

**BEFORE THE HEARINGS PANEL SOUTHLAND REGIONAL COUNCIL**

**IN THE MATTER** of the Resource Management Act  
1991

**AND** of an Application for Resource  
Consent to Discharge Water and  
Contaminants from the Invercargill  
City reticulate stormwater network  
to water  
**APP-201668843**

**BY** **INVERCARGILL CITY COUNCIL**

Applicant

---

**BRIEF OF EVIDENCE OF JANAN SAUL DUNNING**

**Dated 25 July 2017**

---

*Filed by*  
**Invercargill City Council**  
Civic Administration Building  
101 Esk Street  
Private Bag 90104  
Invercargill 9840  
Ph: (03) 211 1777  
*Solicitor Acting: M D Morris*  
*e: Michael.Morris@icc.govt.nz*

I, Janan Saul Dunning state:

## **INTRODUCTION**

1. My name is Janan Saul Dunning.
2. I am a Senior Planner with Stantec New Zealand Ltd (Stantec), formerly MWH New Zealand Ltd. I am also the team leader for Stantec's Urban Planning and Environmental Services Team in the South Island.

## **QUALIFICATIONS AND EXPERIENCE**

3. I hold a Master of Science in Physical Geography from the University of Canterbury, and have completed post-graduate papers in Planning Practice, Theory and Law from Lincoln and Massey Universities respectively.
4. I have been a full member of the New Zealand Planning Institute since 2008.
5. I have over 17 years' professional experience in resource management planning, based on a wide range of planning work, primarily focussing on statutory approval processes, particularly transport and water infrastructure projects. I have led the resource management planning processes including consultation and preparation of application documents for a number of complex infrastructure consenting projects, including projects involving discharges of water and contaminants to the environment. I have also led several resource consent applications for wastewater discharges to water, including for the Christchurch City Council, the Selwyn District Council, the Grey District Council, and the Tasman District Council.
6. My primary area of experience is in providing advice and resource management services to private and public sector clients, mainly around consents and approvals processes.
7. Whilst not strictly required for first instance council resource consent hearings, I have read the Code of Conduct for Expert Witnesses as set out in the Environment Court Consolidated Practice Note 2014 and agree to comply with it. I have set out my qualifications above, and confirm that my evidence is within my area of expertise and the opinions I express are my own except where I have stated that I rely on the evidence of other witnesses. I have not knowingly omitted to consider any material facts that may alter or detract from the opinions I express in my evidence.

## **SCOPE OF EVIDENCE**

8. I was engaged by the Invercargill City Council (the applicant) after the application was lodged to provide resource management advice, and to present planning evidence for this hearing. I have reviewed, and am familiar with the application. I have also been involved in the informal and formal prehearing meetings between the applicant, Environment Southland and submitters. I am familiar with Invercargill City and the streams discussed in the application.
9. In my evidence I:
  - (a) Describe the application process to date;
  - (b) Briefly summarise the background to the activity for which consent is sought, the nature of the discharges, the receiving environment and the effects on the environment;
  - (c) Discuss the application in the context of the applicable planning documents, including the Resource Management Act 1991 (RMA);
  - (d) Summarise and discuss the submissions received; and
  - (e) Discuss the applicant's proposed conditions of consent.

## **KEY MATTERS**

10. In my view, the key matters for the Hearing Panel to consider are:
  - (a) Whether s104D of the RMA, which outlines tests for non-complying activities, prevents the application from being granted;
  - (b) The presence of human sewage identified in some stormwater discharges;
  - (c) The actual and potential effects of the discharges of stormwater (as defined in the application) and contaminants on the receiving environments; and
  - (d) The existing and critical role of the stormwater network and discharges in providing for the health and safety, and the social, cultural, environmental and economic wellbeing of the Invercargill community.

## **THE APPLICATION**

11. The application has been described in detail in the report, prepared under s42A of the RMA (the s42A report), by Mr Stephen West on behalf of Environment Southland. I consequently do not describe the application again in detail, however I provide a summary below for the record.
12. I generally agree with Mr West's assessment of the consents required other than in respect of his reference on Page 11 of his report to the discharge of stormwater containing sewage

to water in an artificial watercourse immediately prior to discharging to the Waikiwi Stream. Mr West concludes that the discharge to the artificial water course is a prohibited activity under Rule 26(f) of the Proposed Southland Water and Land Plan. Rule 26 of that Plan relates only to discharges from on-site wastewater systems, so does not apply to the applicant's stormwater network discharges. The exclusion of artificial watercourses from Rule 15(c) may be an unintended consequence of plan drafting, as I note Rule 15(a) includes specific reference to artificial watercourses. In the absence of any other 'fit' for the discharges to the artificial watercourse, the correct approach in my view would be to consider the discharges under Rule 15(c), which also holds a non-complying activity status.

13. This application seeks a new (replacement) resource consent to authorise the discharge of water<sup>1</sup> and contaminants from the applicant's stormwater network to the following surface water bodies:

- The Waihopai River;
- Waikiwi Stream (via an artificial watercourse);
- Otepunu Stream;
- Kingswell Creek; and
- Clifton Channel.

14. The five existing resource consents<sup>2</sup> currently held by the applicant authorising the discharge of water and contaminants from Invercargill City's reticulated stormwater networks to water technically expired on 15 December 2016. Through this application the applicant seeks to replace them with a single new resource consent authorising the discharge of stormwater and contaminants from all five catchments. The applicant's stormwater network also discharges water and contaminants to the Coastal Marine Area (CMA), however these discharges are considered to be permitted, and are not included as part of this application.

15. The application was lodged in the period between six and three months prior to the expiry date(s) of the five existing consents, in accordance with the timeframe set out in section 124(2)(d) of the RMA. Environment Southland received the application on 14 September 2016 and exercised its discretion provided for under section 124(2)(e), enabling the discharges to lawfully continue under the existing resource consents beyond the expiry date(s) until a decision is made on the application and it is beyond challenge.

---

<sup>1</sup> Includes surface water runoff resulting from rainfall, contaminants entrained in overland flow before entering the network; drainage water from subsurface drains; groundwater, including through inflow and infiltration, and dewatering water discharged to the stormwater network; and washwater and other discharges and contaminants typical of surface runoff from urban environments and activities in New Zealand

<sup>2</sup> Waihopai River (206936), Waikiwi Stream (206937), Otepunu Stream (206938), Kingswell Creek (206939) and the Clifton Channel (206940).

16. The application was publically notified on 3 October 2016 and 11 submissions were received, with nine submitters indicating that they wish to be heard. Following the close of submissions the applicant requested that the application be placed on hold while it met with submitters to: 1) discuss the matters raised in submissions; 2) to better understand submitters' concerns; and 3) explore ways to address those concerns where appropriate. A series of informal meetings were held with submitters culminating in a set of proposed consent conditions being developed by the applicant. The proposed conditions were circulated to all parties prior to a formal prehearing meeting held at Environment Southland's offices on 15 June 2017 which was well attended by submitters. The outcomes of that meeting are accurately summarised in the prehearing report circulated by Environment Southland on 23 June 2017. I address the submissions in more detail later in my evidence.

### **Nature of the discharge**

17. The nature of the stormwater and contaminants discharged from the applicant's network, the network itself, and the receiving environment have been described in detail in part 2 and 3 of the application, in the evidence of Ms Bennett on behalf of the applicant, and further in the section 42A report.

18. The applicant acknowledges that some of the stormwater discharges can contain untreated human sewage from time to time as identified by the extensive monitoring undertaken by the applicant since 2011. This human sewage is understood to originate primarily from cross-contamination from subsurface sewage pipes that are aged or broken in some parts of the City, and from illegal sewage connections to the stormwater network within private properties. Some untreated sewage can also enter the stormwater network from overflows of the Invercargill City's wastewater network during high rainfall events.

19. Mr Loan, in his evidence, notes the extremely low frequency of these overflows and he explains the significant steps that the applicant has already taken to address to eliminate them. In my opinion, these overflows are a discharge of untreated sewage from the sewer network and not part of the current application. The incidental entrainment of the human sewage in the stormwater is an unintended consequence and not within the scope of the resource consent sought by the applicant.

20. This application does not, and legally cannot, seek consent to discharge untreated human sewage to water, and hence authorisation to discharge untreated sewage in any form is explicitly excluded from this application. The discharge of untreated human sewage is a prohibited activity under Rule 14 of the Southland Regional Water Plan (RWP) and hence

resource consent cannot be applied for<sup>3</sup>, irrespective of how much dilution the human sewage receives within the stormwater network before it is discharged to a receiving water body. This is consistent with the conclusion reached by the Hearing Panel's decision on the 2011 application, based on the legal advice received at that time which concluded that consent for the sewage component could not be granted, determined that an exception under s107(2)(a) applied and that Rule 14 was therefore not applicable. This application is therefore limited to a single resource consent that authorises only the discharge of stormwater, water and contaminants typically associated with urban stormwater.

21. Despite the fact that the applicant cannot seek consent for the sewage component, the application includes a suite of actions and mitigation measures and a rigorous monitoring regime to enable the sewage sources to be identified and removed from the stormwater network. These actions and measures are discussed in detail in Mr Cocker's and Ms Bennett's evidence, and are key to enhancing receiving water quality. I have therefore confined my assessment of the proposal and the relevant policy framework to the "consentable" activity, being a discharge (that excludes untreated human sewage) that is otherwise typical of stormwater and contaminants from urban catchments. In my view, it is necessary to take this approach as a consequence of the RWP rules discussed above. In doing so, as Ms Bennett and Dr Stewart show in their evidence, the adverse effects of the discharges are minor (when sewage is excluded) and therefore the 'adverse effects' gateway test of section 104D RMA for non-complying activities is passed. Setting that to one side however, I focus the remainder of my evidence on whether the application passes the second section 104D RMA gateway test – that is, whether the activity is contrary to the relevant objectives and policies of the regional plans.

## **THE RECEIVING ENVIRONMENT**

22. The receiving environment is described in detail in section 3 of the application document, in Ms Bennett's evidence, and throughout Mr West's section 42A report.

23. The extent of the catchments is set out in section 3.1 of the application, and clearly demonstrates the predominantly rural nature of most of the catchments upstream of the applicant's stormwater network which discharge in the lower reaches of each catchment. It is important to note the extent and nature of most of the catchments upstream of the City boundary in order to understand the influence on the quality of the receiving waters into which the applicant's network discharges, and the limitations on the extent to which improvements

---

<sup>3</sup> Section 87A(6)(a) of the RMA

to the applicant's stormwater discharge will contribute to the enhancement of receiving water quality in isolation.

24. A detailed description of the water quality of the receiving water bodies is set out in section 3.3 of the application, which identifies the location, frequency and type of sampling undertaken, and draws on water quality information from a number of sources, including the applicant's monitoring since 2011 and Environment Southland's own State of the Environment (SoE) monitoring. Ms Bennett discusses matters pertaining to water quality in her evidence, including the influence of upstream land uses on water quality on the sampling results, and the effects of the discharges on overall water quality. In her evidence, Ms Bennett concludes that the discharges (excluding sewage) result in effects which are minor in the water bodies. The untreated sewage discharges result in adverse effects which are more than minor, primarily with respect to human health, but the effects are not significant – noting that sewage discharges are excluded from this application. This is discussed in some detail by both Ms Bennett in her evidence and Mr West in his section 42A report.
25. The evidence of Dr Stewart also discusses the environmental effects of the discharge on the aquatic ecosystem of the receiving environments, including the New River Estuary as the ultimate receiving environment. He concludes that there is no compelling evidence that stormwater derived contaminants are resulting in adverse effects to aquatic ecology that are more than minor, particularly within the New River Estuary.
26. In section 2.3 (page 12) of his evidence, Mr West discusses the discharges as existing activities, and concludes that *“for the purposes of considering the current application, the effects of the existing discharges are not part of the existing environment”*, and that when considering the effects of the discharges in determining this application, the existing environment is to be considered as if the activity is not occurring. Mr West refers to case law<sup>4</sup> as providing direction in this regard. I note however that while the discharges themselves cannot be assessed as if they are continuing (i.e. that the ongoing discharges form part of the existing environment), the *effects* of the long term discharges are part of the existing environment and must be taken into account. The discharges have occurred in some form for decades, more recently as a consented activity where the effects were anticipated, accepted to occur and previously consented by Environment Southland. The existing environment has been influenced by the discharges, and when determining whether the quality of the receiving water bodies is “maintained or enhanced”, should be considered in that context.

---

<sup>4</sup> *Ngati Rangī Trust v Manawatu-Whanganui Regional Council* [2016] NZHC 2948

## PLANNING FRAMEWORK

27. Section 104 of the RMA directs that the consent authority must, subject to Part 2 of the RMA, have regard to the following matters when considering an application for resource consent:

- (a) *any actual and potential effects on the environment of allowing the activity; and*
- (b) *any relevant provisions of—*
  - (i) *a national environmental standard;*
  - (ii) *other regulations;*
  - (iii) *a national policy statement;*
  - (iv) *a New Zealand coastal policy statement;*
  - (v) *a regional policy statement or proposed regional policy statement;*
  - (vi) *a plan or proposed plan; and*
- (c) *any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

28. In terms of clauses (b) and (c), in my opinion the relevant planning instruments for this application are:

- (a) The **National Policy Statement for Freshwater Management 2014** (NPS-FM). The intention of the NPS-FM is to help safeguard the life-supporting capacity of fresh water, its ecosystems, and indigenous species. It requires regional councils to set water quality and quantity limits through regional plans, a process that Environment Southland is scheduled to start late 2018. This limit setting process was raised in several submissions, which I address in my discussion of submissions from paragraph 124 of my evidence.
- (b) The **New Zealand Coastal Policy Statement 2010** (NZCPS), which applies to activities within the Coastal Marine Area (CMA) as defined in section 2 of the RMA<sup>5</sup>, and the coastal environment as identified on the Invercargill City Council's operative District Plan planning maps. I note that none of the discharges subject to this application occur directly to the CMA or to waters located within the defined coastal environment, but acknowledge that the New River Estuary is the ultimate receiving environment for the streams into which the discharges occur, and is within the CMA. The New River Estuary is also within the jurisdiction of the **Regional Coastal Plan for Southland**.
- (c) The **Southland Regional Policy Statement** (RPS) and the **proposed Southland Regional Policy Statement** (pRPS) are both relevant, and the consent authority must, subject to Part 2 of the RMA, have regard to the provisions of both documents, noting that most of the pRPS is now beyond challenge.

---

<sup>5</sup> **coastal marine area** means the foreshore, seabed, and coastal water, and the air space above the water—

(a) of which the seaward boundary is the outer limits of the territorial sea:

(b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of—

(i) 1 kilometre upstream from the mouth of the river; or

(ii) the point upstream that is calculated by multiplying the width of the river mouth by 5



- (d) The **Regional Water Plan for Southland (RWP)**, which contains objectives, policies and rules relating to the management of water resources in Southland, and gives effect to the RPS.
- (e) The **proposed Southland Water and Land Plan (pSWLP)**. While the rules of this document have legal effect, given that it is in the early stage of hearings very limited weight can be placed on the objectives and policies. While the pSWLP is relevant to the consideration of this application, it must be acknowledged that it is in a relative state of flux, and substantially subject to submissions, including submissions from the applicant and the other Southland territorial authorities in regard to the key provisions relevant to this application.
- (f) **Te Tangi a Taurira**, the Iwi Management Plan for Muruhiku, endorsed in 2008 by the respective runanga. The plan has status under the RMA through s104(1)(c) of the RMA as relevant to the consideration of this application.

## ACTIVITY STATUS

- 29. The application identifies the discharges as **non-complying activities** under Rule 2 of the RWP, and as such section 104D of the RMA must be considered. While the application considers only Rule 2 of the RWP, I note the other rules triggered by the activity that are identified in Mr West's section 42A report. I agree that they are also relevant, and note that the activity status does not change as a result.
- 30. Under section 104D of the RMA, the Hearing Panel must be satisfied that the discharges will either not result in adverse environmental effects that are more than minor (s104D(1)(a)), or that the discharges are not contrary to the objectives and policies of the RWP and, to a lesser extent, the pSWLP (s104D(1)(b)(iii)). The activity need only satisfy one of these 'gateway' tests in order to be granted, but cannot be granted if it fails both. Upon passing one of the tests, the way is then clear for the Hearing Panel to consider the application under s104 of the RMA, and make a determination under s104B.
- 31. As a result of the monitoring undertaken since the previous discharge permits were granted to the applicant in 2011, the environmental effects of the discharges (excluding sewage) on the receiving water bodies have been assessed and found to be minor, meaning that the first gateway test is passed. As noted in Ms Bennett's evidence, when setting aside the adverse effects of the "unconsentable" sewage which will ultimately be removed from the applicant's network, the stormwater that is discharged is considered to be of a 'normal' urban stormwater quality. After reasonable mixing, the discharges do not affect the degree of compliance with the water quality standards contained in Appendix G of the RWP in these streams, except

for the faecal coliform standard, which may be impacted during wet weather in the smaller catchments.

32. In his assessment of the application, Mr West considers the proposal does not pass the effects gateway of section 104D(1)(a) RMA. Mr West however does not assess whether just the consentable discharges (i.e. those excluding untreated human sewage) meet this first gateway test and in my view that needs to be done in this case. In the event that the adverse effects of the activity are considered to be more than minor the Hearing Panel would need to be satisfied that the discharges are not *contrary*<sup>6</sup> to the relevant objectives and policies of the RWP (and to a lesser extent the pSWLP) and can pass through the second gateway in order to be considered under s104, and determined under 104B.
33. In my view, if the 'unconsentable' sewage content of the discharges is set aside, the activity would pass through both s104D RMA gateways, but would fail the effects gateway if sewage is included as the effects are more than minor (but not significant). Regardless, the application passes the policy gateway when considered as a whole, and can therefore be considered further under s104 of the RMA. I provide the context for my conclusion in the following section.

### **CONSIDERATION OF THE APPLICATION UNDER SECTION 104 OF THE RMA**

34. Having concluded that the application passes one (or both) of the s104D RMA gateway tests, the Hearing Panel may then consider the application in the context of s104(1) as set out in paragraph 27 of my evidence.
35. The actual and potential effects include both adverse and positive effects and these have been thoroughly described in the application, and in the evidence of Ms Bennett and Dr Stewart. The overall conclusion is that the actual adverse effects of the discharges (as defined by the monitoring undertaken to date) when considered in the context of the RWP water quality standards will generally be minor (excluding sewage), other than in respect of the effects of the sewage (which are more than minor but not significant). The positive effects have been shown to be significant, as was discussed in the application, and paragraph 22 of Ms Bennett's evidence.

---

<sup>6</sup> In the sense that the activity is not repugnant to the relevant objectives and policies; refer *Tairua Marine Ltd v Waikato RC* [2010] NZEnvC 398

36. In processing the application, Environment Southland has not sought any further information or sought to commission additional reports/investigations. On that basis, it must be concluded that Environment Southland considers the application to contain sufficient information for the application to be determined. I agree with Environment Southland's view.
37. Turning to s104(1)(b) of the RMA, I have considered the relevant provisions of the applicable planning instruments, and attached my assessment as Appendix A to my evidence. I summarise my assessment of the key provisions in the following sections of my evidence.

## **RELEVANT PROVISIONS**

### **Regional plan provisions**

38. Mr West has provided a comprehensive list of the provisions in the planning instruments from page 25 of his s42A report that are relevant to considering this application, and key to determining whether it may be granted under section 104D. In my view, Mr West has correctly identified the relevant provisions. However, I disagree with Mr West's opinion that the discharges are either contrary to, or not consistent with, the relevant objectives and policies.

### **Key provisions of the Regional Water Plan**

39. Mr West has provided a detailed assessment of some of the relevant objectives and policies of the RWP in his section 42A report. I consider that the critical objectives are Objective 3 – *Surface water bodies other than in Natural State waters* and Objective 4 – *Gradual improvement in surface water quality parameters*. I agree that the provisions that Mr West identifies are relevant, and in particular that Policies 3, 4 and 11 are the critical provisions. I also consider Objective 2 – *Maintain water quality* to be relevant.

