

**BEFORE THE INDEPENDENT HEARINGS PANEL SOUTHLAND
REGIONAL COUNCIL**

IN THE MATTER of the Resource Management Act
1991

AND of an Application for Resource
Consent to Discharge Water,
Stormwater and Contaminants from
the Invercargill City reticulated
stormwater network to water

BY **INVERCARGILL CITY COUNCIL**
APP-201668843

Applicant

WRITTEN RIGHT OF REPLY OF THE APPLICANT

Dated 25 August 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:mail Michael.Morris@icc.govt.nz

MAY IT PLEASE THE PANEL

CONTENTS OF THE REPLY

1. The Right of Reply is made up of the following parts:
 - i. Introduction - para 2
 - ii. Legal issues reply
 - (a) Sewage in the stormwater - para 4
 - (b) Not inconsistent with the objectives and policies - para 15
 - (c) Te Tangi a Taurira "Cry of the People" – para 24
 - (d) National Policy Statement on Freshwater Management 2014 - para 35
 - (e) Part Two Resource Management Act 1991 - para 61
 - iii. Regulatory tools available to the applicant in relation to private land - para 69
 - iv. Proposed conditions
 - (a) Changes to the draft conditions - para 83
 - (b) Review of consent - limit setting - para 96
 - (c) Term of consent - para 111
 - v. Applicants expenditure and improvements - para 114
 - vi. Conclusion - para 130
 - vii. Appendix 1- Planning Documents Analysis (including Te Tangi a Tauri)
 - viii. Appendix 2- Draft Consent Conditions (Tracked changes)
 - ix. Appendix 3- Email chain regarding Consent Conditions
 - x. Appendix 4- Rainfall Assessment

INTRODUCTION

2. This is the written reply of the Applicant in response to the information provided by the various submitters, Southland Regional Council staff and to questions of the Commissioners at the Hearing held on the Resource Consent application APP-201668843 on 19 August 2017.

3. As stated in the reply made by the writer at the Hearing, because the Applicant does not respond to each point made by a submitter or Regional Council staff member, it does not mean that the Applicant accepts this. Rather it is a matter for the Panel to place what weight it decides upon the evidence and information provided by the witnesses and submitters.

LEGAL ISSUES REPLY

Sewage in the Stormwater

4. As was highlighted in the legal submissions and opening statement of the Applicant, and also indeed in the 42A report of the reporting officer for the Southland Regional Council, a significant issue is the sewage contamination of the stormwater.
5. Rule 14 of the Operative Southland Regional Water Plan (RWP) makes it a prohibited activity to discharge raw sewage directly into water.
6. This means that the Applicant is unable to apply for a consent to legitimise this practice (not that the Applicant would or is applying to discharge raw sewage to water).
7. There are essentially three ways for this to be resolved as was discussed in the legal opinion of Mr Barry Slowley to the 2011 Resource Consents and it is appended to that decision.
8. These are:
 - i. To use as a fiction and consent only the stormwater discharge ignoring any potential sewage contamination; or
 - ii. Consider that the sewage contamination is a discharge of sewage and is therefore prohibited and the activity cannot be consented pursuant to Rule 14 RWP; or

- iii. Accept the application is for the discharge of stormwater and that the stormwater is contaminated from time to time by sewage.
9. For the ability to obtain the Resource Consent the fiction approach is simplest for the Applicant because the stormwater discharge would otherwise meet the requirements of the RWP if the sewage contamination was removed. However, this creates a problem as the reality is that sewage is contaminating the stormwater, and further the Applicant's suite of proposed Resource Consent conditions are primarily focussed on removing the sewage from the stormwater contamination.
10. It is also an unsatisfactory state of affairs to have to rely on a fiction in circumstances such as this.
11. The Applicant submits that the most appropriate way to resolve this issue continues to be that proposed by Mr Slowley in 2011, being that the application is for the discharge of stormwater and that the stormwater is sometimes subject to contamination from sewage.
12. This approach in the Applicant's submission is the most logical way to deal with this issue and is not inconsistent with the principles of the Resource Management Act or those of the RWP.
13. The explanation in Rule 14 RWP makes it clear that the rule's target is to stop the deliberate discharge of raw sewage to waterways as a means of disposing of that or otherwise cleansing it. That is not in any way what the Applicant is seeking to do. This interpretation also fits best with the definition of "contaminant" in the Resource Management Act 1991 (RMA).

