified and experienced scientist, as either not significant or that prior monitoring undertaken in accordance with Condition 28(b) and (c), demonstrates that a modification in monitoring is justified; and

(ii) The independent expert shall provide a detailed explanation that justifies the modification; and

(iii) The certified modification and the certified explanation shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager prior to implementing the change.

Receiving Environment Standards

29. (a) The discharge, outside the zone of reasonable mixing specified in attached Figure 4 shall not result in:

(i) A greater than 50 percent reduction in the clarity of the receiving water compared with background concentrations;

(ii) A reduction in the concentration of dissolved oxygen to less than 80 percent of saturation concentration;

(iii) Any emission of offensive or objectionable odour at the adjacent shoreline;

(iv) Any significant adverse effects on aquatic life;

(v) The concentration of ammoniacal nitrogen in the receiving waters exceeding the ANZECC (2000) 95% level of marine species protection trigger value of 0.91 grams per cubic metre; and

(vi) The concentration of hexavalent chromium (Cr VI) in the receiving waters exceeding the ANZECC (2000) 95% level of marine species protection trigger value of 0.0044 grams per cubic metre.

(b) The following shall be carried if there is a breach of the receiving standards specified in 29(a)(i-vi), and if two independent experts, one appointed by the

Consent Holder and one appointed by the Canterbury Regional Council, agree that the breach was likely to have been caused by the discharge:

(i) Increase the sampling frequency of the effluent to weekly for four weeks and analyse the samples as follows: Condition 29(a)(i) Total Suspended Solids (TSS), Condition 29(a)(ii) TSS, Carbonaceous Biochemical Oxygen Demand (CBOD); Condition 29(a)(iii) CBOD; Condition 29(a)(iv) ammoniacal nitrogen, metals/metalloids, semi-volatile organic compounds (SVOCs); Condition 29(a)(v) ammoniacal nitrogen and Condition 29(a)(vi) hexavalent chromium (Cr VI).

(ii) Determine (in conjunction with individual industry dischargers, if necessary) the reason for any increase in the contaminant (s) analysed for.

(iii) Prepare a report on the results of the sampling and investigations required by Condition 29(b)(i) and (ii) and identify all practical measures to reduce the discharge of the specified contaminant(s) through the outfall to prevent the recurrence of the exceedance of the specified standard. This report shall be certified by a suitably qualified and experienced engineer or scientist, as being a thorough assessment of the cause of the exceedance and that the identified measures are appropriate to prevent a recurrence.

(iv) Submit the report and the certification specified to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager within 2 months of the end of the 4 week sampling period required under Condition 29(b)(i). The measures identified in the report required under Condition 29(b)(iii) shall be implemented as soon as practicable and a report provided on that implementation to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, as soon as possible after completion of the measures.

Investigation of Treatment Plant Performance

30. An investigation of the Timaru wastewater treatment plant performance, effluent and receiving water monitoring results, commencing in year 12 after the commissioning of the Stage One upgrade, shall be carried out by a suitably qualified and experienced engineer or scientist. The review, which shall include an assessment of wastewater reuse and onsite treatment at the major Timaru Industries, advances in municipal wastewater treatment technologies, as well as treatment and disposal trends at comparable centres in

New Zealand, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager and made available via the Consent Holder's website or equivalent, within six months of the commencement of the review.

31. A report on the outcomes of the Five Yearly Industry Improvement Reviews required by the Timaru District Council Industrial Wastewater Strategy Programme shall be submitted to the Canterbury Regional Council: Attention RMA Compliance and Enforcement Manager, at the same time as the report on the results of the benthic and water quality surveys carried out under the requirements of Condition 28(b) and (c).