### **Objective 2**

40. Objective 2 seeks to ensure that water quality is not reduced beyond the zone of reasonable mixing below the water quality that existed in January 2010. The discharges from the applicant's network commenced and have occurred without interruption since well before the date the RWP became operative, and in fact since Invercargill City was first established. In my view, the proposal achieves this objective as the monitoring undertaken by the applicant shows that the quality of stormwater discharges have been consistent since monitoring commenced, and hence would not have lowered the quality of receiving surface water bodies below that which existed in 2010.

### Objective 3

41. Mr West did not consider the application in the context of Objective 3 despite listing this objective as being relevant in his section 42 report. In my view, this objective is very relevant, and in fact is a key provision. Objective 3 seeks measurable progress towards water quality improvements in Southland's water bodies. For the five streams affected by this application, the goals in Objective 3 are:
- (a) bathing, in those sites where bathing is popular;*
  - (b) trout where present, otherwise native fish;*
  - (c) stock drinking water;*
  - (d) Ngāi Tahu cultural values, including mahinga kai;*
  - (e) natural character including aesthetics.*
42. As has been noted in the application and in the evidence of Mr Loan, and as was acknowledged in the decision on the applicant's 2011 consent, the applicant has inherited the stormwater network from the time that Invercargill was first settled over 100 years ago. Also, the discharge of stormwater and contaminants to water was, until comparatively recently, a permitted activity and was not subject to any form of monitoring or active management. Historically, stormwater has simply been collected and discharged in order to provide broad social, economic, and public health benefits that the network still provides for.
43. While I agree that it is the duty of the applicant to meet its obligations under the current planning framework, that framework anticipates in Objectives 3 and 4 that it will take some time to do so. Also, the explanation to Objective 3 notes that: *"These goals will not be met overnight. The objective is therefore to make progress towards achieving them"*. The most effective way to do so, and to therefore be consistent with Objective 3 is through the granting of a resource consent which includes consent conditions that require measureable progress to be made by the consent holder towards further improving discharges towards meeting the stated goals, including monitoring and reporting that will demonstrate such progress.
44. Objective 3 aims to prevent further decline in water quality where it is already degraded, and measureable progress over time to improve it to ultimately meet water quality standards. The actions and measures proposed by the applicant, as outlined in Mr Crocker's and Ms Bennett's evidence, include progressively undertaking targeted network renewal work, detecting and removing sewage, and undertaking audits of industrial sites to reduce contaminant risks. These actions will result in measureable progress toward the water quality goals for these streams, and hence in my view the proposal is entirely consistent with Objective 3 and is certainly not 'contrary' to it.

#### **Objective 4**

45. Objective 4 – *Gradual improvement in surface water parameters* also acknowledges that immediate water quality improvements may be neither practicable nor achievable, and anticipates that such improvements can only be achieved over time. This objective focusses on improvements in respect to microbiological contaminants, nitrate, phosphorus, and clarity. Ms Bennett notes that by actively removing untreated human sewage as proposed, there will be a measurable improvement in these parameters.
46. The explanation to Objective 4 notes that: *“Attempting to achieve [water quality improvements] in a short timeframe would require significant constraints on both land use activities and direct discharge of contaminants to water”*, acknowledgement again that such water quality improvements are expected to be achieved over time. The applicant has committed to a number of active mitigation measures and progressive changes to its network which will result in measurable improvements, but which, due to practicable, technical and operational constraints, will take time to implement. In my view, the proposal is therefore entirely consistent with Objective 4 and certainly not ‘contrary’ to it.

#### **Policy 3**

47. Policy 3 sets the expectation that the quality of the receiving water will not be reduced beyond the zone of reasonable mixing unless it is consistent with the promotion of the sustainable management of natural and physical resources, as set out in Part 2 of the RMA to do so. As noted in Mr Morris’s opening, this policy accepts that there will be instances where the water quality standards will not be met beyond the zone of reasonable mixing, and that it may not necessarily be inappropriate in the circumstances. This approach recognises and accommodates the critical role that infrastructure such as stormwater networks play in sustainable management.
48. In directing decision makers to Part 2 of the RMA, Policy 3 provides for circumstances where factors other than water quality alone should be taken into account when determining whether consent for such discharges should be granted. Such factors include the health and safety of the community, and their social and economic wellbeing. I address this in my consideration of the proposal under Part 2, from paragraphs 64 of my evidence, and conclude that the proposal is consistent with Policy 3, and is not contrary to it.
49. The explanation to Policy 3 includes specific reference to s107(1) of the RMA which prevents the granting of resource consents authorising the discharge of water or contaminants to water (s107(1)(a)) if the discharge results, after reasonable mixing in the following effects (under s107(1)):

- (c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:*
- (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.*

50. Ms Bennett concludes that the stormwater discharges will not result in the effects identified in s107(1) particularly once the sewage is removed from the reaches of the relevant streams.

Section 107(2) enables consent authorities to grant consents even if the effects of s107(1) are present, where the consent authority is 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 it is consistent with the purpose of this Act to do so.*

51. In my view, the application should not be prevented from being granted because, despite improvements to the discharge, the receiving water quality will fail to meet the requirements of s107(1)(f) in the reaches of the streams affected by sewage where stock could be expected to drink the water, as discussed in Ms Bennett's evidence. It is beyond the ability of the applicant to render the receiving water quality suitable for consumption by farm animals in isolation, despite the intended removal of sewage, because of the upstream water quality. Furthermore, there are no areas downstream of the discharges where stock require access to drinking water, given the proximity of the City's urban area to the CMA, that are rendered unsuitable for stock water as a result of the discharges. In this circumstance, I consider it would be appropriate for the Hearing Panel to apply the exception provided under s107(2)(a) in respect to stock water, which would enable the consent to be granted.

#### **Policy 4**

52. Policy 4 directs that discharges meet the water quality standards specified in the RWP, after reasonable mixing (as set out in the explanation to the policy), unless it is consistent with the promotion of the sustainable management of natural and physical resources, as set out in Part 2 of the Resource Management Act 1991, to do so and so avoid levels of contaminants in water and sediments that could harm the health of humans, domestic animals including stock, and/or aquatic life. For the most part the applicant's stormwater discharges will meet those standards, other than in respect of the sewage which is not part of this application.

53. The measures proposed to address human sewage in stormwater will substantially reduce the concentration of pathogens in the stormwater, which are the most significant human health risk. This will take time to achieve, as acknowledged by Objectives 3 and 4. Regardless, given the inherent nature of stormwater, pathogens will still present albeit in lower concentrations, with a correspondingly lower risk to public health. As noted in section 3.5.3 of the application and in Ms Bennett's and Dr Stewart's evidence, the adverse effects of the stormwater discharges on aquatic life are minor, with a negligible potential for effects on human health as a result of consumption. Ms Bennett notes that in the three locations where it is possible for stock to drink the water (if the upstream water quality improved sufficiently) it is likely that the relevant reaches of the streams would comply with the ANZECC stock drinking guideline, and the discharges from the stormwater network, excluding sewage, would not render the water unsuitable for stock drinking water. The measures proposed by the applicant will contribute to achieving the stock drinking water guidelines, but these will only be able to be achieved in tandem with substantial improvements in upstream water quality as well. In my view, the proposal is consistent with Policy 4, and is not contrary to it.

#### **Policy 11**

54. Policy 11 anticipates that applications for consent to discharge stormwater will include conditions that require discharges to meet both the ANZECC sediment quality guidelines and the relevant water quality standards of the RWP following reasonable mixing. Policy 11(b) applies to this application for a new resource consent for existing discharges, and directs that these standards should be met at the commencement of the consent unless it is consistent with the purpose of the RMA to allow further time to do so. This is aligned with the expectation of gradual improvement in water quality over time, set through Objectives 3 and 4.

55. The explanation to Policy 11 also anticipates that resource consents will be granted that will enable the standards to be achieved over time:

*It is expected that the prime means of achieving these standards will be through adopting best management practices (or the best practicable option where it is not possible to adopt best management practices) to prevent contaminants entering the stormwater system. This could occur immediately on all new developments and could occur in other areas as upgrades take place. In some cases, it may be necessary to install some form of settling system that captures the first flush of stormwater in a rain event, before it enters a surface water body.*

56. Importantly, the explanation sets the expectation that the standards will be achieved through the adoption of best management practices, or where that is not possible, then the adoption

of the best practicable option (BPO)<sup>7</sup>. Mr Leahy has considered in his evidence the options that the applicant could adopt, including whether the proposal represents the BPO in light of the physical and practicable constraints on the City's stormwater system, and with the application of the proposed conditions should the application be granted. I consider this in more detail in paragraph 122 of my evidence.

57. Ms Bennett notes in her evidence that monitoring shows that the ANZECC ISQG-High sediment guidelines are generally met, with the ISQG-Low guidelines<sup>8</sup> not met in the lower reaches of the Otepunui Stream and Waihopai River. Ms Bennett also notes that, over time, given the proposed improvements to the network, the concentrations in sediment will further reduce. In my view, it is therefore relevant to consider whether it is consistent with the purpose of the RMA as set out in Part 2, to grant this application with appropriate conditions that provide time in which to meet the ANZECC ISQG-Low sediment guidelines. In my view, and as I explain in my assessment of the proposal in the context of Part 2 from paragraph 64 of my evidence, I conclude that the proposal is consistent with Policy 11, and is not contrary to it.

### **Policy 13**

58. Mr West considers Policy 13 – *Discharge of untreated effluent* to be relevant. I disagree because the application does not (or more correctly cannot) seek authorisation to discharge untreated (raw) sewage<sup>9</sup>, foul water<sup>10</sup> (which excludes sewage collected by community sewage schemes), or agricultural effluent. In my view, Policy 13 is not relevant to the consideration of this application.

### **PART 2 RMA**

59. When considering this application, the Hearing Panel must have regard to the relevant objectives and policies of the relevant plans, but always subject to Part 2 as directed by the first part of s104 of the RMA; that is, with due consideration as to whether the activity will achieve the sustainable management purpose of the RMA as set out in section 5 of that Act.

---

<sup>7</sup> **Part 2 RMA: best practicable option**, in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to—  
(a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and  
(b) the financial implications, and the effects on the environment, of that option when compared with other options; and  
(c) the current state of technical knowledge and the likelihood that the option can be successfully applied.

<sup>8</sup> The ANZECC ISQG guidelines are included in Appendix E of the RWP.

<sup>9</sup> **Raw sewage** - Sewage that has not undergone any chemical or biological changes prior to disposal. Raw sewage may have undergone some solids separation in a storage facility such as a pond or sump.

<sup>10</sup> **Foul water** - The discharge from any sanitary fixtures or sanitary appliances that has had either no treatment or primary treatment only, but excludes sludges and effluent from industrial or trade processes, agricultural effluent, and sewage collected by community sewage schemes.



An overall broad judgement under Part 2 of the RMA allows the decision maker to take into account whether the health, safety, and social, economic and cultural wellbeing of people and communities is provided for by an activity. This overall broad judgement is critical when determining an application such as this, where the stormwater network and its discharges are such an essential part of community wellbeing, health and safety, and fundamental to the role of the applicant in providing critical community infrastructure which also helps to avoid, and mitigates potentially significant adverse environmental effects. Exercising an overall broad judgement is not a balancing exercise, but a comparison of potentially conflicting considerations. The consideration of positive effects is necessary, but does not override the requirement for adverse effects to be avoided, remedied or mitigated. In my view, the application takes account of the positive effects of the City's stormwater network including the discharges, and offers substantial mitigation of adverse effects in recognition of the applicant's obligation to contribute to the sustainable management of natural and physical resources.

60. The recent findings of the High Court in the *Davidson*<sup>11</sup> decision are relevant. The *Davidson* decision confirmed that the approach taken in the Supreme Court's decision on *King Salmon*<sup>12</sup> applies when considering resource consent applications – that is, the provisions of the lower order documents prevail, and there is no need (and no ability) to undertake an “overall broad judgement” of whether an activity achieves the purpose of the RMA by considering an application in the context of Part 2 in favour of the provisions of the lower order documents. Only where a provision in a lower order document is invalid, incomplete, or uncertain can a decision maker refer back to Part 2 of the RMA and apply an overall broader judgement regarding the application.

61. I note that the Environment Court has since issued a decision<sup>13</sup> confirming that Part 2 is still relevant to considering resource consent applications in some circumstances<sup>14</sup>, and that the *Davidson* case currently subject to appeal. Further, the premise on which the RWP, RPS and other relevant documents will have been drafted will have intentionally relied to some degree on recourse to Part 2 to resolve unintended and unresolvable tensions between provisions in planning instruments when resource consent applications are considered.

---

<sup>11</sup> *R J Davidson Family Trust v Marlborough District Council*, [2017] NZHC 52:

<sup>12</sup> *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593 (*King Salmon*)

<sup>13</sup> *Envirofume Limited v Bay of Plenty Regional Council*, [2017] NZEnvC 12

<sup>14</sup> From *Envirofume Limited v Bay of Plenty Regional Council*, [2017] NZEnvC 12: [143] (a) as an overview or check that the purpose of the Act and that Part 2 issues are properly covered and clear; (b) to focus the Court or decision makers on the overall purpose of the consent in question; and (c) as a check that the various documents have recognised, provided for or given effect to the Act and other documents in the Hierarchy.

62. The *Davidson* decision has been appealed to the Court of Appeal<sup>15</sup>. In the event that the Court upholds the appeal, Part 2 may well return to being an integral part of considering resource consent applications as it has up until the *Davidson* High Court decision was issued earlier this year. This is particularly important given that neither the RWP nor the RPS were prepared in cognisance of the effect of the *Davidson* decision in confining decision makers to the provisions of the lower order documents without being able to consider the broader view provided for by Part 2. As such the Hearing Panel should also consider the application in the context of Part 2, notwithstanding that the *Davidson* decision currently stands.
63. In my view, and as set out in Mr Morris' opening, in this case the *Davidson* High Court decision does not limit the ability of the Hearing Panel to consider this application in the context of Part 2 because Policies 3, 4 and 11 specifically refer decision makers directly to Part 2 in the circumstances that exist in this application. It is my opinion that consideration of Part 2 of the RMA is entirely appropriate and required in this case, and I address it in the following section of my evidence.

### **Consideration of Part 2 of the RMA**

64. In considering the proposal in the context of the whole of Part 2, I am of the view that the proposal is consistent with the purpose of the RMA as defined in section 5, taking into account the relevant matters of sections 6 – 8 for the following reasons:

#### **Section 5**

- (a) The purpose of the RMA is identified in s5(1) as being to promote the sustainable management of natural and physical resources. Invercargill City is a physical resource of substantial social, economic and cultural value. The stormwater network is a critical part of enabling the use and development of land in the City, and protecting it as a physical resource to the benefit of the community. It is also critical in providing for health and safety of the community, and social, cultural and economic well-being. This needs to be taken into consideration alongside the sustainable management of the natural resources associated with the proposal.
- (b) Providing an effective drainage system for the City is a fundamental part of sustaining the potential of the City as a physical resource, to meet the reasonably foreseeable needs of future generations (s5(2)(a)). It does not override the need to take into account the effects of the activity and the needs of future generations in regard to natural resources, but it is a valid consideration.
- (c) The stormwater network also enables the applicant to undertake its duties to safeguard the life-supporting capacity of the City's water, soil and ecosystems (s5(2)(b)) under the

---

<sup>15</sup> [2017] NZCA 194

RMA, and its duties under the Local Government Act. Aside from the obvious human health benefits, the stormwater network prevents large areas of the City from flooding, which impacts the ability of soils to sustain life, and threatens the short term quality of ecosystems. While it is fanciful, it is useful to acknowledge the substantial community benefit that the stormwater network brings in avoiding significant adverse effects on receiving water bodies from flooding and uncontrolled overland flow in the Invercargill urban area, including the unmitigated entrainment of sediment and contaminants in flood waters and ultimately in rivers, streams and coastal waters, with the associated adverse effects on environmental quality.

- (d) Fundamentally, the stormwater network is in itself, a significant mitigation measure of considerable economic value – I consider this further from paragraph 116 of my evidence, and Mr Loan also discusses the value of the network. The stormwater network and its discharges enable the City to substantially avoid and mitigate significant adverse effects (s5(2)(c)) that would prevail if the network was not present, or was not able to discharge stormwater to surface water. This is to be considered in a broad judgement of the effects on natural resources. The evidence presented by Ms Bennett and Dr Stewart demonstrates that the adverse effects on the sustainable management of the receiving environments will be, at worst, minor, taking into account the removal of the sewage component of the discharge over time. This is consistent with the ‘maintain and enhance’ requirements of the matters of national importance described in section 6.

## **Section 6**

- (e) The relevant matters of section 6 to this application which the Hearing Panel must recognise and provide for include s6(a), (c) – (e), (g) and (h).
- (f) The applicant is seeking consent for an activity that has taken place in various forms for over 100 years since Invercargill was first settled. The underlying principal of the application is that the effects of the current activity are minor (excluding sewage), will be maintained in the short term (that is, will not be made worse), and with the actions and mitigation measures proposed by the applicant, will be progressively reduced to better provide for the matters of national importance set out in section 6.
- (g) The proposal therefore is consistent with the requirement in section 6 to recognise and provide for natural character (beyond the mixing zone) (s6(a)), significant indigenous vegetation, significant habitats of indigenous fauna such as the New River Estuary (s6(c)), and public access to and along rivers and the CMA (s6(d)).
- (h) The relationship of Maori and their culture and traditions (s6(e)) and associated protected customary rights (s6(g)) will also be enhanced over time as the mitigation measures show measureable improvements in the quality of stormwater discharged to the rivers and the CMA, and particularly with the removal of human sewage from the discharges.

- (i) Importantly, the stormwater network and the discharges are a fundamental part of the measures necessary to protect the Invercargill community from the risk of significant flooding during natural hazard events (s6h)).

## **Section 7**

- (j) The relevant matters of section 7 to this application which the Hearing Panel must have particular regard to include s7(a) – (b) and (c) – (i).
- (k) The application took into account the values expressed in Te Tangi a Taurira, and involved direct consultation with representatives of Te Ao Marama Inc., who were also involved in several informal prehearing meetings, including input on draft conditions developed and now proposed by the applicant. Further, as part of the proposed conditions the applicant proposes to establish a working party to engage with stakeholders on an ongoing basis in regard to the future management of the discharges, explicitly including Te Ao Marama Inc. as one of the core parties (s7(a) and s7(aa)).
- (l) The efficient use and development of natural and physical resources includes the present and future use of the receiving environment and Invercargill City as a significant physical resource (s7(b)). The ability for the community to continue to use existing, and to develop new areas of the land resource in Invercargill entirely relies on an efficient and effective stormwater network without which there would be significant adverse effects from flooding, including human health issues and significant adverse social, cultural and economic effects.
- (m) Similarly, the use of the stormwater networks and discharges to water enable the maintenance of amenity values and the quality of the environment within the City, while having a minor effect on quality of the receiving water bodies and aquatic habitat.
- (n) The discharges (excluding sewage) do not prevent the use of the receiving water bodies by present or future generations, and represent the most efficient manner in which to protect the health, safety and wellbeing of the community. As a result of the proposed improvements to the quality of the discharges, and the corresponding improvement to overall receiving water quality, the maintenance and enhancement of amenity values (s7(c)), the intrinsic values of ecosystems (s7(d)), and the overall quality of the environment (s7(f)) will be enhanced, as will the habitat of trout and salmon (s7(h)).
- (o) Importantly, the stormwater network and discharges are expected to become increasingly important in enabling the Invercargill community to manage the anticipated effects of climate change on the City as a physical resource (s7(i)).