14. We therefore respectfully submit that the Panel can consider this application and treat the discharge as being stormwater that has a contamination of sewage (from time to time).

Not Inconsistent with the Objectives and Policies

15. As was also highlighted in the legal submissions and opening statement of the Applicant and through Mr Dunning's Planning evidence, because this is a non-complying activity, the Applicant must establish to the Panel that it meets the requirements of Section 104D RMA.
16. Only the second limb of this "gateway test" of Section 104D RMA is available to the Applicant and that is the consented activity is not inconsistent with the objectives and policies of the RWP and the proposed Southland Regional Land and Water Plan (pSWLP).
17. The Applicant accepts that with the sewage contamination being treated as part of the discharge then the effects are more than minor and therefore the first of the two gateways through Section 104D is closed and not open for further discussion.
18. As was discussed in detail in Mr Dunning's evidence the discharge is mostly consistent with the objectives and policies of both Regional and Operative Plans. Annexed to this reply is Mr Dunning's Summary Table of the key objectives and policies from both the RWP and the pSWLP in respect of the gateway test under s104D(1)(b), as well as the other relevant plans for the region. Mr Dunning has made this assessment on the basis of the discharges consisting of stormwater that is contaminated by untreated sewage, consistent with the opinion set out in paragraph 8(iii) of this Reply.

19. As can be seen from the table there are 89 relevant objectives and policies from the Regional Policy Statement and Plans as well as the New Zealand Coastal Policy Statement and National Policy Statement for Freshwater Management 2014. Of these there are nine of which the application is inconsistent with and six that are contrary.
20. These objectives and policies are discussed by Mr Dunning in the table attached. One of the objectives and policies that the application is contrary to is Objective 18 of the pSWLP. It is submitted that given this plan is very early on in the hearing stage only a limited amount of weight can be given to it.
21. The other contrary policy is Policy 5.2 of the Southland Regional Policy Statement. This policy relates to requiring all point source discharges to comply with water quality standards (after reasonable mixing). The discharge will only meet this requirement where there is no sewage.
22. This is not a fatal blow. It simply means that the discharge cannot meet the policy requirement where there is sewage. Over the term of the Consent the Applicant will progressively upgrade the network and will work to remove the contamination where identified. An overall view is required of the objectives and policies when assessing the application for Section 104D.
23. Neither Policy 5.2 nor Objective 18 can be described as “key” policies and objectives to such an extent that the being contrary to them is a fatal blow such that the application cannot pass the gateway test of Section 104D. The Applicant submits that the best approach of all the relevant Policies and Objectives continues to be a Broad Judgement of the Policies and Objectives as a whole. As a whole the application is consistent with and passes the gateway test of Section 104D RMA.

Te Tangi a Taurira "Cry of the People"

24. During the Hearing, it became apparent to the Applicant that part of Mr Dunning's evidence had been inadvertently left out of his evidence due to an administrative error, and was not presented in his evidence to the Panel as expected.
25. This was specifically the tables that relate to and point out in the Applicant's submission the relevant provisions of Te Tangi a Taurira.
26. The discussion of the analysis was completed by Mr Dunning in his evidence at paragraphs 113-115 of his Brief of Evidence filed with the Panel.
27. These provisions are now included in the table annexed to this reply as Appendix One. The provisions of Te Tangi a Taurira start at page 22 of that appendix.
28. Of the 19 provisions identified, four are contrary and two are inconsistent. The remaining 13 show the application is consistent with them.
29. Of the contrary provisions, two (Policy 3.5.2.6 and 3.5.13.5) are about using water for the disposal of wastewater or for contaminants. Both provisions have the caveat of "generally, all discharge must first be to land". This does indicate an acceptance that there are circumstances (as here) where there are no other practicable or feasible choices.
30. The third Policy is focused on protecting and enhancing the customary relationship of Ngai Tahu ki Murihiku with freshwater. The applicant acknowledges that the discharge of stormwater and contaminants to water is contrary to these provisions. However

with the progressive removal of the contaminants this will assist in enhancing the relationship.