Attachments

Figure 1: Plan of Outfall Diffuser

Figure 2: Water Quality Classifications – Washdyke Lagoon to Opihi River Mouth

Figure 3: Benthic Survey Monitoring Stations

Figure 4: Outfall Mixing Zone

Coastal Permit CRC101182 - To erect, place and construct a discharge pipeline and outfall structure on the seabed, and occupy and use the coastal marine area with those structures

Term of Consent

1. The term of this consent shall be 35 years from the date of commencement

General

2. The outfall diffuser layout shall be constructed in accordance with Figure 1, attached to and forming part of this consent, or a layout that is of equivalent performance to maximise the initial dilution of treated effluent discharged from the outfall.

3. The seaward end of the outfall diffuser shall be located not less than 400 metres from the shoreline at mean sea level, with the mid-point of the diffuser situated at or about map reference NZTM 1,463,417: 5,089,078.

4. The discharge pipeline, diffuser and associated facilities shall be maintained in efficient working order, in accordance with generally accepted best engineering practice.

Diffuser Condition

5. A visual inspection of the outfall diffuser structure shall be undertaken within 12 months of the commencement of this consent and then at five yearly intervals, to assess the condition of the structure and ensure that the diffuser ports are operating effectively. The inspection shall be undertaken by a suitably qualified diver e.g. Occupational Safety and Health Construction Diver Certified.

6. Any changes made to the diffuser layout shall be certified, in writing by a suitably qualified and experienced engineer, as complying with the requirements of Condition 2.

Signage and Notification of Structure

7. A marker sign shall be erected and maintained on the shore that is readable from a distance of five metres, on the line of the outfall pipeline, to indicate to beach users, the presence of the outfall. The sign shall state "***Warning*** *A pipeline is buried approximately 9*

metres under the beach at this point that connects to a piled outfall structure that discharges treated wastewater approximately 400 metres from the shoreline"

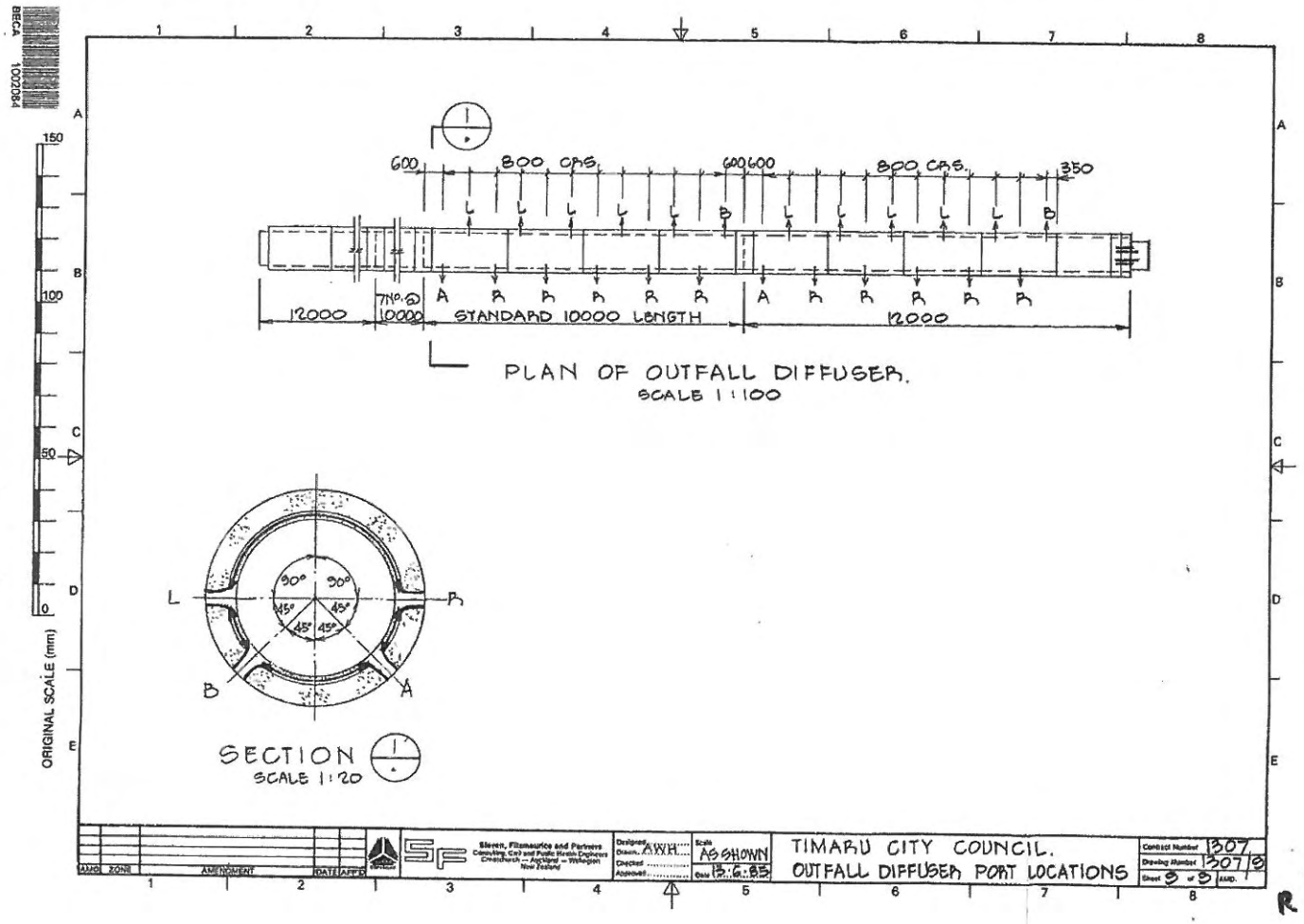
8. The Director of Maritime Safety, as defined in the Maritime Transport Act and Land Information New Zealand, as the National Hydrographic Authority for New Zealand (LINZ) and the Canterbury Regional Council Regional Harbour Master shall be notified of the location of the piled outfall structure, together with appropriate map references.