## **Section 8**

- (p) The principals of the Treaty of Waitangi have been taken into account, recognising the role of Ngai Tahu as kaitiaki and their special relationship with the five receiving water

bodies and the New River Estuary. The proposed mitigation measures in particular will reduce the adverse effects of the stormwater discharges on receiving environments and the effects on cultural and spiritual values, particularly as a result of removing sewage from the discharge. The applicant has engaged with Te Rūnanga o Waihopai in preparing the application, and in pre-hearing meetings, and undertakes to establish a formal relationship through a Working Party, to provide a forum for involvement in the management of the stormwater system for the term of the consent (if granted).

65. On the basis of the above assessment, I am of the view that the application is consistent with the purpose of the RMA.

### **Key Provisions of the Proposed Southland Water and Land Plan**

66. The pSWLP was notified on 3 June 2016, and as such the rules have legal effect while the objectives and policies must be taken into account when determining consent applications under s104(1)(b)(vi) and s104D(1)(b)(iii).

67. I agree with Mr West that the same weight cannot be afforded to the objectives and policies of the pSWLP as the operative RWP, although I would go further to say very little weight can be placed on these provisions given the relative state of flux of the plan while it progresses through the hearing process. I note that the pSWLP is subject to considerable challenge through submissions, including from the applicant in respect of appropriately providing for critical infrastructure – the final provisions may well be very different to what are currently in the pSWLP. At best, in my view, the pSWLP provides an overall indication of the direction intended by Environment Southland in undertaking its duties under the RMA, while noting it is subject to Part 2, and the values of the community as expressed through changes sought through the hearing process.

68. Mr West identifies the key provisions of the pSWLP as Objective 6, Policy 13 and Policy 40. I agree but also consider Objective 13 to be key.

### **Objective 6**

69. The aim of Objective 6 is to ensure that water quality of freshwater bodies and estuaries is either (a) maintained if not degraded, or (b) is improved where degradation due to human activity has occurred. The freshwater bodies that are the subject of this application are known to be degraded as a result of human activity, and hence Objective 6(b) applies. In my view, the underlying premise of the application is to achieve progressive and measureable improvements in stormwater quality over time, with a corresponding improvement in the

quality of the receiving water bodies as a result. In this respect I find that the proposal will meet Objective 6.

### **Objective 13**

70. Objective 13 seeks to enable the use of land and soils providing that (a) discharges of contaminants to land that have significant or cumulative effects on human health are avoided, and that (b) adverse effects on ecosystems, amenity, cultural and historic heritage values are avoided remedied or mitigated such that the values are maintained or enhanced.

71. As discussed in Ms Bennett's evidence, the discharge of stormwater does not result in significant adverse effects on human health, and as sewage is progressively removed, the presently moderate human health risk in some of the receiving water bodies will further reduce. The evidence of Ms Bennett and Dr Stewart also concludes that the adverse effects of the discharges on the values identified in Objective 13(b) are either avoided, or will be mitigated by the actions proposed by the applicant. In my opinion, the stormwater discharge will meet Objective 13.

### **Policy 13**

72. Policy 13 directs that land use activities and discharges to land and water are to be managed to ensure that human health, domestic animals and aquatic life are protected.

73. Monitoring of the current stormwater discharges concludes that the potential adverse effects on human health are, at worst moderate (but not significant), due mostly to the presence of sewage. The measures proposed by the applicant including improved public information and signage, and a comprehensive surveillance and monitoring regime leading to the removal of sewage at source will reduce the human health risk from the discharges over time. I disagree with Mr West's view that Policy 13 requires immediate action to protect water quality, and human, animal and aquatic health. If Mr West's interpretation were correct then the policy would be inconsistent with the provisions in Objective 6 which seeks progressive improvements in water quality, and also inconsistent with Objective 13 which seeks to "maintain or enhance" the specified values, noting that improvements and enhancements take time to achieve. In my view the measures proposed by the applicant to progressively improve water quality represent active management of the discharges which will ultimately protect human, animal and aquatic health, and consequently the proposal is consistent with Policy 13.

**Policy 40**

74. Policy 40 provides direction to the decision maker in respect of the matters to be considered when determining the term for a resource consent. The matters include whether there is uncertainty regarding the effects of the activity or the capacity of the resource, the relevant tangata whenua values and cultural health indicators, the duration sought by the applicant, the permanence and economic life of any capital investment, whether the term should align with a common expiry date for other resource consents that may affect the resource, previous consent compliance, and the timing of the limit setting process.
75. I note that the applicant initially sought a term of 35 years, but has volunteered to reduce this to 25 years in response to concerns from submitters, and Te Rūnanga o Waihopai in particular.
76. Resource consent for the discharges was first obtained in 2011. The information gathered on the applicant's stormwater network and quality over the term of the existing consents provides a reasonable scientific basis for the effects assessment in the application, and a solid foundation for identifying the additional mitigation measures and comprehensive surveillance and monitoring regime now proposed. The monitoring regime will rapidly add to the understanding of the quality of stormwater from the network and progressively reduce any remaining uncertainty on the effects of the discharge. Given the cost of such monitoring as shown in Mr Cocker's evidence, this represents a significant investment by the applicant over the 25 year term sought.
77. The adverse effects of the discharges on tangata whenua values and cultural health indicators will be progressively reduced as sewage is detected and removed, and other contaminants reduced. It is noted in Ms Bennett's evidence that the effects of stormwater discharges on the suitability of fish and shellfish from the New River Estuary for human consumption is negligible, understanding that this is a small part of the cultural value placed on water quality. Further, the role of iwi representatives on the proposed Working Party will help to ensure that such values remain a key part of the applicant's ongoing management of stormwater, and will facilitate a long term beneficial relationship with the applicant.
78. The stormwater network is a permanent and necessary part of the City's infrastructure, with an anticipated operational life of at least 100 years. The capital investment required for the network was set out in Mr Loan's evidence, and is substantial. Given the longevity of such infrastructure, and the value of the associate community investment, aligning the expiry date with existing consents to reduce the term below 25 years would be inefficient.

79. I understand Environment Southland's limit setting process is due to commence from late 2018, and conclude in 2022. Setting a shorter term for the consent to make it easier for Environment Southland to implement the framework does not take into account that the consent authority has other tools available to it to review<sup>16</sup> and amend the conditions of a consent should it be necessary. It is not, in my view a strong enough reason on its own to impose a shorter term.

## KEY PROVISIONS OF OTHER PLANNING INSTRUMENTS

### Regional Coastal Plan for Southland

80. The provisions of the RCP are relevant insofar as the New River Estuary lies within the CMA, and is the ultimate receiving environment for the discharges.

81. Objective 6.2.1 seeks to maintain and enhance the values of the New River Estuary. The objective broadly identifies the values as recreational, symbolic, ecological, social, cultural and commercial. Policy 6.2.1 relates to the maintenance and enhancement of the Estuary's natural character.

82. Dr Stewart concludes in paragraph 77 of his evidence that he agrees with Mr West's statement that "there is no clear evidence that the stormwater is adversely affecting benthic communities in the receiving waters". Ms Bennett also notes that the effects of the discharges, including the current sewage content, on the estuary are minor, other than localised moderate effects on sediment quality which, while exceeding the ISQG-Low sediment guidelines, do not exceed the ISQG-High guidelines. Ms Bennett and Mr West both acknowledge the findings of the Landcare report<sup>17</sup> which confirmed a negligible effect on human health from consuming fish or shellfish from the estuary.

83. Taking the information in the application and the evidence presented by Dr Stewart and Ms Bennett into account, I am of the view that the proposed discharges are entirely consistent with the relevant provisions of the RCP.

---

<sup>16</sup> Section 128(1)(b) of the RMA provides Consent Authorities with the ability to review the conditions of a resource consent as of right (i.e. the review triggers necessary under s128(1)(a) do not apply):

*(1) A consent authority may, in accordance with section 129, serve notice on a consent holder of its intention to review the conditions of a resource consent—*

*(a) ...[N/A]*

*(b) in the case of a coastal, water, or discharge permit, when a regional plan has been made operative which sets rules relating to maximum or minimum levels or flows or rates of use of water, or minimum standards of water quality or air quality, or ranges of temperature or pressure of geothermal water, and in the regional council's opinion it is appropriate to review the conditions of the permit in order to enable the levels, flows, rates, or standards set by the rule to be met; or...*

<sup>17</sup> E Cavanaugh & N Ward, (2014), "Contaminants in estuarine and riverine sediments and biota in Southland", Landcare Research, Lincoln & Environment Southland, Invercargill



### **The Southland Regional Policy Statement**

84. In my view, the key provisions relate to water quality, and include Objective 5.1 - 5.4 and Policies 5.2 and 5.5.
85. Objective 5.1 seeks to provide for water quality in Southland that meets the needs of a range of uses (including future use), and safeguards the life-supporting capacity of water and ecosystems. Objective 5.2 seeks the maintenance and enhancement of water quality, with Objective 5.3 seeking the achievement of water quality standards. Objective 5.4 seeks the recognition of the relationship of Maori with water.
86. Ms Bennett notes in her evidence that the water quality standards of the RWP are generally achieved other than in respect of sewage, which the applicant will actively identify and remove at source. Discharges of stormwater will affect water quality, however not to the extent human health or the life-supporting capacity of the receiving water bodies and associated ecosystems are significantly affected. In my view, with the removal of sewage from the discharges, water quality will be enhanced and will ultimately be more consistent with the current water quality standards. In doing so, the relationship of Maori with water is better provided for. The proposal therefore is not contrary to these objectives.
87. Ms Bennett discusses mixing zones in her evidence, and concludes that the discharges (excluding sewage) will not impact upon the degree of compliance with the relevant water quality standards beyond a 50 m mixing zone, other than for faecal coliforms which the applicant will actively seek to reduce by removing human sewage inputs. Policy 3 of the RWP has been prepared to be consistent with the direction provided by the RPS, and has been informed by Policy 5.2 of the RPS. Policy 3 anticipates that there may be occasions when discharges will not meet water quality standards beyond the mixing zone, but that such circumstances may be consistent with the sustainable management purpose of the RMA considered earlier from paragraph 64 of my evidence.
88. Policy 5.5 requires local authorities to avoid, remedy or mitigate the adverse effects of land use and discharges on water. The importance of source control in achieving this is noted in Mr West's s42A report, and is recognised in the measures proposed by the applicant, including the implementation of low impact design measures through the applicant's 2016 Code of Practice for Land Development and Subdivision<sup>18</sup>. The adverse effects of the stormwater discharges on receiving water quality will be progressively mitigated through the

---

<sup>18</sup> Invercargill City Council Bylaw 2016/1, *Code of Practice for Land Development and Subdivision Infrastructure*.

measures proposed by the applicant, hence I consider the proposal to be consistent with this policy.

### **The Proposed Southland Regional Policy Statement**

89. Of the water quality provisions in the pRPS, only WQUAL.8, WQual.11 and WQual.12 are considered operative. The remaining provisions are under appeal to the Environment Court, and while relevant cannot be given full weight.

90. Mr West is of the view that the application is contrary to Policy WQUAL.8 which, amongst other matters requires direct discharges of sewage and wastewater to water to be avoided. In my view this policy is not relevant in this case because the application is not (and cannot) seeking authorisation to discharge sewage.

91. Policy WQUAL.11 relates to the integrated management of land use water, coast and air resources and the use, development of protection of resources to achieve the freshwater objectives under Objective WQUAL.1:

*Water quality in the region:*

*(a) safeguards the life-supporting capacity of water and related ecosystems;*

*(b) safeguards the health of people and communities;*

*(c) is maintained, or improved in accordance with freshwater objectives formulated under the National Policy Statement for Freshwater Management 2014;*

*(d) is managed to meet the reasonably foreseeable social, economic and cultural needs of future generations.*

92. On the basis of the evidence presented by Ms Bennett and Dr Stewart, I am of the view that the proposal is consistent with achieving this objective. Currently the effects of the discharges are more than minor (but not significant) at worst, and with the removal of sewage discharges, the stormwater will result in minor adverse effects on the life-supporting capacity of water and ecosystems or human health; will not prevent future generations from meeting their needs, and will not be inconsistent with the maintenance and enhancement of water quality over time in accordance with the NPS-FM.

93. With the detailed surveillance and monitoring programme proposed, the proposal is consistent with Policy WQUAL.12 insofar as it will contribute significantly to an improved understanding of the relationship between land use and water quality. This in turn will help to promote the sustainable management of Southland's water resources.

94. The Infrastructure provisions of the pSRPS are operative. Objective INF.1 aims to ensure that Southland's critical infrastructure (which in my view includes Invercargill City's

stormwater network) is secure, operates efficiently and is integrated with land use and the environment. The explanation to the Objective notes that such infrastructure is “*essential to the wellbeing, health and safety of people and communities.*” and that:

1. It significantly contributes to the social, economic and cultural wellbeing of people and communities;
2. It is the subject of considerable financial investment;
3. It is unlikely to be readily replaced or duplicated, and
4. It requires integrated management with other natural and physical resources.

95. The explanation to the objective recognises that greater weight should be afforded to its requirements, while also noting that it is desirable to control environmental effects from infrastructure. The explanation notes that the term “appropriately” in the context of this objective recognises the variability to which critical infrastructure will be able to avoid, remedy or mitigate adverse environmental effects.

96. The City’s stormwater network clearly satisfies the criteria of 1 – 3 listed above, and is essential to the wellbeing, health and safety of people and communities. In my view, given that the environmental effects of the existing discharges are not significant, and will reduce over time as the applicant implements the proposed mitigation measures, the discharges are consistent with the Objective.

97. Supporting policies INF.1 and INF.2 are pivotal. Policy INF.1 directs that the benefits derived from critical infrastructure are recognised, and that the development, maintenance, upgrade and ongoing operation of such infrastructure is provided for. This application is fundamentally about enabling the existing stormwater network, through its discharges to continue to operate, to the significant benefit of the community. Policy INF.2 however requires that adverse environmental effects are avoided, remedied or mitigated where practicable, taking into account:

- (a) *any functional, operational or technical constraints that require the physical infrastructure of regional or national significance to be located or designed in the manner proposed;*
- (b) *whether there are any reasonably practical alternative designs or locations;*
- (c) *whether good practice approaches in design and construction are being adopted;*
- (d) *where appropriate, and such measures are volunteered by a resource user, whether any significant residual adverse effects can be offset or compensated for; and*
- (e) [not applicable]

98. The operation of the City’s stormwater infrastructure has significant functional, operational and technical constraints that underpin its design, operation, and location. Mr Loan discusses this in his evidence. The ability of the applicant to redesign and / or relocate the

stormwater network, including the ability to pre-treat stormwater and / or to discharge it to an alternative environment are severely limited (or simply not practicable) by the physical characteristics of the location and landscape on which the City has been built. Essentially, there are no reasonable practicable alternatives to the current stormwater system, its design, or options for disposal. In proposing the mitigation measures offered in the application and through consent conditions however, the applicant is undertaking to make measurable improvements to stormwater quality to the extent practicable, and in order to ultimately avoid or mitigate the most significant environmental effects of the discharges.

99. In my opinion, the proposal will meet Objective INF.1, and is consistent with Policies INF.1 and INF.2. As the provisions are operative, the Hearing Panel must have appropriate regard to them as key considerations.

100. In my view, the infrastructure provisions require a judgement to be made in recognition of the essential role of critical infrastructure which may bring applications into conflict with other objectives and policies, such as the water quality provisions. Where such conflict arises, the exceptions provided for in the High Court's *Davidson* decision would be triggered. It would therefore be appropriate for decision makers to make a broader judgement of an application whether a proposal achieves the sustainable management purpose under Part 2 of the RMA. If the Hearing Panel considers that such a conflict exists in this case, I refer to my previous assessment of the proposal under Part 2 from paragraph 64 of my evidence.

101. Two other provisions of the pRPS are also key in my view. They are Policies URB.1 and URB.2, which relate to the use and development of urban areas.

102. Policy URB.1 notes that infrastructure and built environments can result in significant adverse effects on the environment, and directs that such effects should be avoided, remedied or mitigated. The mitigation measures proposed by the applicant will reduce the adverse effects of the stormwater discharge, primarily by removing sewage and other contaminants. I consider the application to be consistent with this policy.

103. Policy URB.2 promotes the management of urban growth and development, including (in URB.2(d)) "*the progressive upgrading of infrastructure and improvement of the quality of sewage and stormwater discharges;*". This application and proposed conditions commit the applicant to progressively upgrading the stormwater network as part of the measures taken to improve the quality of stormwater discharges over time. The policy anticipates, in the use

of the term “progressively”, that this can only be achieved over time. I consider the application to be entirely consistent with this policy.

#### **National Policy Statement for Freshwater Management 2014**

104. The effects of the discharges have been shown to have a minor effect on the life-supporting capacity of the receiving waters, and a minor public health risk once sewage sources are identified and removed. The proposal will not reduce water quality further, and with the applicant’s proposed measures, will result in water quality being improved over time. This improvement will also have a beneficial effect on the downstream coastal environment in the New River Estuary.

105. The proposed measures will mitigate the adverse effects of the discharges, which in turn will better provide for social, recreational and cultural values of the receiving water bodies and the New River Estuary. Accordingly, I consider the proposal will be consistent with the direction provided by the NPS-FM in seeking to maintain or improve water quality, and achieving the sustainable use of water as a natural and physical resource.

#### **New Zealand Coastal Policy Statement**

106. I agree with the relevant provisions that Mr West has identified in the NZCPS. While the discharges occur upstream of the CMA and are outside the coastal environment as defined in the Invercargill City Council’s District Plan maps, the receiving environment is the New River Estuary which lies within the CMA. For the reasons defined above, and on the basis of the evidence of Ms Bennett and Dr Stewart, who consider that effects of the stormwater discharges on the coastal marine area are minor, I consider that the proposal is consistent with the provisions of the NZCPS, particularly when the progressive improvement in stormwater quality is taken into account.

107. The inclusion of Te Rūnanga o Waihopai in the proposed working party will provide opportunities for tangata whenua to exercise kaitiakitanga in the coastal environment, and in decision making through a formal forum. The working party will provide a platform for ongoing collaboration, consultation and involvement in the management of stormwater quality and the potential effects on the coastal environment and cultural values of the New River Estuary. The progressive improvement of stormwater quality will better provide for Maori cultural and spiritual values, as well as those of the wider community in the use and enjoyment of the coastal area. Indigenous biological diversity will be better provided for, noting that the current stormwater discharges do not result in significant adverse effects on benthic communities (as stated by Dr Stewart) or coastal or aquatic ecology values.

108. The proposal is consistent with the direction of Policy 14 in promoting the restoration or rehabilitation of the natural character of the coastal environment, as part of the solution to enhancing coastal water quality, including through reducing contaminant and sediment loads.
109. Policy 23(4) refers to stormwater discharges directly to the coastal environment<sup>19</sup>, directing that steps be taken to avoid adverse effects of stormwater discharges to water in the coastal environment. I note that none of the discharges included in this application occur directly to the CMA or to waters within the coastal environment (as defined in the Invercargill City Council's operative District Plan), but accepting that CMA is the receiving environment, I have considered this policy for completeness.
110. Policy 23(4)(a) seeks to avoid '*where practicable*' and otherwise remedy cross contamination of stormwater with sewage. This is essentially what the applicant proposes through this application, and the mitigation measures proposed in section 5 of the application, and through the proposed conditions. Cross contamination will be avoided where practicable, with the applicant expecting to be able to identify cross-connections through the approach set out in the proposed conditions, and implement measures through the mechanisms described in Mr Crocker's evidence, to remedy those connections.
111. Policy 23(4)(b) directs that in taking steps to avoid adverse effects from stormwater discharges, contaminant and sediment loadings should be reduced at source. The applicant's Code of Practice for Land Development and Subdivision Infrastructure requires land developers to, unless there is a valid reason not to, implement low impact design principles for the treatment (at or near the source) of stormwater, which is consistent in my view with the direction of Policy 23(4)(b) – (d) as it promotes the integrated management of catchments and stormwater networks (Policy 23(4)(c)), and designs that reduce flows to stormwater networks at source (Policy 23(4)(d)).
112. The proposed mitigation measures, along with the applicant's Code of Practice for Land Development and Subdivision Infrastructure<sup>20</sup>, will progressively reduce contaminant and sediment loads in stormwater, and are consistent with Policy 23(4) of the NZCPS.