31. It is also submitted that appropriate cultural monitoring as set out in the draft conditions will assist in the protection of the relationship and contribute to the enhancement.
32. The final Policy of 3.6.7.5 relates to Coastal Water Quality. This policy looks to avoid the use of upstream waters as receiving points for contaminant discharges.
33. As noted, there are no other real or practicable alternatives to the applicant for the discharge of stormwater. As such this can not be avoided and the activity is contrary to this provision.
34. While the policy does not speak of it, it is submitted that monitoring as is proposed, the assessments to be undertaken, and the Technical Review Group (and the powers given to it), these will all help control, modify and improve the impact of the discharges.

National Policy Statement for Fresh Water Management 2014

35. On Monday 9 August 2017 the Applicant was asked to respond to the recent changes to the National Policy Statement on Freshwater Management 2014 (NPS). Mr West provided his comments on Thursday 23 August 2017.
36. The Applicant is of the view that there is little actual impact from the changes on this Application. The NPS is a document that needs to be considered with the changes being made to it.
37. The Applicant notes that Mr West is of the view that with the changes to the NPS, it now provides more reasons to decline the Consent. The Applicant disagrees and believes that the changes are more supportive of the Consent being granted.

38. A number of the changes accept that improvements in water quality will take time and need to take other considerations into account, such as social and economic issues, as well as water quality. For example the preamble now states:
- “National bottom lines in the national policy statement are not standards to aim for. Where freshwater management units are below national bottom lines they must be improved to at least the national bottom line, or better, over time. It is up to community and iwi/hapu, through councils, to determine the pathway and timeframe for ensuring freshwater management units meet the national bottom lines. Where changes in the way community use fresh water are required, the pace of those changes should take into account impacts on economic well-being. Improvements in freshwater quality may take generations depending on the characteristics of each freshwater management unit.”*
39. This is important in the Applicant's submission as the NPS recognises that freshwater needs to reach a minimum standard, and that when taking steps to improve the water, economic considerations are relevant (but not a reason to not make a change) and that the change itself may take many years to achieve. The applicant does not seek consent for a status quo discharge, but submits that the application is wholly premised on the basis of progressively improving the quality of stormwater discharges over time.
40. The conditions proposed by the Applicant will, over time, make measurable improvements to the water quality. The changes to the NPS, making economic considerations a factor are very important in this case, as is the recognition that change may take some time.
41. The Applicant has committed, in the conditions, to significant expenditure to improve the quality of the discharge, by both net

work improvements and investigations to locate and fix contamination sources. The Applicant is also committed to taking such regulatory steps as needed to compel owners and occupiers to correct any identify contamination sources.

42. Public information is also a vital aspect of this approach. The residents of Invercargill's urban area also have a part to play to improving water quality.
43. It is fair to say none of the changes the Applicant is hoping to achieve will be achieved overnight. The NPS accepts that change will not happen quickly, rather it notes that it can take generations. This is a long term view, and the Applicant is of the view this is appropriate as it enables actual change to occur and be seen.
44. The preamble also states: *"This national policy statement allows some variability in freshwater quality, as long as the overall freshwater quality is maintained within a freshwater management unit."*
45. This essentially means that the NPS anticipates that there will be "unders and overs" within a Freshwater Management Unit, and acknowledges that it may well not be possible due to natural processes or other circumstances (such as channelization of the Otepuni Stream for example) for all water bodies to achieve improvements that meet the specified water quality targets.
46. The statements in the Preamble are supported by the Policies and Objectives in the NPS.
47. Objective A1 is key, and in the Applicant's view as there are no changes in respect of:

- 47.1 Clause (a): *the life-supporting capacity of the receiving water bodies*. Which the Applicant's evidence shows are affected by the discharges to a less than minor degree; and
- 47.2 Clause (b): *safeguarding the health of people following contact with the water*. This will be progressively improved (not that it has been shown to be significant even if the ICC were looking for a status quo consent).
48. Appendix 1 identifies '*Human health for recreation*' as people being able to "*connect with the water through a range of activities such as swimming, waka, boating, fishing mahinga kai and water skiing, in a range of different flows*", and that matters to be taken into account for a healthy waterbody for human use includes (inter alia) pathogens, clarity, sediment, plant growth, and 'other toxicants'. Most of these contaminants will be substantially reduced over time by the measures proposed by the Applicant.
49. The Applicant submits that these improvements over time are exactly what is contemplated by the changes to the NPS.
50. Mr West notes in his comments the effect of Objective A4 and supporting Policy A7 – The Applicant agrees that these are key. These additions to the NPS move the emphasis away from the "*maintain or enhance water quality at all costs*" philosophy of the original provisions of the NPS to an acknowledgement that improvements in water quality must also take into account the economic well-being of communities. This addition requires Regional Councils to provide more balance than was perhaps required before, when 'giving effect' to the NPS (i.e. when setting provisions in regional plans, and when making resource management decisions). The proviso is that it is to be achieved by sustainably managing freshwater quality "within limits" – and those limits have not yet been set.

51. However, the Applicant does not agree with Mr West that the provisions do not apply as the limits are not yet set. These provisions set the direction for regional plans and decisions being made under them, irrespective of whether limits currently exist – as the changes to the NPS-FM take effect from 6 September; there is no clause in the provisions that delays their application until such time as limits are set.
52. Policy A5, states that improvements to specified rivers (which would presumably include the at least the Waihopai in the Invercargill context) must contribute to achieving the regional targets established under Policy A6, with final targets under that policy due 31 December 2018. The actions proposed by the Applicant will achieve progressive improvements in stormwater, and therefore receiving water quality, and will therefore contribute to achieving those targets (when they're set).
53. Enabling communities to provide for their economic wellbeing is the basis for Policy A7. – This is a directive to regional councils and must be considered when it takes effect on 6 September 2017. As noted above, simply because this Consent Authority has not yet set limits does not mean that these provisions are not able to be considered. The NPS does not contain a provision that states Objectives and Policies that talk about “limits” can only be considered when limits are in fact set. Rather, these provisions should be considered as they are now in the NPS now - with one factor being that limits have not yet been set.
54. The economic well being of the community in the City of Invercargill and indeed the wider Southland region has been highlighted by the Applicant. Invercargill is the main centre for Southland and is a significant contributor to the New Zealand Economy over all. Now when considering freshwater management the NPS requires that

economic considerations be part of that consideration (from 6 September at the latest).

55. Part C of the NPS addresses Integrated Management. Policy C1 requires regional councils to improve integrated management of freshwater, land, ecosystems and the coastal environment by (clause (b)) "*managing freshwater, land use and development in an integrated and sustainable way to avoid, remedy or mitigate adverse effects, including cumulative effects*". This application is based on the Applicant recognising and providing for integrated management, by removing contaminants at source, requiring new land development to include Low Impact Design measures and other such steps. Sustainable management also requires the consideration of social, cultural and economic effects as well as water quality ones, and the provision in the policy to '*remedy or mitigate*' adverse effects accepts that there will be times when adverse effects cannot be avoided.
56. Policy CA3 acknowledges the importance (and perhaps also the technical and operational limitations) of critical infrastructure, as long as such infrastructure was operational on 1 August 2014 (which applies in this case). The policy 'makes an exception' for existing infrastructure, but expects (by limiting the application of the policy to pre 2014) that new infrastructure would be of a higher standard in respect of effects on freshwater values. It provides for regional councils to set freshwater objectives below national bottom lines where it is necessary to realise the benefits provided by such infrastructure, and where such infrastructure contributes to existing water quality. The Applicant believes this will apply to its Stormwater network. However, the Policy only applies to the infrastructure listed in Appendix 3 of the NPS which is currently empty. The Applicant acknowledges that this will therefore have limited weight pending the listing in Appendix 3. It does however

set the wider context of the changes to the NPS that the Applicant is advancing as relevant to this Application.