Annual Reporting

9. An annual monitoring report shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager by 31 August each year. The report shall include a summary of the inspections carried out to the end of June of the same year, in accordance with the Condition 5 of this consent and as a minimum shall:
   (a) summarise the results of any visual inspection carried out in accordance with Condition 5 of this consent; and
   (b) list any significant maintenance work undertaken or required to be undertaken to ensure compliance with consent conditions; and
   (c) include copies of any certification undertaken in accordance with Condition 6.

Review of Consent Conditions

10. The Canterbury Regional Council may once a year, on any of the last five working days of November in each year, serve notice of its intention to review the consent conditions for the purpose of:
   (a) dealing with any adverse effect on the environment which may arise from the exercise of the consent;
   (b) requiring the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment resulting from the discharge; or
   (c) reviewing the monitoring provisions of the consent.



CC10831

Figure 1 - Plan of Diffuser Layout

CRC101831

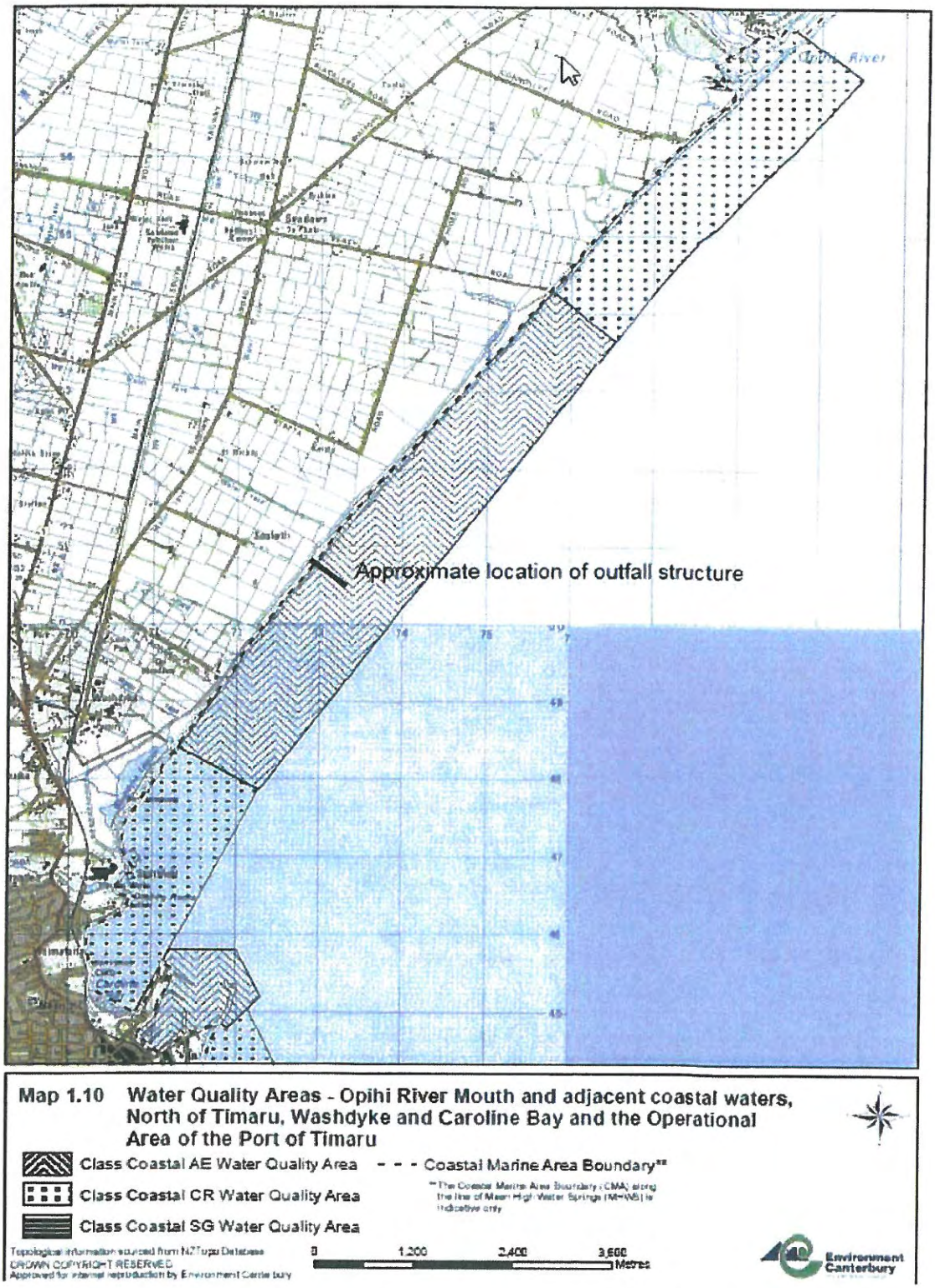


Figure 2 – Water Quality Classifications – Washdyke to Opihi River Mouth

CRC101831

STN_ID	Stn_Name	NZTME	NZTMN
1KN-Iso	1000 N Isobath	1,464,020	5,089,874
500N-In	500 N Inshore	1,463,538	5,089,561
500N-Off	500 N Offshore	1,463,851	5,089,326
350N-In	350 N Inshore	1,463,511	5,089,441
350N-Off	350 N Offshore	1,463,749	5,089,271
175N-In	175 N Inshore	1,463,458	5,089,248
175N-Off	175 N Offshore	1,463,572	5,089,159
50N-Iso	50 N Isobath	1,463,447	5,089,118
50S-Iso	50 S Isobath	1,463,387	5,089,038
175S-In	175 S Inshore	1,463,260	5,089,001
175S-Off	175 S Offshore	1,463,384	5,088,906
350S-In	350 S Inshore	1,463,086	5,088,885
350S-Off	350 S Offshore	1,463,331	5,088,708
500S-In	500 S Inshore	1,462,983	5,088,829
500S-Off	500 S Offshore	1,463,295	5,088,593
1KS-Iso	1000 S Isobath	1,462,814	5,088,280