---

<sup>19</sup> **Coastal Environment:** Commences at the CMA and contains land to the extent that such land is affected by or affects the coast, whether the coast be sea, estuary, harbour or bay, as delineated on the District Planning Maps; Invercargill City Council District Plan, operative February 2005.

<sup>20</sup> Invercargill City Council Bylaw 2016/1, *Code of Practice for Land Development and Subdivision Infrastructure*.

## **Te Tangi a Tauira**

113. As the endorsed iwi management plan for the Murihiku area, the provisions of *Te Tangi a Tauira* are relevant.
114. The relevant provisions are primarily focussed on enabling tangata whenua to have a role in the management of freshwater, in accordance with the principle of ki uta ki tai, from the mountains to the sea. The provisions generally seek recognition of the cultural and spiritual value of freshwater resources, including as sources of drinking water, sources of food, and for recreation. Several of the policies also seek better relationships with other statutory agencies, including improved mechanisms for cultural values and perspectives to be taken into account in decision making processes. Various policies recognise that there may be practical limitations to achieving some of the more aspirational goals, but that taking such limitations into account, improvements in water quality must still be made.
115. I have provided an assessment of the provisions I consider relevant from *Te Tangi a Tauira* in Appendix A. While there are practicable, technical and operational limitations to achieving the direction of policies such as Policy 3.5.13.5 and 3.5.13.9 which prefer discharges to land, and Policy 3.6.7.5 which promotes the avoidance of discharges to streams upstream of coastal water, the progressive improvements to stormwater quality proposed by the applicant are generally consistent with most other relevant policies.

## **OTHER MATTERS**

### **Section 104(2A) of the RMA**

116. The value of the applicant's investment in the stormwater network is a critical consideration for this application. Section 104(2A) of the RMA requires decision makers to have regard to the value of this investment as this application was made subject to s124, and under which the applicant currently continues to discharge stormwater from its network.
117. Mr Loan notes the value of the network in his evidence, with the optimised replacement value being \$206M, and the ongoing annual operational budget of \$3.3M which includes the current renewal budget of \$1.8M. This is a significant investment by the community in critical infrastructure, over a number of generations. Taking into account that the operation of the existing network absorbs over \$3M a year of public money, in addition to the costs of the monitoring as indicated by Mr Crocker, the applicant must also allocate additional funding to make changes that will achieve measureable improvements in the quality of the discharges.

118. The limitations on available funding need to be given due regard in determining the application. While they are important, and the applicant acknowledges their obligations, the achievement of water quality outcomes needs to be considered alongside the ability of the applicant to fund the necessary changes, and any implications for the applicant being able to achieve other local government functions and obligations at the same time.

### **Section 105 of the RMA**

119. Section 105 is relevant to the Hearing Panel's consideration of this application.

Section 105 states:

*If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(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 reasons for the proposed choice; and*

*(c) any possible alternative methods of discharge, including discharge into any other receiving environment*

120. The nature of the discharge and the sensitivity of the receiving environment has been thorough examined by Ms Bennett and Dr Stewart, and by Mr West in his s42A report. Ms Bennett and Dr Stewart concluded that both the freshwater and coastal receiving environments are of low and relatively low sensitivity respectively, to the effects of the discharges.

121. Mr Loan discusses in his evidence the reasons for seeking consent to continue the discharges, given the very limited options to otherwise manage stormwater in the City, including the absence of other practicable alternatives or other receiving environments. Mr Leahy also addressed in his evidence some of the practicable alternatives available to manage stormwater. The City's low lying topography, close proximity to the CMA and high rainfall and groundwater levels present few if any reasonably practicable alternatives, including limitations on the technical feasibility of installing and operating retrofitted treatment and management options.

122. As discussed in paragraph 56 of my evidence, the applicant is proposing the best practicable option as defined in Part 2 of the RMA. That is, the proposal to continue to discharge stormwater to water, while actively seeking to improve the discharge quality including removing sewage and other contaminants, and undertaking a renewals programme is the best method available to the applicant for preventing or minimising adverse environmental effects, taking into account that:



- (a) The current discharges, do not result in significant adverse environmental effects;
- (b) The adverse financial implications for the applicant, and therefore the Invercargill community of needing to substantially modify its stormwater network would be particularly onerous (depending on the option adopted), and seem to be at odds with the scale and significance of the environmental effects of the proposal, particularly once sewage is removed; and
- (c) The proposed options are technically feasible, can be readily and rapidly applied<sup>21</sup>, and will result in a measureable improvement in stormwater quality.

### **Section 107 of the RMA**

123. Section 107 of the RMA has been assessed both in Ms Bennett's evidence, and in paragraph 52 of my evidence above. In my view, provided that the effects identified in s107(1)(c) – (g) are avoided beyond the zone of reasonable mixing, the Hearing Panel may grant the application. Insofar as addressing the sewage component of the discharge will not render receiving water suitable for farm animals to consume because of upstream water quality, I consider it would be appropriate for the Hearing Panel to rely on the exception provided under s107(2)(a), particularly as, in my view the proposal is consistent with the sustainable management purpose of the RMA.

### **SUBMISSIONS**

124. I agree with the summary of submissions provided in Mr West's s42A report, noting that of the 11 received, nine wish to be heard, seven are opposed, and four are neutral. Importantly, none of the submitters request that the application is declined outright, but most request a shorter term along with measurable milestones to enable the applicant to be held accountable to making tangible improvements to receiving environment quality over time.

125. To better understand the matters raised in submissions, the applicant met informally with Federated Farmers, New Zealand Steel Ltd, Fish and Game New Zealand, Southern District Health Board, and Te Ao Marama Inc. for Te Rūnanga O Waihopai on several occasions. As a result of these discussions, the applicant developed a set of conditions and invited feedback from the submitters. The conditions were then circulated, and all submitters invited to a formal prehearing meeting held at, and chaired by, Environment Southland on 15 June 2017. While the meeting was worthwhile, no agreement was reached with the submitters present. The conditions discussed with the submitters substantially form the basis of the proposed conditions attached to my evidence in Appendix B.

---

<sup>21</sup> The industrial site audits, and sewage source identification and removal in particular. The applicant acknowledges that the network renewals programme is a more long term solution.

126. The matters raised are common to several of the submissions. Most submitters are concerned about the adverse effects of the discharges on the receiving environment, in particular because of the untreated sewage content, and the effects on the New River Estuary as the ultimate receiving environment. Several submitters consider the proposed monitoring regime to be inadequate, and are seeking that the applicant substantially increases (i.e. speeds up) the rate at which it is proposing to renew stormwater network pipes and to remove sewage from the discharge within five years of commencement. The 35 year term originally sought by the applicant is consistently opposed in submissions, and there are concerns regarding the effect that granting consent would have in respect of the future limit-setting process pending under the NPS-FM.

127. In response, the applicant has proposed measures which will effectively eliminate the sewage component of the stormwater over time, both by identifying and removing cross-connections, replacing aging pipes to eliminate subsurface cross-contamination, and various upgrades to the City's wastewater network to effectively eliminate the risk of sewer overflows. The applicant has offered conditions requiring inspections of industrial and commercial premises to reduce risk of contaminants discharging from these to the stormwater network, and a programme to identify the critical sources of metals to the network and reduce the loads from these sources over time. Other contaminants such as metals will also be monitored and reported. The applicant has reduced the term sought from 35 years to 25 years, particularly in respect of the provisions of *Te Tangi a Tauri* and the submission from Te Rūnanga o Waihopai. In respect of the concerns raised by submitters regarding the pending limit setting process, I refer to the ability of Environment Southland to review the conditions of consent (if granted) under s128(1)(b) of the RMA as discussed in paragraph 80 of my evidence. Issuing consent to discharge stormwater and contaminants does not insulate the applicant from the effects of the limit setting process for the term of the consent. While some may prefer to see a decision deferred until the limit setting process is complete, the application must be determined within a reasonable timeframe, and cannot be placed 'on hold' until limit setting is complete.

## **PROPOSED CONDITIONS**

128. The Hearing Panel may impose conditions as provided for by s108 of the RMA. The applicant's proposed conditions are attached to my evidence as Appendix B.

129. The conditions include a robust and rigorous surveillance and monitoring programme that will endure over the life of the consent. The conditions are centred on identifying and

removing contaminants at source where that is practicable to do so. Ms Bennett refers in her evidence to the flow charts she presents, which explain how the surveillance and monitoring programme will work to result in measureable improvements to stormwater quality.

130. The conditions includes the requirement for the applicant to establish a Working Party which would consist of key stakeholders. The Working Party will provide a formal and ongoing means for stakeholders to engage with, and work with, the applicant to address any issues or concerns, measure progress towards network improvements and a means of common ownership of the stormwater outcomes. In effect, the conditions proposed provide Environment Southland, key stakeholders and the community the means to hold the applicant accountable to the community for making changes to the stormwater networks that will result in a positive environmental outcome to the quality of the receiving environment.

131. I note that s108(2)(e) enables the Hearing Panel to include a condition requiring the applicant to adopt the BPO to prevent or minimise the “*actual or likely*” adverse effects resulting from the discharge. Further, in anticipating review conditions being included, both s128(1)(a)(ii) and s131 of the RMA provide for the inclusion (through review) of conditions requiring the applicant to adopt the BPO. This is relevant since, with the limit setting process due to commence late 2018, and with the potential for technology to advance over the 25 year term sought, new options may become available to the applicant which will help improve the quality of the discharge further.

### **Term of consent**

132. Prior to the RWP becoming operative in January 2010, Invercargill’s stormwater discharges were permitted activities. The applicant has had seven years in which to first define the nature of the discharges, and then to identify and implement any changes necessary to avoid, remedy or mitigate any effects on water quality from the discharges.

133. Some of the City’s stormwater network was established over 100 years ago when Invercargill was first settled, and is still operating (in moderate condition) now. Seven years is, in my view a very short space of time to implement effective changes in a stormwater network that is so old in parts, and where the applicant has inherited engineering approaches that are somewhat outdated.

134. It is particularly relevant in my view to take into account the relatively minor nature of the adverse effects of the discharges, the limited options open to make significant changes

given the practicable, technical and physical constraints, and the issue of affordability for ratepayers to pay for major improvements in short time periods. All of these issues impact on the practicality of making measureable improvements to the stormwater network that will result in improved environmental outcomes within a short timeframe. Most of the measures proposed by the applicant are able to be implemented within a very short time of the consent (if granted) commencing. The renewals programme is the longest term change proposed, and is the action most constrained by long term funding.

135. In my view, taking into account matters discussed above including the limited options and funding open to the applicant, the adoption of the BPO from the outset, the measureable improvements that the changes will result in, and the ability of the consent authority to review consent conditions over the term of the consent, I consider a 25 year term is appropriate in this case. This is also consistent with the direction provided on page 139 of Te Tangi a Taurira:

*“Ngāi Tahu ki Murihiku do not believe we should be granting consents for activities where we do not know what the effects may be over the long term. Anything over 25 years is essentially making decisions for the next generation.*

*We also need to ensure that consent duration recognises and provides for changes in technology, thus allowing us to continually improve the way we do things.”*

## CONCLUSIONS

136. Having considered the application, the evidence presented by other witnesses, the matters raised by submitters, the s42A report, and the provisions of the relevant planning instruments I do not consider that there any matters preventing the Hearing Panel granting application if deemed appropriate, subject to conditions. In my view, granting the application will better enable improvements to be made to the City’s critical stormwater infrastructure that will improve environmental outcomes, appropriately recognise and provide for the natural and physical resources, and the health, safety and wellbeing of the community, and maintain and progressively enhance receiving water quality. Mr West, on page 73 of his s42A report, states that granting the application would be a pragmatic approach to enabling the progressive improvements to be made – I entirely agree with this statement.

137. In my opinion, granting the application, subject to the conditions included in Appendix B, is consistent with the promotion of the sustainable management of natural and physical resources envisaged by the RMA.

Dated: 25 July 2017



.....  
Janan Dunning  
**Senior Planner**  
**Stantec NZ Ltd**

## Appendix A – Assessment of Objectives and Policies

### 1. Regional Water Plan for Southland

The “consentable” (non-sewage) component of the discharges are considered to meet most of the water quality standards in Appendix G of the RWP after reasonable mixing (Part 4.2.6 of the application). The applicant does not (cannot) seek consent for sewage discharges, and has committed to actively remove them from the stormwater network. The proposal is not contrary to the relevant objectives and policies when taking a broad view of all of the relevant provisions together.

Table 1 - RWP Objectives	Comment
<p><b>Objective 2 – Maintain water quality</b>  <i>To manage water quality so that there is no reduction in the quality of the water in any surface water body, beyond the zone of reasonable mixing for discharges, below that of the date this Plan became operative (January 2010).</i></p>	<p>The stormwater discharges pre-date the date that the RWP became operative. The quality of the stormwater discharged from the network will not further reduce water quality beyond the zone of reasonable mixing (i.e. water quality will be <u>maintained</u>), achieving the intent of this objective.</p>
<p><b>Objective 3 – Surface water bodies other than in Natural State waters</b>  <i>To maintain and enhance the quality of surface water bodies so that the following values are protected where water quality is already suitable for them, and where water quality is currently not suitable, measurable progress is achieved towards making it suitable for them.</i>  <i>In surface water bodies classified as ... lowland (hard bed), lowland (soft bed) ...:</i>  <i>(a) bathing, in those sites where bathing is popular;</i>  <i>(b) trout where present, otherwise native fish;</i>  <i>(c) stock drinking water;</i>  <i>(d) Ngāi Tahu cultural values, including mahinga kai;</i>  <i>(e) natural character including aesthetics.</i>            ...</p>	<p>Taking into account the proposed measures to remove the illegal discharges (cross-connections), audit and improve discharges from industrial sites where necessary, remove sewage cross-contamination from the stormwater network through the City’s renewals programme, and require LID principles to be applied to stormwater management for new land developments, water quality will improve over time. That is to say, measurable progress will be made toward achieving the values specified in Objective 3, which specifically anticipates that improvements in water quality will need to be made over time where the specified values of the receiving water bodies are not currently met.</p>
<p><b>Objective 4 – Gradual Improvement of water quality parameters</b>  <i>To manage the discharge of contaminants and encourage best environmental practice to improve the water quality in surface water bodies classified as hill, lowland (hard bed), lowland (soft bed) and spring fed, and in particular to achieve a minimum of 10 percent improvement in levels of the following water quality parameters over 10 years from the date this Plan became operative (January 2010):</i>  <i>(a) microbiological contaminants</i>  <i>(b) nitrate</i>  <i>(c) phosphorus</i>  <i>(d) clarity</i></p>	<p>This objective anticipates a gradual improvement of water quality over time. The explanation to the objective notes in respect of reducing the specified contaminants:  <i>“Attempting to achieve them in a short timeframe would require significant constraints on both land use activities and direct discharge of contaminants to water.”</i>            The applicant’s proposed improvements will achieve measurable progress in respect of a gradual improvement in receiving water quality to the extent that it is affected by stormwater discharges, and will contribute to achieving this objective.</p>
<p><b>Objective 10</b>  <i>To maintain or enhance the diversity and integrity of aquatic and riverine habitats and ecosystems</i></p>	<p>The maintenance and enhancement of the aquatic and riverine habitats and ecosystems will in part be a consequence of improved water quality. The proposed discharge will not make the existing situation worse (i.e. will maintain it) and will enhance it over time as the applicant makes the specified improvements and removes sewage contamination.</p>

Table 2 - RWP Policies	Comment
<p><b>Policy A4</b></p> <ol style="list-style-type: none"> <li>1. ...</li> <li>2. ...</li> <li>3. <i>This policy applies to the following discharges (including a diffuse discharge by any person or animal):</i> <ol style="list-style-type: none"> <li>a. <i>a new discharge or</i></li> <li>b. <i>a change or increase in any discharge – of any contaminant into fresh water ...</i></li> </ol> </li> </ol>	<p>The proposal is not for a new discharge as stormwater has been discharged from the network for over 100 years. The scale and nature of the discharge will not change or increase. This policy therefore does not apply to this application.</p>
<p><b>Policy 1A</b></p> <p><i>Any assessment of an activity covered by this plan must take into account any relevant Iwi Management Plan.</i></p>	<p>The relevant iwi management plan (<i>Te Tangi a Taurira</i>) was taken into account in assessing the effects of the activity and preparing the application. The relevant provisions of that document are addressed below.</p>
<p><b>Policy 3</b></p> <p><i>Allow no discharges to surface water bodies that will result in a reduction of water quality beyond the zone of reasonable mixing, unless it is consistent with the promotion of the sustainable management of natural and physical resources, as set out in Part 2 of the Resource Management Act 1991, to do so.</i></p>	<p>Other than in respect of the sewage contamination (which will be removed over time), the stormwater discharges do reduce water quality beyond the zone of reasonable mixing beyond the water quality standards of the RWP, or below the existing quality of the receiving water bodies. The proposal is therefore consistent with Policy 3.</p>
<p><b>Policy 4</b></p> <p><i>For surface water bodies outside Natural State Waters, manage point source and non-point source discharges to meet or exceed the water quality standards referred to in Rule 1 and specified in Appendix G “Water Quality Standards”, unless it is consistent with the promotion of the sustainable management of natural and physical resources, as set out in Part 2 of the Resource Management Act 1991, to do so and so avoid levels of contaminants in water and sediments that could harm the health of humans, domestic animals including stock and/or aquatic life.</i></p>	<p>Regardless, the policy anticipates that a reduction in water quality may be appropriate when considered in the context of the broader purpose of the RMA, requiring a judgement that takes account of the benefits of achieving water quality standards, while also taking into account the effects of doing so on the social, cultural and economic wellbeing of the community.</p> <p>The levels of contaminants in water and sediments that are attributable to the stormwater discharges, including the cumulative effect of them are considered to be sufficiently low as to avoid harm to human and animal health, and aquatic life. The proposal is therefore consistent with Policy 4.</p>
<p><b>Policy 5</b></p> <p><i>Manage discharges to water in artificial watercourses so that any new discharge, in conjunction with existing discharges, does not reduce the water quality of the surface water body into which the artificial watercourse flows below any standards set for the surface water body in Appendix G “Water Quality Standards” following a zone of reasonable mixing from the point of confluence of the artificial watercourse with the surface water body.</i></p>	<p>The proposal does not involve new discharges of stormwater to artificial watercourses. Regardless, the scale and nature of the existing discharge to the artificial the watercourse (Waikiwi Stream catchment) will not change or increase, and does not further reduce the water quality standards in Waikiwi Stream beyond the zone of reasonable mixing. The proposal is consistent with Policy 5.</p>
<p><b>Policy 7</b></p> <p><i>Prefer discharges to land over discharges to water where this is practicable and the effects are less adverse.</i></p>	<p>Discharges to land are not a practicable alternative for the City’s stormwater discharges given the practicable and physical constraints that apply. The proposal is consistent with Policy 7.</p>
<p><b>Policy 8</b></p> <p><i>Prefer point source discharges of contaminants to water at times of high flow over discharges at normal or low flows, and ensure that where discharging does take place at low flows, the effects that could not be practically avoided are minimised.</i></p>	<p>Aside from the potential for a temporary lag between network discharges and stream flow responses to precipitation, most stormwater discharges will occur to surface water at times of high stream flow. Discharges from the stormwater network will occur at low flows on occasion as a result of groundwater intrusion into the network. The solution is to replace / upgrade the parts of the network where groundwater inflow or infiltration is high - this will</p>