57. Section D - Tangata whenua roles and interests is also a relevant consideration. Objective D1 and the resulting Policy (D1) provide for Local Authorities to take steps to ensure iwi and hapu are involved in the management of fresh water and fresh water ecosystems.
58. This is exactly what the applicant is proposing to happen with the Technical Review Group and iwi/ hapu involvement in that guiding body. The Cultural Monitoring programme will also ensure the requirements of Section D are met.
59. Overall, rather than the application being less consistent with the NPS given the proposed changes as suggested by Mr West, in the Applicants view it better supports the application because:
 - 59.1 This is not a status quo application – the Applicant's proposed measures will result in measurable water quality improvements that are in fact more aligned with providing for the life-supporting capacity and human health values of receiving water bodies. Accordingly, the application is better aligned with the direction of the amendments; and
 - 59.2 Regional Councils are directed to enable communities to provide for their economic well-being when managing freshwater. This requirement comes into effect from 6 September, regardless of limits. This was one of the matters that are considered by reference to Part 2 through the RWP policies 3, 4 and 11, and there is the provision in Policy C1 to “avoid, remedy or mitigate” adverse effects;

59.3 Regional councils are required to consider the importance of critical infrastructure in contributing to existing water quality (noting however that no such infrastructure is yet listed in Appendix 3 of the NPS);

60. On balance, therefore, the NPS is more supportive to the granting of this Consent with the changes than before.

Part Two Resource Management Act 1991

61. Both Counsel for the Applicant and the Regional Council are in agreement regarding the cases of *King Salmon* and *Davidson* and the implications of Part Two in interpreting the Regional Plans.

62. In this case the Planning provisions of the RWP specifically require consideration of Part Two which therefore brings in Part Two considerations to this Resource Consent.

63. The Applicant agrees with Counsel for the Regional Council that the broad judgement approach for the total Resource Consent is not correct, and is not sought by the applicant.

64. The Applicant rather submits that the Part Two considerations are relevant when considering the Plans that require Part Two considerations, and as a consequence the application in that context. It is not the Applicant's case that because the Plans invite Part Two in, it means that a broad judgement approach should be taken for this Resource Consent.

65. The Applicant's view is that the broad judgement approach is only appropriate in the exceptions as identified by *King Salmon* and *Davidson* where the Plans are inconsistent, vague, invalid, or have incomplete coverage.

66. The Applicant has not identified any provision in the RWP where that exception would apply. However, in the pSWLP there is a disconnect between provisions relating to stormwater discharge and to the Infrastructure provisions of the Regional Policy Statement.
67. Because of this inconsistency the Applicant submits that it would be possible when interpreting provisions of the pSWLP to bring in the broad judgement approach when considering the consent in light of this context.
68. However, as also submitted by both Counsels for the Applicant and Counsel for the Southland Regional Council, the pSWLP is at a very early stage and is only part way through the hearings of the plan and therefore very little weight should be placed on the objectives and policies of that plan.

REGULATORY TOOLS AVAILABLE TO THE APPLICANT FOR USE ON PRIVATE LAND

69. As advised at the right of reply at the Hearing, there are a number of regulatory tools available to the applicant when dealing with land owners who have sewage contamination sources on their properties.
70. The Applicant has at its disposal, four Acts in which it can use depending on the circumstances. These include the Local Government Act 1974, the Building Act 2004, the Health Act 1956 and the Resource Management Act 1991.
71. Discussing each of these:

Local Government Act 1974

72. The Local Government Act 1974 (LGA) has two provisions that the Council would be able to use in relation to sewage contamination on private property.
73. Section 467 LGA relates to an unlawful connection of private drain. This section makes it an offence against the Act where a person connects any private drain with a public or private drain or a covered water course. While it is an offence, the Council may also replace, repair any property destroyed or damaged by the unlawful connection and remove or alter any such private drain and may recover the cost of this work.
74. Section 459 LGA is perhaps more useful and this section sets out the powers Council has to enforce people to undertake drainage work. It further states that if the work is not done then Council is able to enter upon the land, complete the work and then charge the owners of the land for cost of the work done. This provision has been used on other drainage issues by the Applicant.