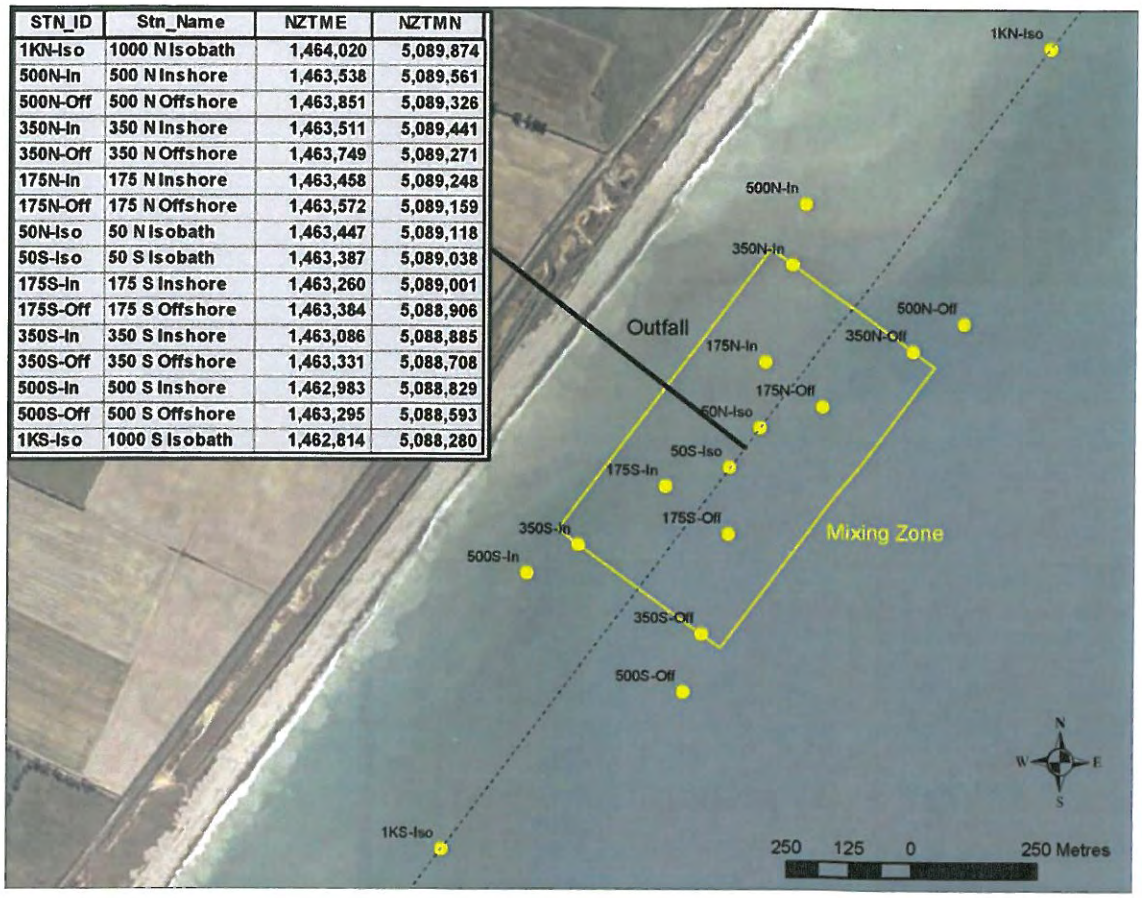


Figure 3: Benthic Survey Monitoring Stations

CRL01831