Table 2 - RWP Policies	Comment
	ultimately reduce if not remove groundwater discharges from the network along with most low flow discharges, avoiding adverse effects to the extent practicable. The proposal is consistent with Policy 8.
<p><b>Policy 9</b>  <i>When determining the size of the zone of reasonable mixing, minimise the size of the area where the relevant water quality standards are breached. Consideration should be given to, but not be limited to, the following matters:</i></p> <p>(a) <i>the aquatic ecosystem values in the affected reach;</i>  (b) <i>the need for fish passage;</i>  (c) <i>the uses of the water body adjacent to and downstream of the point of discharge.</i></p>	<p>The applicant has proposed a reasonable mixing zone that is consistent with the existing discharge permits.</p> <p>The evidence of Ms Bennett and Mr Stewart indicated that the effects of the discharges on aquatic ecosystems of the receiving water bodies was minor (or more than minor but not significant if sewage is taken into account in the affected catchments). Fish passage will not be physically obstructed. The discharges do not prevent the existing uses of downstream water bodies, however the potential for some cultural and public health effects to occur until sewage is removed is acknowledged. The proposal is not contrary to Policy 9 when considering the effects of these values beyond the mixing zone.</p>
<p><b>Policy 11</b>  <i>Apply consent conditions requiring consented discharges of stormwater to meet both the ANZECC sediment guidelines and the relevant water quality standards following reasonable mixing to:</i></p> <p>(a) <i>All resource consents for new stormwater discharges; and</i>  (b) <i>All new resource consents for existing stormwater discharges. Unless it is consistent with the purpose of the Act to allow further time, existing discharges will be required to meet the standards and guidelines by 2010 or the date the resource consent commences, whichever is the latter.</i></p>	<p>This policy requires that consent conditions are included in resource consents requiring the ANZECC ISQG sediment guidelines and the relevant water quality standards to be achieved after reasonable mixing. While no monitoring sites were found to exceed the ISQG-High guidelines (above which adverse effects are <i>likely</i> to occur), and the current discharges (excluding sewage) mostly achieve the water quality standards, the applicant is unlikely to be able to fully comply with such conditions at the commencement of the consent. In such circumstances, the policy anticipates that a reduction in water quality over time may be appropriate when considered in the context of the purpose of the RMA, requiring a judgement broader than just in respect of water quality to be made. In my view, the proposal is not consistent with this policy, other than when considered under a broad judgement under a Part 2, but neither is it contrary to the policy.</p>
<p><b>Policy 13</b>  <i>Avoid the point source discharge of raw sewage, foul water and untreated agricultural effluent to water.</i></p>	<p>The discharge of raw sewage to water is a prohibited activity under Rule 14 of the RWP and consent cannot be sought. The discharge is explicitly excluded from the consent being sought by the applicant.</p>



## 2. Proposed Southland Water and Land Plan

Table 3 - Ngāi Tahu	Comment
<p><b>Objective 3</b>  <i>The Mauri of waterbodies provides for the health of the people, environment and the waterbody</i></p>	<p>The physical effects on the quality of the receiving water, and the corresponding effects on the health of people and the environment are minor. It is acknowledged that the effect on the Mauri of the waterbodies may be more than minor. However, with the improvements proposed, this effect will be progressively mitigated. The proposal will therefore help better achieve Objective 3.</p>
<p><b>Objective 4</b>  <i>Tāngata whenua values and interest are identified and reflected in the management of freshwater and associated ecosystems.</i></p>	<p>The relevant tangata whenua values have been identified in the application, and are considered in evidence on behalf of the applicant. The values will be progressively provided for better as the mitigation measures are applied. The proposal will help achieve Objective 4.</p>
<p><b>Objective 5</b>  <i>Ngāi Tahu have access to and sustainable customary use of, both commercial and non-commercial, mahinga kai resources, nohoanga, mātaītai and taiāpure.</i></p>	<p>The progressive improvements to stormwater quality proposed will benefit access to mahinga kai resources, including in the New River Estuary, to the extent that the stormwater discharges impact these values.</p>
<p><b>Policy 1</b>  <i>Enable papatipu rūnanga to effectively undertake their kaitiaki responsibilities in freshwater and land management through Environment Southland:</i>  <i>1. providing copies of all applications that may affect a Statutory Acknowledgement area, tōpuni, nohoanga, mātaītai or taiāpure to Te Rūnanga o Ngāi Tahu and the relevant papatipu rūnanga;</i>  <i>2. identifying Ngāi Tahu interests in freshwater and associated ecosystems in Southland/Murihiku;</i>  <i>3. reflect Ngāi Tahu values and interests in the management of and decision-making on freshwater and freshwater ecosystems in Southland/Murihiku, consistent with the Charter of Understanding.</i></p>	<p>The applicant has engaged directly with Te Runanga o Waihopai in preparing the application, and in the pre-hearing period. Including representatives in the Working Party proposed in conditions is also recognition of ongoing Ngāi Tahu interests in freshwater management. The proposal is consistent with Policy 1.</p>
<p><b>Policy 2</b>  <i>Any assessment of an activity covered by this plan must:</i>  <i>1. Take into account any relevant iwi management plan; and</i>  <i>2. Assess water quality and quantity based on Ngāi Tahu indicators of health.</i></p>	<p>The assessment of effects submitted with the application, and the evidence presented take Te Tangi a Tauria into account. While the water quality assessment is not based on Ngāi Tahu indicators of health, the evidence of Ms Bennett and Mr Stewart will provide a sound basis with which to do so. The proposal is contrary to Policy 2(2).</p>
<p><b>Policy 3</b>  <i>To manage activities that adversely affect taonga species, identified in Appendix M.</i></p>	<p>The application and evidence acknowledges that the discharges may adversely affect taonga species, albeit to a minor degree. Improvements to the discharge quality proposed by the applicant will reduce the contribution of stormwater to such adverse effects, and hence the proposal is consistent with Policy 3.</p>

Table 4 - Water Quality	Comment
<p><b>Objective 1</b>  <i>Land and water and associated ecosystems are managed as integrated natural resources, recognising the connectivity between surface water and groundwater, and between freshwater, land and the coast.</i></p>	<p>The mitigation measures proposed by the applicant, including such measures as industrial site audits, low impact design measures in new land development, and identifying and removing sources of cross-contamination represent a move by the applicant towards improved integrated management of land and water resources, and will help achieve Objective 1.</p>
<p><b>Objective 6</b>  <i>There is no reduction in the quality of freshwater and water in estuaries by:</i>  <i>(a) maintaining water quality where it is not degraded; and</i>  <i>(b) improving water quality in waterbodies, estuaries and coastal lagoons, which have been degraded by human activity.</i></p>	<p>The discharges will not result in degradation of the quality of receiving waters beyond their current state, and will contribute to improving water quality overall. The proposal is consistent with the achievement of Objective 6.</p>
<p><b>Objective 13</b>  <i>Enable the use and development of land and soils, provided:</i>  <i>(a) The ...</i>  <i>(b) The discharge of contaminants to land or water that have significant or cumulative effects on human health are avoided; and</i>  <i>(c) Adverse effects on ecosystems (including diversity and integrity of habitats), amenity values, cultural values and historic heritage values are avoided, remedied or mitigated to ensure these values are maintained or enhanced.</i></p>	<p>The discharges do not have significant adverse effects on human health, and have a minimal contribution to adverse cumulative effects. The effects of the discharges, including cultural effects will be progressively improved through the mitigation measures proposed, particularly the removal of sewage. The proposal will help achieve Objectives 13 and 14.</p>
<p><b>Objective 14</b>  <i>The range and diversity of indigenous ecosystem types and habitats within dryland environments, rivers, estuaries, wetlands and lakes, including their margins, and their life-supporting capacity are maintained or enhanced.</i></p>	
<p><b>Objective 16</b>  <i>Public access to river and lake beds is maintained, except in circumstances where public health and safety are at risk.</i></p>	<p>The proposal will not further hinder public access to rivers. While the applicant proposes to place signage advising the public to avoid some locations for public health reasons until sewage is removed, ultimately public access (insofar as contact with water is concerned) will be improved over time. The proposal will not prevent Objective 16 from being achieved.</p>
<p><b>Objective 18</b>  <i>All activities operate at "good (environmental) management practice" or better to optimise efficient resource use and protect the region's land, soils, and water from quality and quantity degradation.</i></p>	<p>Taking into account the practicable, technical and physical constraints, the activity is consistent with the best practicable option.</p>
<p><b>Policy A4 NPS 2014</b>  <b>Policy 13</b>  <i>Manage land use activities and discharges to land and water so that water quality and the health of humans, domestic animals and aquatic life, is protected.</i></p>	<p>The levels of contaminants in water and sediments that are attributable to the stormwater discharges, including the cumulative effect of them are considered to be sufficiently low as to avoid harm to human and animal health, and aquatic life. The proposal is therefore consistent with Policy 13.</p>
<p><b>Policy 14</b>  <i>Prefer discharges to land, rather than direct discharges to water.</i></p>	<p>Discharges to land are not a practicable alternative for the City's stormwater discharges given the practicable, technical and physical constraints that apply. The policy expresses a preference for discharges to land, however does not limit or</p>

Table 4 - Water Quality	Comment
	prevent discharges to surface water. The proposal is not contrary to Policy 14.
<p><b>Policy 15</b>  <i>Maintain and improve water quality by:</i>  1. <i>despite any other policy or objective in this Plan, avoiding new discharges to surface waterbodies that will reduce water quality beyond the zone of reasonable mixing;</i>  2. <i>avoiding point source and non-point source discharges to land that will reduce surface or groundwater quality, unless the adverse effects of the discharge can be avoided, remedied or mitigated;</i>  3. <i>avoiding land use activities that will reduce surface or groundwater quality, unless the adverse effects can be avoided, remedied or mitigated; and</i>  4. <i>avoiding discharges to artificial watercourses that will reduce water quality in a river, lake or modified watercourse beyond the zone of reasonable mixing; so that:</i>  1. <i>water quality is maintained where it is better than the water quality standards specified in Appendix E “Water Quality Standards”; or</i>  2. <i>water quality is improved where it does not meet the water quality standards specified in Appendix E “Water Quality Standards”; and</i>  3. <i>water quality meets the Drinking-Water Standards for New Zealand 2005 (revised 2008); and</i>  4. <i>ANZECC sediment guidelines (as shown in Appendix C of this Plan) are met.</i></p>	<p>This policy does not apply as consent is not sought for new discharges (1); no discharges to land are proposed (2); the land use activities are already established, and surface water quality will be maintained at the current state, then progressively avoided or mitigated (4); and discharges to artificial water courses (Waikiwi catchment) will not reduce the existing water quality in the Waikiwi stream after reasonable mixing.</p> <p>I also note that this policy is subject to substantial challenge from multiple submissions, yet to be resolved through the plan hearing process.</p>
<p><b>Policy 17</b>  1. <i>Avoid adverse effects on water quality, and avoid as far as practicable other adverse environmental effects of the operation of, and discharges from effluent management systems.</i>  2. <i>Manage effluent systems and discharges from them by:</i>  (a) <i>designing, constructing and locating systems appropriately and in accordance with standards;</i>  (b) <i>maintaining and operating effluent systems in accordance with best practice guidelines;</i>  (c) <i>avoiding any surface run-off/overland flow, ponding or contamination of water resulting from the application of agricultural effluent to pasture;</i>  (d) <i>avoiding the discharge of raw sewage and untreated agricultural effluent to water.</i></p>	<p>The proposal is not an effluent system and hence this policy is not relevant.</p>

Table 5 - Freshwater Management Unit Policies	Comment
<p><b>Objective 7</b>  <i>Any further over-allocation of freshwater (water quality and quantity) is avoided and existing over-allocation is phased out in in accordance with timeframes established under Freshwater Management Unit processes.</i></p>	
<p><b>Policy 47</b>  <i>The FMU [Freshwater Management Unit] sections will:</i>  1. <i>establish freshwater objectives for each catchment, having particular regard to the national significance of Te Mana o te Wai, and any other values developed in accordance with Policies CA1-CA4 and Policy D1 of the</i></p>	

<b>Table 5 - Freshwater Management Unit Policies</b>	<b>Comment</b>
<p><i>National Policy Statement for Freshwater Management 2014;</i></p> <ol style="list-style-type: none"> <li><i>2. set water quality and water quantity limits and targets to achieve the freshwater objectives;</i></li> <li><i>3. set methods to phase out any over-allocation, within a specified timeframe; and</i></li> <li><i>4. assess water quality and quantity based on Ngāi Tahu indicators of health.</i></li> </ol>	

<b>Table 6 - Consideration of Resource Consent Applications</b>	<b>Comment</b>
<p><b>Policy 39A</b> <i>To improve integrated management of freshwater and the use and development of land in whole catchments, including the interactions between freshwater, land and associated ecosystems (including estuaries).</i></p>	<p>The application considers the whole of the catchments for which consent is sought, and includes consideration of the 'downstream' effects of the discharges in the New River Estuary. The mitigation measures proposed by the applicant will positively affect the whole catchment and associated ecosystems, and is consistent with this Policy.</p>
<p><b>Policy 40</b> <i>When determining the term of a resource consent consideration will be given, but not limited, to:</i></p> <ol style="list-style-type: none"> <li><i>1. granting a shorter duration when there is uncertainty regarding the nature, scale, duration and frequency of adverse effects from the activity or the capacity of the resource;</i></li> <li><i>2. relevant tangata whenua values and Ngāi Tahu indicators of health;</i></li> <li><i>3. the duration sought by the applicant, plus material to support the duration sought;</i></li> <li><i>4. the permanence and economic life of any capital investment;</i></li> <li><i>5. the desirability of applying a common expiry date for water permits that allocate water from the same resource or land use and discharges that may affect the quality of the same resource;</i></li> <li><i>6. the applicant's compliance with the conditions of any previous resource consent; and</i></li> <li><i>7. the timing of development of FMU sections of this Plan, and whether granting a shorter or longer duration will better enable implementation of the any revised frameworks established in those sections.</i></li> </ol>	<p>There is adequate certainty as to the effects of the activity to understand the scale and nature of the effects, and the capacity of the receiving environments. The adverse effects of the discharges on tangata whenua values and cultural health indicators will be progressively reduced as sewage is detected and removed, and other contaminants reduced. Mr Stewart notes that the effects of stormwater discharges on the suitability of fish and shellfish from the New River Estuary for human consumption is negligible, understanding that this is a small part of the cultural value placed on water quality. Further, the role of iwi representatives on the proposed Working Party will help to ensure that such values remain a key part of the Council's ongoing management of stormwater, and will facilitate a long term beneficial relationship with the applicant. The stormwater network is a permanent and necessary part of the City's infrastructure, with an anticipated operational life of at least 100 years. The capital investment required for the network is substantial. Given the longevity of such infrastructure, and the value of the associate community investment, aligning the expiry date with existing consents to reduce the term below 25 years would be inefficient.</p>
<p><b>Policy 41</b> <i>Consider the magnitude of environmental effects and risk when determining requirements for auditing and supply of monitoring information on resource consents.</i></p>	<p>There is adequate certainty as to the effects of the activity to understand the scale and nature of the effects, and the capacity of the receiving environments. The effects have been shown to be minor (without sewage).</p>

### 3. Regional Coastal Plan

Table 7 - Regional Coastal Plan	Comment
<p><b>Objective 6.2.1 Maintain and enhance the values of New River Estuary</b>  <i>To maintain and enhance those values that contribute to the mauri of the estuary and provide for its use as:</i></p> <p><i>a. a city playground</i></p> <ul style="list-style-type: none"> <li>- a family environment, picnics on the shore and swimming in sheltered waters; and,</li> <li>- a variety of water sports to be enjoyed in enclosed waters without the constraints of conflict or pollution.</li> </ul> <p><i>b. a symbol for Invercargill</i></p> <ul style="list-style-type: none"> <li>- an introduction for visitors, good views for people driving to and from Otatara, the airport and Bluff; and</li> <li>- an estuary on display.</li> </ul> <p><i>c. a significant habitat</i></p> <ul style="list-style-type: none"> <li>- where native species can exist alongside humanity;</li> <li>- a refuge for freshwater and marine species, and a spawning and rearing ground, and fish passageway;</li> <li>- a feeding and roosting area for birds including waders and waterfowl; and</li> <li>- sequences of vegetation including a nationally important maritime marsh to totara sand dune forest.</li> </ul> <p><i>d. a retreat</i></p> <ul style="list-style-type: none"> <li>- a place for families to escape the pressures of the city;</li> <li>- an opportunity to experience a natural setting, where the estuary predominates as an ecosystem and human influences are unobtrusive; and</li> <li>- a place where tranquillity and nature replenish the soul.</li> </ul> <p><i>e a place of learning</i></p> <ul style="list-style-type: none"> <li>- where people can discover the heritage of Southland,</li> <li>- where people can gain an understanding of a natural unique ecosystem, the interface of land, sea and freshwater; and,</li> <li>- where, through research, a programme for restoration of the estuary can be developed.</li> </ul> <p><i>f a food basket</i></p> <ul style="list-style-type: none"> <li>- where there are no health risks from consuming the products of recreational fishing and shellfish gathering.</li> </ul> <p><i>g an opportunity for commercial use</i></p> <ul style="list-style-type: none"> <li>- allowing commercial uses which are in harmony with nature and other uses.</li> </ul> <p><i>h a place with historical and geological values</i></p> <ul style="list-style-type: none"> <li>- historical and geological values are located near the estuary shores throughout the area.</li> </ul>	<p>The values of the New River Estuary as identified in the Objective will be maintained, and will be progressively enhanced. The proposal will help meet the intent of this objective.</p>
<p><b>Policy 6.2.1 The natural character of New River Estuary</b>  <i>To maintain and enhance the natural character of New River Estuary.</i></p>	<p>The stormwater discharges will not result in greater adverse effects on natural character than at present, and these will reduce over time. The proposal is consistent with Policy 6.2.1.</p>

## 4. Southland Regional Policy Statement

<b>Table 8 - Takata Whenua o Murihiku</b>	<b>Comment</b>
<p><b>Objective 1.2</b>  <i>To recognise the importance of wahi tapu, wahi taoka, mahika kai and the customary use of water to Kai Tahu.</i></p>	<p>The application recognised the importance of the customary use of water and other cultural values, and the progressive improvements will reduce the adverse effects of the current discharges. The Working Party will help achieve the concept of kaitiakitanga by providing a management forum for ongoing involvement with the applicant. The proposal is consistent with achieving both Objectives.</p>
<p><b>Objective 1.4</b>  <i>To have particular regard to the concept of kaitiakitanga in relation to managing the use, development and protection of natural and physical resources.</i></p>	

<b>Table 9 - Water Quality</b>	<b>Comment</b>
<p><b>Objective 5.1</b>  <i>To sustain the quality of the region's water resources so as to:</i>  <i>(a) meet the needs of a range of uses, including the reasonably foreseeable needs of future generations</i>  <i>(b) safeguard the life-supporting capacity of water and related ecosystems.</i></p>	<p>The progressive improvements to stormwater quality will better provide for the life-supporting capacity of the regions freshwater and estuarine water bodies, and provide for other present and future uses of the water resources as a result. Water quality will improve from its current state to the extent that it is affected by stormwater, which also recognises the relationship of Maori with water. The proposal will help achieve these objectives.</p>
<p><b>Objective 5.2</b>  <i>To ensure that in the use and development of water and land resources, and the discharge of contaminants, water quality is maintained and wherever practicable enhanced.</i></p>	
<p><b>Objective 5.3</b>  <i>To ensure the taking, use, damming, diversion of water and the discharge of contaminants into water does not compromise water quality standards established for the region.</i></p>	
<p><b>Objective 5.4</b>  <i>To recognise the relationship of Maori with water.</i></p>	
<p><b>Policy 5.2</b>  <i>Require all point source discharges, after reasonable mixing, to comply with water quality standards.</i></p>	
<p><b>Policy 5.5</b>  <i>In preparing, implementing and administering Regional and District Plans and in considering resource consents, local authorities shall assess the effects of land use and development on ground water and surface water quality, including both point and non-point source discharges, and provide for any adverse effects to be avoided, remedied or mitigated.</i></p>	<p>The adverse effects of new development will be managed through the Council's land development and subdivision bylaw.</p> <p>Improving the quality of the stormwater as proposed will better provide for Maori values of water. The presence of persistent and bio-accumulative contaminants attributable to stormwater are considered to be negligent. The proposal is consistent with these policies.</p>
<p><b>Policy 5.8</b>  <i>Manage the Region's water resources in ways that recognise and provide for the values that Maori place on water.</i></p>	
<p><b>Policy 5.9</b>  <i>Discourage, and where practicable prohibit, the discharge of persistent and bio-accumulative contaminants into water.</i></p>	

<b>Table 10 - Built Environment</b>	<b>Comment</b>
<p><b>Policy 10.2</b>  <i>Require that network utilities associated with the built environment be undertaken in such a manner as to avoid wherever practicable, remedy or mitigate effects on the quality of natural and physical resources.</i></p>	<p>The stormwater network mitigates many significant adverse effects on the quality of the receiving environment, to the extent practicable. The proposal is consistent with Policy 10.2.</p>

<b>Table 11 - Coast</b>	<b>Comment</b>
<p><b>Objective 13.5</b>  <i>To facilitate integrated management of the land and coastal marine area interface.</i></p>	<p>The proposal represents an improvement in integrated management of land and water, including the effects on the downstream CMA. Contact recreation is generally not significantly affected other than in some specific reaches following storm events, although no Bathing sites as identified in the plan are affected. The effects of the current discharges on human consumption of fish and shellfish are negligible. The improvements better provide for natural, cultural and spiritual values to Maori. The proposal is consistent with policies 13.1 and 13.5.</p>
<p><b>Policy 13.1</b>  <i>Recognise sites and resources of cultural, natural and spiritual significance to Maori and consult the takata whenua when making statutory decisions on issues impacting upon such matters.</i></p>	
<p><b>Policy 13.5</b>  <i>Provide for contact recreation, the human consumption of shellfish and the health and vitality of aquatic organisms within the coastal waters of the Region.</i></p>	

<b>Table 12 - Biodiversity</b>	<b>Comment</b>
<p><b>Policy 2.4</b>  <i>Avoid, wherever practicable, remedy or mitigate adverse impacts on biodiversity and the natural processes of ecosystems.</i></p>	<p>The effects of the discharges on biodiversity and ecosystems attributable to the stormwater are avoided to the extent practicable, such that they are negligible. Regardless, they will be further reduced by the applicant's mitigation measures. As such, the proposal is consistent with this policy</p>

<b>Table 13 - Monitoring</b>	<b>Comment</b>
<p><b>Monitoring Policy 1</b>  <i>Undertake monitoring sufficient to provide a level of understanding of the environment necessary for effective resource management.</i></p>	<p>A detailed surveillance and monitoring programme is proposed which will provide significant detail on the effects of the discharges. The proposal is therefore consistent with this policy.</p>

## 5. Proposed Southland Regional Policy Statement

<b>Table 14 - Takata Whenua</b>	<b>Comment</b>
<p><b>Objective TW.3</b>  <i>Mauri and wairua are sustained or improved where degraded, and mahinga kai and customary resources are healthy, abundant and accessible to tangata whenua.</i></p>	<p>By maintaining (i.e. not allowing a decline in) water quality, and improving it over time as the quality of the discharges is improved, the Mauri and wairua of the receiving waters and associated values will also be maintained and improved, helping to achieve the objective.</p> <p>Te Tangi a Tauria was considered in preparing the application and this evidence. Tangata whenua were engaged with throughout the process, and will be on an ongoing basis through the proposed working party. The proposal is consistent with these Policies.</p>
<p><b>Policy TW.1</b>  <i>Consult with, and enhance tangata whenua involvement in local authority resource management decision-making processes, in a manner that is consistent with the principles of the Treaty of Waitangi/Te Tiriti o Waitangi.</i></p>	
<p><b>Policy TW.3</b>  <i>Take Iwi Management Plans into account within local authority resource management decision making processes.</i></p>	

Table 14 - Takata Whenua	Comment
<p><b>Policy TW.4</b>  <i>When making resource management decisions, ensure that local authority functions and powers are exercised in a manner that:</i></p> <p>(a) <i>recognises and provides for:</i></p> <p>(i) <i>traditional Māori uses and practices relating to natural resources;</i></p> <p>(ii) <i>the ahi kā relationship of tangata whenua with and their role as kaitiaki of natural resources;</i></p> <p>(iii) <i>mahinga kai and access to areas of natural resources used for customary purposes;</i></p> <p>(iv) <i>mauri and wairua of natural resources;</i></p> <p>(v) <i>places, sites and areas with significant spiritual or cultural historic heritage value to tangata whenua;</i></p> <p>(vi) <i>Māori environmental health and cultural wellbeing.</i></p> <p>(b) <i>recognises that only tangata whenua can identify their relationship and that of their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga.</i></p>	

Table 15 - Water Quality	Comment
<p><b>Objective WQUAL 1</b>  <i>Water quality in the region:</i></p> <p>(a) <i>safeguards the life-supporting capacity of water and related ecosystems;</i></p> <p>(b) <i>safeguards the health of people and communities;</i></p> <p>(c) <i>is maintained, or improved in accordance with freshwater objectives formulated under the National Policy Statement for Freshwater Management 2014;</i></p> <p>(d) <i>is managed to meet the reasonably foreseeable social, economic and cultural needs of future generations.</i></p>	<p>As noted in relation to previous objectives and policies, the proposal is consistent with safeguarding the life-supporting capacity of water and ecosystems, the health of people and communities, and freshwater objectives of the NPS-FM, and the social, economic and cultural needs of present and future generations, and will therefore help achieve these objectives by avoiding further degradation of the receiving water quality (including by cumulative effects) and progressively improving.</p>
<p><b>Objective WQUAL.2</b>  <i>Halt the decline, and improve water quality in lowland water bodies and coastal lakes, lagoons, tidal estuaries, salt marshes and coastal wetlands in accordance with freshwater objectives formulated in accordance with the National Policy Statement for Freshwater Management 2014.</i></p>	
<p><b>Policy WQUAL.1 (a) ....</b>  <i>(b) Manage discharges and land use activities to maintain water quality, or improve it, to ensure freshwater objectives are met</i></p>	<p>Water quality will be maintained and improved. In conjunction with any other improvements in wider water quality, the progressive improvements of stormwater quality will contribute toward the achievement of freshwater objectives, and the removal of key contaminants, particularly those related to sewage. The proposal is consistent with these policies.</p>
<p><b>Policy WQUAL.2</b>  <i>In managing water quality, particular regard will be had to the following contaminants:</i></p> <p>(a) <i>nitrogen;</i></p> <p>(b) <i>phosphorus;</i></p> <p>(c) <i>sediment;</i></p> <p>(d) <i>microbiological contaminants.</i></p>	
<p><b>Policy WQUAL.8</b>  <i>Avoid the direct discharge of sewage, wastewater, industrial and trade waste and agricultural effluent to water unless these discharges have undergone treatment.</i></p>	
<p><b>Policy WQUAL.9</b>  <i>Where practicable, manage the siting and operation of activities that result in point source discharges of contaminants to land to ensure that adverse effects on groundwater, surface water and coastal water quality are avoided, remedied or mitigated.</i></p>	<p>Land-based discharges are not a practicable alternative for the ICC stormwater network discharges. The proposal is not consistent with this policy, but as the alternative (land discharges) is not practicable, neither is it contrary to it.</p>



<b>Table 15 - Water Quality</b>	<b>Comment</b>
<p><b>Policy WQUAL.11</b>  <i>Integrate the management of land use, water quality, water quantity, coast and air, and the use, development and protection of resources wherever possible to achieve the freshwater objectives formulated in accordance with Policy WQUAL.1.</i></p>	<p>The actions and improvements proposed by the applicant represents the integration between land use activities and the effects on water quality, including coastal water and associated ecosystems, and is a step toward achieving freshwater objectives. The proposal is not consistent with this policy but is not contrary to it, being that it represents the BPO available to the applicant to maintain and enhance overall water quality.</p>
<p><b>Policy WQUAL.12</b>  <i>Continue to improve knowledge and understanding of water resources, and the relationship of land use activities with water quality values in water bodies, in Southland to promote the sustainable management of water.</i></p>	<p>The robust surveillance and monitoring regime proposed will contribute substantially over the term of the consent (if granted) to understanding of the receiving water resources, and is therefore consistent with this policy.</p>

<b>Table 16 - Coast</b>	<b>Comment</b>
<p><b>Objective COAST.3</b>  <i>Coastal water quality and its ecosystems are maintained or enhanced.</i></p>	<p>The proposal will maintain and progressively enhance coastal water quality in the New River Estuary, and help to achieve this Objective.</p>
<p><b>Policy COAST.5</b>  <i>Avoid, remedy or mitigate adverse effects of land-based activities on coastal water quality and its ecosystems.</i></p>	<p>The adverse effects of the discharges will be progressively addressed, and will further avoid and mitigate effects on coastal water quality in a manner consistent with this policy.</p>

<b>Table 17 - Biodiversity</b>	<b>Comment</b>
<p><b>Objective BIO.2</b>  <i>Maintain indigenous biodiversity in Southland and protect areas of significant indigenous vegetation and significant habitats of indigenous fauna for present and future generations.</i></p>	<p>Maintaining (initially) and enhancing stormwater quality will contribute to the protection of significant habitats of indigenous fauna, and help achieve this objective.</p>
<p><b>Objective BIO.3</b>  <i>Enhance the range, extent and condition of indigenous biodiversity in Southland, with a particular emphasis on those areas most at risk to further loss or degradation.</i></p>	<p>n/a</p>
<p><b>Policy BIO.2</b>  <i>Areas of significant indigenous vegetation and significant habitats of indigenous fauna in the Southland region will be protected and where appropriate enhanced.</i></p>	<p>Maintaining (initially) and enhancing stormwater quality will contribute to the protection of significant habitats of indigenous fauna, and is therefore consistent with these policies.</p>
<p><b>Policy BIO.3</b>  <i>Protect indigenous biodiversity from adverse effects in the coastal environment as set out in Policy 11 of the New Zealand Coastal Policy Statement 2010.</i></p>	

<b>Table 18 - Infrastructure</b>	<b>Comment</b>
<p><b>Objective INF.1</b>  <i>Southland's regionally significant, nationally significant and critical infrastructure is secure, operates efficiently, and is appropriately integrated with land use activities and the environment.</i></p>	<p>Stormwater networks are part of the community's critical infrastructure, and are essential for protecting their health &amp; safety, and the social, cultural and economic wellbeing. The proposal is well aligned with achieving this objective ensuring the stormwater network is operated efficiently, while integrating land use activities and the environment (including receiving waters).</p>
<p><b>Policy INF.1</b>  <i>Recognise the benefits to be derived from, and make provision for, the development, maintenance, upgrade and ongoing operation of regionally significant, nationally significant and critical infrastructure and associated activities.</i></p>	<p>The criticality and benefits of providing for an efficient and functional stormwater system for the City are clear. The proposal is consistent with this policy, as consenting the discharges will authorise an essential component of the stormwater system, and is consistent with this policy.</p>
<p><b>Policy INF.2</b></p>	<p>The adverse effects of stormwater infrastructure on the environment will be avoided, and mitigated to</p>

<b>Table 18 - Infrastructure</b>	<b>Comment</b>
<p><i>Where practicable, avoid, remedy or mitigate the adverse effects of infrastructure on the environment. In determining the practicability of avoiding, remedying, or mitigating adverse effects on the environment, the following matters should be taken into account:</i></p> <p><i>(a) any functional, operational or technical constraints that require the physical infrastructure of regional or national significance to be located or designed in the manner proposed;</i></p> <p><i>(b) whether there are any reasonably practical alternative designs or locations;</i></p> <p><i>(c) whether good practice approaches in design and construction are being adopted;</i></p> <p><i>(d) where appropriate, and such measures are volunteered by a resource user, whether any significant residual adverse effects can be offset or compensated for; and</i></p> <p><i>(e) ....</i></p>	<p>the extent practicable, taking into account the practicable, technical and operational constraints of the network. There are no practical alternative designs or locations, and the proposal represents the BPO. The proposal is consistent with this policy.</p>

<b>Table 19 - Urban</b>	<b>Comment</b>
<p><b>Policy URB.1</b> <i>The adverse effects of urban development on the environment should be avoided, remedied or mitigated.</i></p> <p><b>Policy URB.2</b> <i>Manage urban growth and development in ways that:</i></p> <p><i>(a) support existing urban areas;</i></p> <p><i>(b) promote development and/or redevelopment of existing urban areas ahead of greenfield development;</i></p> <p><i>(c) promote urban growth and development within areas that have existing infrastructure capacity;</i></p> <p><i>(d) promote the progressive upgrading of infrastructure and improvement of the quality of sewage and stormwater discharges;</i></p> <p><i>(e) provide potable water supply;</i></p> <p><i>(f) plan ahead for the expansion of urban areas;</i></p> <p><i>(g) promote compact urban form; and</i></p> <p><i>(h) promote appropriate site and building orientation that supports the principles of optimum energy efficiency and solar energy gain.</i></p>	<p>The network itself provides a substantial form of effects mitigation, helping to substantially reduce the potential adverse effects of stormwater stemming from urban development by managing it. The network will be progressively upgraded to improve the quality of the stormwater discharges. The proposal is consistent with these policies.</p>

## 6. NPS-FM 2014

<b>Table 20 - NPS-FM 2014</b>	<b>Comment</b>
<p><b>Objective A1</b> <i>To safeguard:</i></p> <p><i>a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and</i></p> <p><i>b) the health of people and communities, at least as affected by secondary contact with fresh water; in sustainably managing the use and development of land, and of discharges of contaminants.</i></p>	<p>The discharges represent sustainable management of natural and physical resources, and help to avoid and mitigate adverse effects on the life-supporting capacity of freshwater and associated ecosystems. The proposal is consistent with the intent of these objectives, particularly given the maintenance of existing, and the progressive improvements to stormwater and consequently receiving water quality resulting from the actions proposed by the applicant.</p>
<p><b>Objective A2</b> <i>The overall quality of fresh water within a region is maintained or improved while:</i></p> <p><i>a) protecting the significant values of outstanding freshwater bodies;</i></p> <p><i>b) protecting the significant values of wetlands; and</i></p> <p><i>c) improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.</i></p>	

Table 20 - NPS-FM 2014	Comment
<p><b>Objective C1</b>  <i>To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land and associated ecosystems and the coastal environment.</i></p>	
<p><b>Objective CC1</b>  <i>To improve information on freshwater takes and sources of freshwater contaminants, in order to:</i>  <i>a) ensure the necessary information is available for freshwater objective and limit setting and freshwater management under this national policy statement; and</i>  <i>b) ensure information on resource availability is available for current and potential resource users.</i></p>	<p>The robust surveillance and monitoring regime proposed will contribute substantially over the term of the consent (if granted) to understanding of the receiving water resources, and is therefore consistent with achieving this objective.</p>
<p><b>Objective D1</b>  <i>To provide for the involvement of iwi and hapu and to ensure that tangata whenua values and interests are identified and reflected.</i></p>	<p>Te Tangi a Tauira was considered in preparing the application and this evidence. Tangata whenua were engaged with throughout the process, and will be on an ongoing basis through the proposed working party. The proposal is consistent with the achievement of this objective.</p>
<p><b>Policy C1</b>  <i>By every regional council managing fresh water and land use and development in catchments in an integrated and sustainable way, so as to avoid, remedy or mitigate adverse effects, including cumulative effects.</i></p>	<p>The mitigation measures, actions and improvements proposed will improve stormwater over time and will better integrate land use with the maintenance and enhancement of water quality, and the avoidance and remedying of adverse effects. The proposal is consistent with this policy.</p>
<p><b>Policy D1</b>  <i>Local authorities shall take reasonable steps to involve iwi and hapu in the management of freshwater; work with iwi and hapu to identify tangata whenua values and interests; and to reflect tangata whenua values and interests in the management of and in the decision making regarding freshwater.</i></p>	<p>Te Tangi a Tauira was considered in preparing the application and this evidence. Tangata whenua were engaged with throughout the process, and will be on an ongoing basis through the proposed working party. The proposal is consistent with the achievement of this objective.</p>
<p><b>Policy E1</b>  <i>a) This policy applies to the implementation by a regional council of a policy of this national policy statement.</i>  <i>b) Every regional council is to implement the policy as promptly as is reasonable in the circumstances, and so it is fully completed by no later than 31 December 2025.</i>  <i>(ba) A regional council may extend the date in Policy E1(b) to 31 December 2030 if .....</i>  <i>c) Where a regional council is satisfied that it is impracticable for it to complete implementation of a policy fully by 31 December 2015, the council may implement it by a programme of defined time-limited stages by which it is to be fully implemented by 31 December 2025 or 31 December 2030 if Policy E1(ba) applies.</i>  <i>d) Any programme of time-limited stages is to be formally adopted by the council by 31 December 2015 and publicly notified.</i>  <i>e) .....</i>  <i>f) .....</i></p>	<p>N/a – is a direction to the consent authority.</p>

## 7. New Zealand Coastal Policy Statement

Table 21 - NZCPS	Comment
<p><b>Objective 1</b>  <i>To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>maintaining or enhancing natural biological and physical processes in the coastal environment and recognising their dynamic, complex and interdependent nature;</i></li> <li><input type="checkbox"/> <i>protecting representative or significant natural ecosystems and sites of biological importance and maintaining the diversity of New Zealand's indigenous coastal flora and fauna; and</i></li> <li><input type="checkbox"/> <i>maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity.</i></li> </ul>	<p>This objective identifies qualities of the coastal environment to be safeguarded – the proposal will help to achieve this objective by maintaining and progressively improving stormwater quality, which discharges to streams and ultimately the coastal environment.</p>
<p><b>Policy 1</b>  <i>(1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.</i>  <i>(2) Recognise that the coastal environment includes:</i></p> <ul style="list-style-type: none"> <li><i>(a) the coastal marine area;</i></li> <li><i>(b) islands within the coastal marine area;</i></li> <li><i>(c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;</i></li> <li><i>(d) areas at risk from coastal hazards;</i></li> <li><i>(e) coastal vegetation and the habitat of indigenous coastal species including migratory birds;</i></li> <li><i>(f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values;</i></li> <li><i>(g) items of cultural and historic heritage in the coastal marine area or on the coast;</i></li> <li><i>(h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and</i></li> <li><i>(i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.</i></li> </ul>	
<p><b>Policy 2</b>  <i>In taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment:</i></p> <ul style="list-style-type: none"> <li><i>(a) recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environment, including places where they have lived and fished for generations;</i></li> <li><i>(b) ....</i></li> <li><i>(c) with the consent of tangata whenua and as far as practicable in accordance with tikanga Māori, incorporate mātauranga Māori in regional policy statements, in plans, and in the consideration of applications for resource consents, notices of requirement for designation and private plan changes;</i></li> <li><i>(d) provide opportunities in appropriate circumstances for Māori involvement in decision making, for example when a consent application or notice of requirement is dealing with cultural localities or issues of cultural</i></li> </ul>	<p>Te Tangi a Taurira was considered in preparing the application and this evidence. Tangata whenua were engaged with throughout the process, and will be on an ongoing basis through the proposed working party. The proposal is consistent with this policy.</p>