Figure 4 - Outfall Mixing Zone

CRC101832

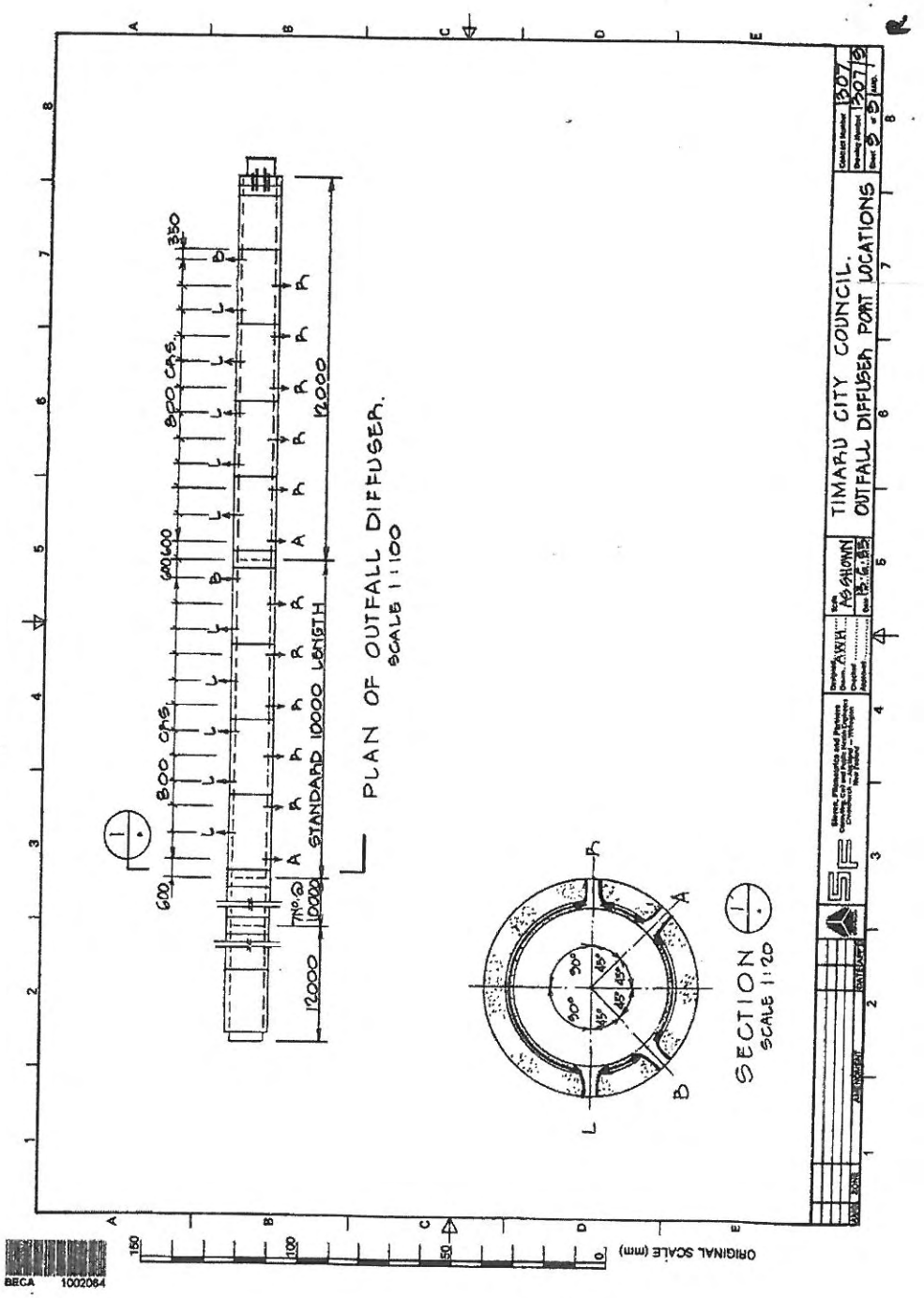


Figure 1 - Plan of Diffuser Layout