Table 21 - NZCPS	Comment
<p>significance, and Māori experts, including pūkenga, may have knowledge not otherwise available;</p> <p>(e) take into account any relevant iwi resource management plan and any other relevant planning document recognised by the appropriate iwi authority or hapū and lodged with the council, to the extent that its content has a bearing on resource management issues in the region or district; and</p> <p>(i) where appropriate incorporate references to, or material from, iwi resource management plans in regional policy statements and in plans; and</p> <p>(ii) consider providing practical assistance to iwi or hapū who have indicated a wish to develop iwi resource management plans;</p> <p>(f) provide for opportunities for tangata whenua to exercise kaitiakitanga over waters, forests, lands, and fisheries in the coastal environment through such measures as:</p> <p>(i) bringing cultural understanding to monitoring of natural resources;</p> <p>(ii) providing appropriate methods for the management, maintenance and protection of the taonga of tangata whenua;</p> <p>(iii) having regard to regulations, rules or bylaws relating to ensuring sustainability of fisheries resources such as taiāpure, mahinga mātaītai or other non-commercial Māori customary fishing; and</p> <p>(g) in consultation and collaboration with tangata whenua, working as far as practicable in accordance with tikanga Māori, and recognising that tangata whenua have the right to choose not to identify places or values of historic, cultural or spiritual significance or special value:</p> <p>(i) recognise the importance of Māori cultural and heritage values through such methods as historic heritage, landscape and cultural impact assessments; and</p> <p>(ii) provide for the identification, assessment, protection and management of areas or sites of significance or special value to Māori, including by historic analysis and archaeological survey and the development of methods such as alert layers and predictive methodologies for identifying areas of high potential for undiscovered Māori heritage, for example coastal pā or fishing villages.</p>	
<p><b>Policy 4</b> Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment. This requires:</p> <p>(a) co-ordinated management or control of activities within the coastal environment, and which could cross administrative boundaries, particularly:</p> <p>(i) the local authority boundary between the coastal marine area and land;</p> <p>(ii) local authority boundaries within the coastal environment, both within the coastal marine area and on land; and</p> <p>(iii) ....</p> <p>(b) working collaboratively with other bodies and agencies with responsibilities and functions relevant to resource management, such as where land or waters are held or managed for conservation purposes; and</p> <p>(c) particular consideration of situations where:</p> <p>(i) ....</p>	<p>The applicant has taken into account the public use and enjoyment of the coastal environment, and the potential for that enjoyment and the values of the coastal environment to be adversely affected by the discharges. By maintaining or improving the quality of the discharges, the effects on water quality in the coastal environment will be reduced (coastal water quality enhanced) to the extent that it is affected by stormwater discharges. The proposal is consistent with this policy.</p>

Table 21 - NZCPS	Comment
<p>(ii) public use and enjoyment of public space in the coastal environment is affected, or is likely to be affected; or</p> <p>(iii) ....</p> <p>(iv) land use activities affect, or are likely to affect, water quality in the coastal environment and marine ecosystems through increasing sedimentation; or</p> <p>(v) significant adverse cumulative effects are occurring, or can be anticipated.</p>	
<p><b>Policy 11</b>  <i>To protect indigenous biological diversity in the coastal environment:</i></p> <p>a. ....</p> <p>b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:</p> <p>i. areas of predominantly indigenous vegetation in the coastal environment;</p> <p>ii. habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;</p> <p>iii. indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;</p> <p>iv. habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;</p> <p>vi. habitats, including areas and routes, important to migratory species; and</p> <p>vii. ecological corridors, and areas important for linking or maintaining biological values identified under this policy.</p>	<p>The actions and mitigation measures proposed as part of this proposal which will enhance the quality of the discharges will help protect indigenous biological diversity values in the coastal environment. The proposal is consistent with this policy.</p>
<p><b>Policy 14</b>  <i>Promote restoration or rehabilitation of the natural character of the coastal environment, including by :</i></p> <p>(a) ....</p> <p>(b) ....</p> <p>(c) where practicable, imposing or reviewing restoration or rehabilitation conditions on resource consents and designations, including for the continuation of activities; and recognising that where degraded areas of the coastal environment require restoration or rehabilitation, possible approaches include:</p> <p>(i) ....</p> <p>(ii) ....</p> <p>(iii) ....</p> <p>(iv) ....</p> <p>(v) ....</p> <p>(vi) reducing or eliminating discharges of contaminants; or</p> <p>(vii) ....</p> <p>(viii) ....</p> <p>(ix) ....</p> <p>(x) ....</p>	<p>The application is based on a progressive reduction of contaminants in stormwater (particularly associated with sewage), and therefore is consistent with this policy.</p>
<p><b>Policy 22</b></p> <p>(1) ...</p> <p>(2) ...</p> <p>(3) ...</p> <p>(4) Reduce sediment loadings in runoff and in stormwater systems through controls on land use activities.</p>	<p>The application of LID principals through the applicant's bylaw and other mitigation measures and improvements will help to reduce sediment loads in stormwater, and is consistent with this policy.</p>
<p><b>Policy 23</b></p> <p>(1) In managing discharges to water in the coastal environment, have particular regard to:</p>	<p>Refer to my evidence in chief – from paragraph 109.</p>

<b>Table 21 - NZCPS</b>	<b>Comment</b>
<p>(a) the sensitivity of the receiving environment;</p> <p>(b) the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and</p> <p>(c) the capacity of the receiving environment to assimilate the contaminants; and:</p> <p>(d) avoid significant adverse effects on ecosystems and habitats after reasonable mixing;</p> <p>(e) use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and</p> <p>(f) minimise adverse effects on the life-supporting capacity of water within a mixing zone.</p> <p>(2) In managing discharge of human sewage, do not allow:</p> <p>(a) discharge of human sewage directly to water in the coastal environment without treatment; and</p> <p>(b) ....</p> <p>(3) ....</p> <p>(4) In managing discharges of stormwater take steps to avoid adverse effects of stormwater discharge to water in the coastal environment, on a catchment by catchment basis, by:</p> <p>(a) avoiding where practicable and otherwise remedying cross contamination of sewage and stormwater systems;</p> <p>(b) reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities;</p> <p>(c) promoting integrated management of catchments and stormwater networks; and</p> <p>(d) promoting design options that reduce flows to stormwater reticulation systems at source.</p> <p>(5) .....</p>	

## 8. Part 2 – Resource Management Act 1991

<b>Table 22 - Section 5</b>	<b>Comment</b>
<p>In this Act, “sustainable management” means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while:</p> <p>(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;</p> <p>(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and</p> <p>(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.</p>	<p>Refer my evidence in chief from paragraph 64(a).</p>

<b>Table 23 - Section 6</b>	<b>Comment</b>
<i>In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:</i>	
<b>Section 6(a)</b> The preservation of the natural character of the coastal environment, wetlands and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.	Refer my evidence in chief from paragraph 64(e).
<b>Section 6(b)</b> The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development.	
<b>Section 6(c)</b> The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.	
<b>Section 6(d)</b> The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers.	
<b>Section 6(e)</b> The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.	
<b>Section 6(f)</b> The protection of historic heritage from inappropriate subdivision, use, and development.	
<b>Section 6(g)</b> The protection of recognised customary activities.	

<b>Table 24 - Section 7</b>	<b>Comment</b>
<b>Section 7(a)</b> <i>Kaitiakitanga,</i> <b>Section 7(aa)</b> <i>The ethic of stewardship.</i>	Refer my evidence in chief from paragraph 64(j).
<b>Section 7(b)</b> <i>The efficient use and development of natural and physical resources.</i>	
<b>Section 7(c)</b> <i>The maintenance and enhancement of amenity values.</i>	
<b>Section 7(d)</b> <i>Intrinsic values of ecosystems.</i>	
<b>Section 7(f)</b> <i>The maintenance and enhancement of the quality of the environment.</i>	
<b>Section 7(g)</b> <i>Any finite characteristics of natural and physical resources.</i>	
<b>Section 7(h)</b> <i>The protection of the habitat of trout and salmon.</i>	
<b>Section 7(i)</b> <i>The effects of climate change</i>	



## **Appendix B Proposed Conditions for Resource Consent (APP- 201668843)**

### **Details of Permit**

Purpose for which permit is granted: To discharge water, stormwater, and contaminants to water from the Invercargill City Council reticulated stormwater network.

Location - site locality Invercargill  
- catchments Waikiwi Stream, Waihopai River, Otepuni Stream, Kingswell Creek, Clifton Creek

Grid Reference: Appendix 1, Table 1 contains discharge locations and grid references and maps

**Expiry date: [Commencement date plus 25 years]**

### **Schedule of Conditions**

1. This consent authorises the discharge of:
  - (a) water, stormwater and contaminants from the Invercargill City Council reticulated stormwater network; and
  - (b) dye from dye testing of the networksto water at the locations specified in Table 1 and shown on the maps attached in Appendix 1 to these conditions, in general accordance with the application “Stormwater Discharges – Application Document”, dated 14 September 2016.
2. This consent does not authorise the discharge of:
  - (a) Accidentally spilled or deliberately released hazardous substances nor washdown of such substances;
  - (b) Untreated human sewage or agricultural effluent;
  - (c) Contaminants and water that have been removed from sumps during cleaning and maintenance; or
  - (d) Stormwater, water or contaminants from stormwater assets connected to the Invercargill City Council’s stormwater network which require new discharge locations.

### *Inspection of Industrial & Commercial Premises*

3. The consent holder shall undertake inspections of all industrial and commercial properties within the catchment of the specified stormwater network as follows:

- (a) Within the first 12 months of first exercising this consent, the consent holder shall develop and provide to the Consent Authority an inventory of:
- (i) all industrial and commercial sites that store, handle, or use hazardous substances or bulk contaminants of concern, as identified by the Working Party required to be established by Condition 13 of this consent; and
  - (ii) sites on Environment Southland's Selected Land Use Sites Register
- that pose a potential risk to the quality of stormwater discharged to the reticulated stormwater systems included in Appendix 1.
- (b) Within five years of provision of the inventory to the Consent Authority, the consent holder shall undertake field inspections of each of the sites identified on the inventory prepared under condition (3)(a). At least 20% of the identified sites shall be inspected each year, including any additional sites established and / or identified over that period, such that by the fifth anniversary of the provision of the inventory, all identified sites have been inspected. Each site shall be subsequently inspected at least once every five years for the duration of this consent.
- (c) The inspections required under condition (3)(b) shall:
- i) Identify sites requiring improvements to hazardous substances storage and handling areas to ensure that there is no risk of the hazardous substances entering the stormwater network from the site, including in a form that will result in the discharge from the stormwater network exceeding the limits specified in this consent;
  - ii) Identify sites requiring improvements to storage and handling of contaminants of concern to minimise the impact of the stormwater discharges from the site on the quality of the network discharges;
  - iii) Identify sites requiring improvements to stormwater treatment;
  - iv) Identify what improvements need to be made to address the matters outlined in (i) to (iii) above and a timetable for implementation.
- (d) The Consent Holder shall include in the Annual Report required by Condition 21, the current definition of 'bulk contaminants of concern', a summary of the results of the inspections, including the outcome of the inspection, any identified actions required, and the method and timetable for implementing the actions.
- (e) Within three calendar months of completing each round of inspections, the Consent Holder shall provide the Consent Authority with an inspection programme of at-risk sites identified by the inspections required under Condition 3(b).

*Programme to address illegal discharges of human sewage to the stormwater network*

4. The following trigger values shall apply to the monitoring required to be undertaken in dry weather conditions in accordance with Conditions 5 and 7:

<b>Parameter sampled</b>	<b>Surveillance Programme</b>	<b>Indicator Programme</b>
Total ammoniacal nitrogen (mgN/L)	0.1	1
<i>Escherichia coli</i> (cfu/100 mL)	1,000	10,000

5. (a) The Consent Holder shall undertake a Surveillance Programme to determine if there is any sewage present in the stormwater network. The surveillance will include the collection of representative dry weather samples of surface water at two monthly intervals.
- (b) Grab samples shall be collected in dry weather conditions, when there has been less than 0.5 mm of rainfall in the preceding 72 hours as recorded at the Consent Authority's rainfall station at Waihopai Dam. If such rainfall conditions do not occur within two weeks of a scheduled sampling event, samples shall be collected on the next day when there has been less than 0.5 mm of rainfall in the preceding 24 hours.
- (c) Samples shall be collected from all sites in the 'Surveillance Location in Streams' column listed in Table 1 of Appendix 1 (attached to this consent).
- (d) The following shall be recorded for each sampling event:
- i. Rainfall in the preceding 24 hour, 72 hour and 10 day periods at the Consent Authority's rainfall stations at Waihopai Dam and Tisbury Dam;
  - ii. Water level at the Consent Authority's water level stations on the Waikiwi Stream at Ferry Road, Waihopai River at Waihopai Dam and Stead Street, Otepunu Creek at Otepunu Dam, and Kingswell Creek at Tisbury Dam;
  - iii. At each sampling location, qualitative assessment of the flow in the stream at the sampling location as low, medium or high;
  - iv. At each sampling location, observations of the receiving water within 30 m upstream of the sampling location; and
  - v. At each sampling location, observations of any conspicuous oil or grease films, scums or foams or floatable or suspended material, including litter, resulting from the discharge (supported by photographic evidence).
- (e) Samples shall be analysed for :
- Temperature (field measurement)
  - pH (field measurement)
  - Electrical conductivity
  - Dissolved oxygen (as mg/L and percentage saturation)
  - Total ammoniacal nitrogen
  - *Escherichia coli*

If the results for either total ammoniacal nitrogen or *Escherichia coli* exceed the 'Surveillance Programme' trigger value specified in Condition 4, the analytical sample results for the sampling event shall be reported in writing to the Consent Authority within four weeks of receipt of the sample results by the consent holder. Otherwise, the analytical sample results shall be reported as in Condition 21 Reporting.

6. If the monitoring undertaken in accordance with Condition 5 identifies that the 'Surveillance Programme' trigger values listed in Condition 4 are exceeded on more than one occasion over the current and preceding five events, the consent holder shall:
  - a) assess the surveillance results against the up-stream results to determine whether activities outside the stormwater catchment or the residual contamination from the next upstream sampling location may be influencing the exceedance of the trigger value; and
  - b) if an exceedance is identified which cannot be sourced to activities outside the stormwater catchment or residual contamination from the next upstream sampling location, the consent holder shall commence an 'Indicator Programme' for the identified sampling location as defined in Condition 7 if an Indicator Programme or the ensuing investigation as required under Condition 8(b) is not already occurring at the sampling location in question.

#### *Indicator Programme*

7. (a) If triggered by Condition 6(b), the consent holder shall commence an 'Indicator Programme' for the identified sampling location, which includes, at monthly intervals for six months from when condition 6(b) is triggered, the collection of representative dry weather samples of all discharges from the consent holder's stormwater network between the sampling location at which the trigger value was exceeded and the next upstream Surveillance Programme sampling location listed in Table 1 of Appendix 1 (attached to this consent).
- (b) Grab samples shall be collected in dry weather conditions as defined by Condition 5(b).
- (c) The information specified in Condition 5(d) shall be recorded for each sampling event.
- (d) Samples shall be analysed for fluorescent whitening agents (FWAs) and also the determinands specified in Condition 5(e) :

The analytical sample results shall be reported in writing to the Consent Authority as part of the Annual Report required by Condition 21.

8. If the monitoring undertaken in accordance with Condition 7 identifies that the 'Indicator Programme' trigger values listed in Condition 4 are exceeded at any discharge on more than one occasion, the consent holder shall undertake the following as appropriate:
  - a) Establish signage for the identified discharge to inform the public of the risk from the presence of sewage;
  - b) the Consent Holder shall commence an investigation into the catchment of the identified discharge to determine if any sources of untreated human sewage to the stormwater network can be located within the catchment of this discharge, unless such an investigation is already occurring for this discharge location; and
  - c) Once complete or at six monthly intervals, whichever is sooner, the consent holder shall provide a report to the Consent Authority that includes:
    - i. A description of the methodology for the investigation undertaken;

- ii. Maps which show the locations at which samples, inspections or other activities were undertaken; and
  - iii. A summary of the results of the investigations, including any mitigation measures that have been or are intended to be undertaken to remove the sewage, and the timetable for implementing those measures.
- d) Include a summary of the results and any mitigation measures implemented, in the annual report.

#### *Wet Weather Monitoring*

9. (a) The Consent Holder shall undertake a 'Wet Weather Monitoring Programme', including the collection of representative wet weather samples of surface water at least four times each year, to assess the effects of the stormwater discharged during wet weather on water quality in the streams.
- (b) Samples shall be collected during wet weather conditions when rainfall of more than 5 mm has occurred (or is occurring).
- (c) Grab samples shall be collected from the wet weather surface water locations specified in Appendix 2.
- (d) The following shall be recorded for each sampling event:
- i. Rainfall on the day of sampling and in the preceding 24 hour, 72 hour and 10 day periods at the Consent Authority's rainfall stations at Waihopai Dam and Tisbury Dam;
  - ii. Water level at the Consent Authority's water level stations on the Waikiwi Stream at Ferry Road, Waihopai River at Waihopai Dam and Stead Street, Otepuni Creek at Otepuni Dam, and Kingswell Creek at Tisbury Dam;
  - vi. At each location, qualitative assessment of the flow in the stream at the sampling location as low, medium or high;
  - iii. At each sampling location, observations of the receiving water within 30 m upstream of the sampling location; and
  - iv. At each location, observations of any conspicuous oil or grease films, scums or foams or floatable or suspended material, including litter, resulting from the discharge (supported by photographic evidence).
- (e) Samples will be analysed for :
- Temperature (field measurement)
  - pH (field measurement)
  - Electrical conductivity
  - Dissolved oxygen (as mg/L and percentage saturation)
  - Total ammoniacal nitrogen
  - Total oxidised nitrogen
  - Total nitrogen
  - Dissolved reactive phosphorus
  - Total phosphorus
  - *Escherichia coli*
  - Total faecal coliforms
  - Dissolved zinc, copper, nickel, and lead
  - Total zinc, copper, nickel, and lead

The analytical sample results shall be reported in the Annual Report required by Condition 21, including a comparison to the relevant guidelines listed in Appendix 3 (attached to this consent).

### *Sediment Sampling*

10. (a) In the first quarter of each year, the Consent Holder shall collect representative samples of sediment. Each sample shall be a composite sample of four separate samples from each location.
- (b) The sediment samples shall be collected from the locations stated in Appendix 2 as the sediment sampling locations.
- (c) Samples collected shall represent the top 25 cm depth of sediment in areas of accumulated fine sediment. Samples shall be analysed for :
  - Particle size distribution
  - Total organic carbon
  - Total zinc
  - Total copper
  - Total nickel
  - Total lead
  - Polycyclic aromatic hydrocarbons (PAHs)

The analytical sample results for each sampling event shall be reported in the Annual Report required by Condition 21, including a comparison to the guidelines listed in Appendix 4 attached to this consent.

### *Reduction in Metal Loads*

#### *- Copper and Zinc*

11. (a) Within two years of the commencement of the consent, the Consent Holder shall submit a report to the Consent Authority that:
  - i. estimates the loads of copper and zinc from land uses within the catchment of the stormwater network, using the Auckland Council Contaminant Load Model;
  - ii. maps the sources of the metal loads; and
  - iii. identifies the most significant sources of the metal loads.
- (b) In the Annual Report required by Condition 21, the consent holder shall:
  - i. Identify actions to reduce the copper and zinc loads from the network that are planned for the following year, such that the monitoring required under Conditions 9 and 10 meet the trigger values specified in Appendix 3 and 4;
  - ii. Describe any actions that have been undertaken in the past year.

#### *- Nickel and Lead*

12. (a) Within one year of the commencement of the consent, the consent holder shall submit a report to the Consent Authority that:

- i. Identifies all premises within the stormwater network where activities can contribute to nickel and lead in stormwater as identified in the Hazardous Activities and Industries List in the Ministry for the Environment's "*Contaminated Land Management Guidelines No. 3: Risk Screening System*"; and
  - ii. maps the locations of these premises.
- (b) As part of the inspections undertaken under Condition 3, all the premises identified in Condition 12(a) shall be audited within three years of the submission of the report required under Condition 12(a).

#### *Working Party*

13. (a) Within six months of the commencement of this consent, the consent holder shall form and provide administration support for a Working Party to facilitate communication in regard to any issues or concerns arising from stormwater discharges from its reticulated network. The Consent Authority, Te Ao Marama, Public Health South, and Fish and Game South shall be invited to join the Working Party.
- (b) The consent holder shall invite the Working Party to meet annually within three months of the submission of each Annual Report required to be prepared by Condition 21. The minutes of each meeting shall be recorded, and provided to the Consent Authority within ten working days of each meeting.
- (c) The consent holder shall advise the Working Party in writing at least ten working days in advance of the time, date and location of each meeting.

#### *Consent Limits*

14. The exercise of this consent shall not result in bacterial or fungal slime growths visible to the naked eye as obvious plumose growths<sup>1</sup> or mats occurring in any of the receiving waters.
15. The exercise of this consent shall not result in any of the following in any of the receiving waters at or beyond the zone of reasonable mixing, being a 50 m radius from the point of any discharge:
  - (a) The production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
  - (b) Any conspicuous plumes, change in colour or reduction of visual clarity other than as a result of dye testing undertaken in accordance with this consent; and
  - (c) Any emission of objectionable odour.
16. Any conspicuous scour or erosion as a result of the exercise of this consent shall be remediated and effectively stabilised as soon as practicable after the consent holder is made aware of it.
17. New stormwater infrastructure shall be managed in accordance with the best practicable option, and low impact design measures where appropriate, as set out in the Invercargill

---

<sup>1</sup> As set out in the Regional Water Plan for Southland, Appendix G: Water Quality Standards

Bylaw 2016/1: Code of Practice for Land Development and Subdivision Infrastructure, or any subsequent amendments to that Bylaw, as appropriate.

*Maintenance & Visual Inspection*

18. (a) The consent holder shall undertake:
- (i) annual visual inspections to identify the condition of each of the outfalls listed in Appendix 1 and to determine whether Conditions 14, 15, and 16 are being met; and
  - (ii) if breaches of Conditions 14, 15, and 16 are identified, mitigation measures to rectify the breach and timeframes for implementation shall be identified; and
  - (iii) the mitigation measures within the identified timeframe.
- (b) The consent holder will maintain a log of the visual inspections carried out as per Condition 18(a)(i) and provide a copy of this log to the Consent Authority upon request.

*Contamination Management and Notification*

19. (a) In the event of the consent holder becoming aware of a spill of fuel, sewage, hazardous substance or any other contaminant entering into the reticulated stormwater system and/or receiving environments, the consent holder shall notify the following as soon as practicable:
- (i) the Medical Officer of Health or Health Protection Officer (ph 03 476 9800);
  - (ii) Te Ao Marama Inc. (ph 03 931 1242); and
  - (iii) the Consent Authority's Pollution Hotline (ph 0800 76 88 45).
- (b) The following information shall be recorded and provided to the Consent Authority within 48 hours of any incident described in Condition 19(a) being identified:
- (i) the date, time, location and estimated volume of contamination;
  - (ii) the cause of the contamination;
  - (iii) the type of contaminant(s) entering into the stormwater system and/or receiving environments;
  - (iv) clean up procedures undertaken, including but not limited to pumping out sumps;
  - (v) details of the steps taken to control and remediate the effects of the contaminants on the receiving environment; and
  - (vi) measures to be undertaken to prevent a recurrence, and a timetable for their implementation.
- (c) As far as practicable, all affected or potentially affected stormwater sumps shall be identified and closed off to prevent discharge to water during remediation of any incident described in Condition 19(a).



*Dye tracing*

20. The following conditions shall apply to dye tests of the reticulated stormwater network:
- (a) Only Rhodamine WT or Fluorescein dye are authorised by the resource consent for dye tests;
  - (b) The consent holder shall notify the Southland Regional Council's Compliance Manager, prior to the release of the dye into the reticulated stormwater network. Notification shall include:
    - The type of dye,
    - The location of the dye test and the location of the outfall where the dye is likely to emerge,
    - The expected duration of the dye test, and
    - The amount of dye expected to be used.
  - (c) The consent holder shall erect a sign at the stormwater outfall notifying the public of the dye release into the reticulated stormwater outfall.

*Reporting*

21. By 15 August each year, the consent holder shall submit an Annual Report to the Consent Authority. Copies of the report shall be provided to the members of the Working Party as defined in Condition 13. The report shall detail the following from the previous 12 months ending 30 June each year:
- (a) Any upgrades, retrofits or extensions to the reticulated stormwater system.
  - (b) Results of inspections of industrial and commercial premises carried out as per Condition 3.
  - (c) Results of all monitoring and analysis carried out in accordance with this consent in addition to:
    - (i) the method of analysis and laboratory used;
    - (ii) rainfall records for the corresponding rainfall events sampled;
    - (iii) comparison to the trigger values or guidelines included in Condition 4 and Appendices 3 and 4 of this consent;
    - (iv) an interpretation of any seasonal or long term trends; and
    - (v) comments on any adverse effects from the discharges and actions taken to remedy or mitigate these effects.
  - (d) A report of any maintenance work undertaken in accordance with Condition 16 and 17 in addition to the visual inspections carried out in accordance with Condition 18.

- (e) A summary of any remedial or improvement works carried out to ensure compliance with the conditions of this consent, may include but is not limited to:
  - (i) the use of sediment traps and drain covers during construction and earthworks; and
  - (ii) the use of low-impact design methodology, to integrate stormwater management into site development planning, to prevent or minimise, rather than mitigate effects, and to manage stormwater at the point of origin where practicable.
- (f) The annual report shall also detail what works are proposed to be undertaken in the forthcoming year to ensure compliance with the conditions of this consent.

#### *Review of Conditions*

22. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent during the period 1 February to 1 March each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purposes of:
- (a) Determining whether the conditions of this permit are adequate to deal with any adverse effect on the environment, including cumulative effects, which may arise from the exercise of the permit, and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the permit; or
  - (b) Amending the monitoring programme to be undertaken; or
  - (c) Adding or adjusting compliance limits; or
  - (d) Requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment arising as a result of the exercise of this permit.

for the **Southland Regional Council**

#### **Consents Manager**

##### **Note:**

1. *If you require a replacement permit upon the expiry date of this permit, any new application should be lodged at least 6 months prior to the expiry date of this permit. Applying at least 6 months before the expiry date may enable you to continue to exercise this permit until a decision is made, and any appeals are resolved, on the replacement application.*
2. *The consent holder is responsible for ensuring that all contractors carrying out works under this consent are made aware of the relevant consent conditions, plans and associated documents.*

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

**Appendix 1  
Stormwater Discharges and Surveillance Monitoring Locations**

Table 1: Stormwater Discharge and Surveillance Monitoring locations and co-ordinates

Catchment	Surveillance Locations in Streams (label from maps)	Stormwater Discharge Locations (ICC GIS ID #)	X (NZTM)	Y (NZTM)
Clifton	A1	-	1244881	4845598
	-	S25586	1244803	4845675
	A2	-	1244805	4845975
	-	S25575	1244705	4845841
	B	-	1244536	4845778
	C	-	1244083	4845625
	-	S28739	1243956	4845574
	-	S25462	1243955	4845574
	-	S25461	1243938	4845577
	-	S25460	1243934	4845578
	D	-	1243621	4845504
Kingswell	A	-	1245351	4846785
	-	S25141	1245238	4846747
	-	S25139	1245228	4846750
	-	S25138	1245091	4846757
	-	S25140	1244921	4846747
	B	-	1244871	4846758
	-	S25142	1244830	4846742
	-	S25147	1244713	4846738
	-	S25148	1244683	4846733
	-	S25151	1244624	4846730
	-	S25155	1244504	4846724
	-	S25154	1244482	4846724
	-	S25153*	1244465	4846724
	-	S25158	1244461	4846720
	C	-	1244411	4846731
	-	S25160	1244365	4846715
	-	S25161	1244334	4846712
	-	S25164	1244253	4846710
	-	S24994	1244224	4846706
	-	S24995	1244141	4846701
	-	S24997	1244114	4846699
	-	S24996	1244060	4846700
	-	S24998	1244049	4846695
	-	S24999	1244008	4846693
	D	-	1243962	4846704

Catchment	Surveillance Locations in Streams (label from maps)	Stormwater Discharge Locations (ICC GIS ID #)	X (NZTM)	Y (NZTM)
		S25003	1243917	4846685
		S25025	1243764	4846592
		S25030*	1243719	4846535
		S25032	1243706	4846516
		S25031	1243706	4846515
	E	-	1243558	4846451
		S25353	1243523	4846378
		S25367*	1243410	4846304
		S25337	1243175	4846245
	F	-	1243131	4846247
Otepunui	A	-	1246192	4849935
		S23209	1246181	4849936
		S23210	1246185	4849926
		S27094	1246180	4849935
		S23211	1246163	4849928
		S23212	1246122	4849925
		S23217	1246004	4849881
	B	-	1245942	4849848
		S23222	1245937	4849855
		S23224	1245867	4849823
		S23226	1245845	4849815
		S23227	1245824	4849815
		S23228	1245823	4849815
		S23233*	1245743	4849755
		S23237	1245693	4849728
	C	-	1245656	4849692
		S23240	1245511	4849655
		S23242	1245520	4849622
		S23245*	1245437	4849582
		S23091	1245239	4849549
		S23092	1245242	4849541
		S26308	1245202	4849544
	D	-	1245185	4849527
		S23094	1245110	4849516
		S24054	1245031	4849499
		S24055	1245028	4849507
		S24056	1244960	4849486
		S30646	1244960	4849493
		S35121	1244855	4849472
	E	-	1244718	4849429

Catchment	Surveillance Locations in Streams (label from maps)	Stormwater Discharge Locations (ICC GIS ID #)	X (NZTM)	Y (NZTM)
		S24065	1244557	4849421
		S24064	1244531	4849427
		S35014	1244436	4849409
		S24069*	1244402	4849403
		S24068	1244399	4849410
	F	-	1244222	4849385
		S23750	1244188	4849382
		S23738*	1244124	4849434
		S23739	1244076	4849432
		S23746	1243884	4849405
		S23766	1243824	4849365
	G	-	1243779	4849364
		S23749	1243723	4849391
		S26297	1243547	4849381
		S23758	1243530	4849363
		S23756	1243516	4849362
		S23761	1243448	4849361
		S23764	1243426	4849359
		S23755	1243425	4849366
	H	-	1243339	4849357
		S30340*	1243183	4849341
		S30867	1243170	4849344
		S23403	1242956	4849328
		S23404	1242945	4849327
		S23405	1242943	4849327
	I	-	1242836	4849334
		S23395	1242735	4849368
		S23386	1242711	4849380
		S30331	1242712	4849380
		S30333	1242709	4849383
		S23385	1242709	4849400
		S23382	1242697	4849399
	J	-	1242580	4849444
		S30319	1242475	4849457
		S23368	1242461	4849448
		S23361	1242459	4849458
		S23370	1242433	4849446
		S23363	1242410	4849451
		S23366	1242323	4849449
		S30209	1242307	4849440
		S23357*	1242301	4849453

Catchment	Surveillance Locations in Streams (label from maps)	Stormwater Discharge Locations (ICC GIS ID #)	X (NZTM)	Y (NZTM)
	K	-	1242293	4849440
		S23260	1242121	4849442
		S23263	1242050	4849423
		S23265	1242013	4849420
		S23264	1241902	4849422
		S23267	1241902	4849411
		S26339	1241882	4849412
	L	-	1241883	4849417
Waihopai	A	-	1245023	4852928
		S20633	1244959	4852911
		S20635	1244836	4852852
		S20636	1244804	4852836
		S20643*	1244719	4852819
		S20652	1244725	4852672
	B	-	1244563	4852818
		S20660	1244331	4852597
		S20645	1244322	4852771
		S20640	1244317	4852819
	C	-	1244048	4852840
		S20597	1243803	4852696
		S20592	1243781	4852715
		S20593	1243779	4852715
		S20594	1243780	4852715
		S30208	1243594	4852716
	D	-	1243561	4852715
		S20596*	1243510	4852696
		S26356*	1243381	4852657
		S30050	1243371	4852675
		S20610	1243359	4852654
		S29119*	1243314	4852979
		S29120	1243314	4852981
		S20606	1243300	4852666
		S20607	1243298	4852666
		S20608	1243294	4852665
		S20609	1243293	4852665
	E	-	1243245	4852590
		S29157*	1243167	4852491
		S30975*	1242798	4852527
		S20942	1242912	4852404
	F	-	1242878	4852363

Catchment	Surveillance Locations in Streams (label from maps)	Stormwater Discharge Locations (ICC GIS ID #)	X (NZTM)	Y (NZTM)
		S20957	1242892	4852325
		S20958	1242891	4852324
		S20970	1242873	4852291
		S20981	1242705	4852266
		S20980	1242691	4852269
		S20976	1242517	4852292
		S21009	1242521	4852219
		S20975*	1242504	4852276
	G	-	1242441	4852203
		S21004	1242392	4852134
		S21005	1242310	4852131
		S21022	1242296	4852086
		S21013	1242281	4852109
		S21052	1242269	4852031
	H	-	1242219	4852031
Waikiwi	A	-	1241465	4854454
		S35117*	1241388	4854404
		S29209	1241720	4853948
		S20104	1241717	4854013
		S20075	1241709	4854146
		S20065	1241704	4854217
	B	-	1241308	4854294
	C	-	1240570	4853403
		S29168	1241123	4853377
	D	-	1240435	4853336

\* discharges that were monitored in the previous consent



Maps of locations to be included in consent and are provided separately

## Appendix 2: Sediment and Wet Weather Sampling Locations

Wet weather surface water samples to be collected from following locations as identified in Table in Appendix 1:

Waikiwi: A and D  
Waihopai: A, E, F, and H  
Otepunu: A, D, F, I and L  
Kingswell: A, C and F  
Clifton: A1 and D

Sediment samples to be collected from following locations as identified in Table in Appendix 1:

Waikiwi: D  
Waihopai: A, E, F, and H  
Otepunu: A, F, and L  
Kingswell: F  
Clifton: D

**Appendix 3: Wet Weather Water Quality Guidelines**

The table provides a summary of relevant guidelines that will be used to assess the water quality from the wet weather samples. The source and purpose of the guideline is identified.

These guidelines are reporting guidelines only and are not compliance standards. It is noted that the current upstream and downstream water quality does not comply with these reporting guidelines. The assessment required in Condition 21 is to report on progress towards meeting these guidelines.

<b>Contaminant</b>	<b>Guideline</b>	<b>Source</b>
Temperature	< 23°C and Change between upstream and downstream less than 3°C when 16°C and less than 1°C when 16°C	Plan standard for Lowland Hard and Soft Beds
pH	Between 6.5 and 9	Plan standard for Lowland Hard and Soft Beds
Electrical conductivity		Record only to determine extent of tidal effect
Dissolved oxygen (as mg/l)	> 4.0 mg/l	National Bottom line for 1-day minimum in summer months from NPS-FM
Dissolved oxygen (as percentage of Saturation)	> 80 % saturation	Plan standard for Lowland Hard and Soft Beds
Total ammoniacal nitrogen	< 0.1 mgN/L	Surveillance Trigger value (Note that it is more stringent than toxicity based Plan standard of 0.9 mgN/L at maximum recorded pH of 8)
Total oxidised nitrogen	< 0.444 mgN/L	ANZECC 2000 trigger value for nutrient effects
Total nitrogen	< 0.614 mgN/L	ANZECC 2000 trigger value for nutrient effects
Dissolved reactive phosphorus	< 0.01 mgP/L	ANZECC 2000 trigger value for nutrient effects
Total phosphorus	< 0.033 mgP/L	ANZECC 2000 trigger value for nutrient effects
Escherichia coli	< 540 MPN/100mL	Threshold from proposed revision to NPS-FM, 2017 based on suitability for swimming
Faecal coliforms	< 1,000 MPN/100mL	Plan standard for Lowland Hard and Soft Beds
Dissolved Zinc	<0.008 mg/L	ANZECC 2000 95% trigger value for toxicity effects
Dissolved Copper	< 0.0014 mg/L	ANZECC 2000 95% trigger value for toxicity effects
Dissolved Nickel	< 0.011 mg/L	ANZECC 2000 95% trigger value for toxicity effects
Dissolved Lead	< 0.0034 mg/l	ANZECC 2000 95% trigger value for toxicity effects

<b>Contaminant</b>	<b>Guideline</b>	<b>Source</b>
Total Zinc	< 0.031 mg/L	ANZECC 2000 80% trigger value for toxicity effects
Total Copper	< 0.0025 mg/L	ANZECC 2000 80% trigger value for toxicity effects
Total Nickel	<0.017 mg/L	ANZECC 2000 80% trigger value for toxicity effects
Total Lead	< 0.0094 mg/L	ANZECC 2000 80% trigger value for toxicity effects

## Appendix 4: Sediment Quality Standards

The table provides a summary of relevant guidelines that will be used to assess the sediment quality as monitored under Condition 10, as expected constituents of Invercargill stormwater. It is noted that the parameters identified with an asterisk (\*) are to be monitored under this consent.

The table is an extract from the national guidelines for sediment quality (Australia New Zealand Environment and Conservation Council - ANZECC 2000). The full table is included for completeness.

The levels referred to in the table represent guidelines, based on overseas biological effects data due to the lack of local data. Values are expressed as concentrations on a dry weight basis. For organics, values are normalised to 1% organic carbon, rather than expressing as mg/kg organic carbon as is sometimes done. This requires that if the sediment organic carbon content is markedly higher than 1%, the guideline value should be adjusted accordingly.

If the lower sediment quality guideline (ISQG-Low) for a particular contaminant is not exceeded, the chemical is unlikely to cause any biological impact on organisms inhabiting that sediment.

If chemical concentrations exceed the ISQG-Low levels, they may be toxic and further investigation is recommended to determine whether they pose a threat.

### Recommended sediment quality guidelines<sup>a</sup>

These guidelines apply to the sediment after reasonable mixing.

Contaminant	ISQG-Low
<b>METALS (mg/kg dry wt.)</b>	
Antimony	2
Cadmium	1.5
Chromium	80
<b>Copper *</b>	65
<b>Lead *</b>	50
Mercury	0.15
<b>Nickel *</b>	21
Silver	1
<b>Zinc *</b>	200
<b>METALLOIDS (mg/kg dry wt.)</b>	
Arsenic	20
<b>ORGANOMETALLICS</b>	
Tributyltin (µgSn/kg dry wt.)	
<b>ORGANICS (µg/kg dry wt.)<sup>b</sup></b>	
Acenaphthene *	16
Acenaphthalene *	44
Anthracene *	85
Fluorene *	19
Naphthalene *	160
Phenanthrene *	240
Low Molecular Weight PAHs <sup>c</sup>	552

<b>Contaminant</b>	<b>ISQG-Low</b>
Benzo(a)anthracene *	261
Benzo(a)pyrene *	430
Dibenzo(a,h)anthracene *	63
Chrysene *	384
Fluoranthene *	600
Pyrene *	665
High Molecular Weight PAHs <sup>c</sup>	1700
Total PAHs	4000
Total DDT	1.6
p,p'-DDE	2.2
o,p'- + p,p'-DDD	2
Chlordane	0.5
Dieldrin	0.02
Endrin	0.02
Lindane	0.32
Total PCBs	23

- a Primarily adapted from Long et al (1995)
- b Normalised to 1% organic carbon
- c Low molecular weight PAHs are the sum of concentrations of acenaphthene, acenaphthalene, anthracene, fluorene, 2-methylnaphthalene, naphthalene and phenanthrene; high molecular weight PAHs are the sum of concentrations of benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene and pyrene.