Building Act 2004

75. Section 123 of the Building 2004 (BA) sets out the definition of an insanitary building.
76. An insanitary building is defined as being "*a building is insanitary for the purposes of the act if the building is.....does not have sanitary facilities fit for its intended use.*"
77. This means if the sanitary facilities are failing in the property then the building could be deemed insanitary. This means a notice is then issued under Section 124 BA that requires the owner to undertake work. If this work is not undertaken, then the applicant is able to prosecute the owners for failing to comply with this notice

and/or apply to the District Court for an order to complete the work and then recover costs in doing so, under Section 126 BA.

78. This has been used successfully in relation to septic tanks within the city and the septic tank beds.

Health Act 1956

79. Section 29 defines nuisance in the Health Act 1956 (HA). A nuisance is defined as "*where any pool.....sanitary convenience is in such a state or is so situated as to be offensive or likely to be injurious to health.*"

80. The HA requires there to be a health issue, thus where there is sewage potentially leaking through the pipes and coming to the surface or otherwise pooling, this would be a HA issue and the nuisance provisions of the HA would thus be triggered. Section 33 HA sets out the proceedings the applicant can take in the District Court to resolve the nuisance. The applicant is able to complete the work as required if an emergency situation occurs as set out in Section 34 HA.

Resource Management Act 1991

81. As has been discussed, the Resource Management Act 1991 (RMA) has a number of provisions that could be used by the applicant where there is an environmental effect because of the discharge. This could extend to a situation where the property owner refuses to take any steps to stop a discharge and other enforcement or regulatory options have not worked or were not suitable, and then the applicant is able to apply to the Court for an Enforcement Order. An Abatement Notice is also able to be issued. As the ultimate sanction the Applicant could prosecute for the failure to comply with either the Abatement Notice or Enforcement

Order. The Applicant (and Consent Authority) can also prosecute for the discharge itself.

By-law

82. Finally, if there is a city wide issue that needs to be resolved, then the ability to make a By-law is subject to the normal consultation provisions of the Local Government Act 2002 and the provisions of the By-law Act 1910.

PROPOSED CONDITIONS

Changes to the Draft Conditions

83. As indicated at the reply presented at the end of the Hearing on Friday 11 August 2017, the Applicant proposed to amend some of the suite of conditions. These were amended as shown in the tracked changes in the version attached in Appendix Two to this reply. The amended version was provided to Environment Southland on Monday 21 August 2017. Final agreement was reached on Friday 25 August where possible. Appendix 3 is the email chain showing the discussions and agreements reached are accurate.
84. The amended conditions are attached to this reply and have been amended to incorporate input from Mr West and Compliance staff of the Consent Authority and the Applicant's consultants, following a meeting on 22 August 2017 for that purpose.
85. The matters raised in discussions are included in the attached version in margin comments. The Applicant and Consent Authority did not discuss the Consent term and the Applicant has not changed its position regarding the 25 year term. It was accepted by the Consent Authority that limits, other than those that apply to Ammonia can not be set in this case because of the impact of other factors that are beyond the control of the Applicant. Following

discussions with the Consent Authority, the Applicant has now included reference to Ammonia limits.¹ This was discussed in the Applicant's evidence at some length.

86. Any changes that were made to the text of the conditions has been tracked, and is highlighted in blue. The changes and comments have been sent to the Consent Authority staff to ensure they are satisfied with the further changes, and their response and confirmation is attached.
87. These new or amended conditions include:
- 87.1 The creation of the Technical Review Group (formerly the Working Party)²
 - 87.2 Terms of reference for the Technical Review Group³
 - 87.3 Cultural monitoring programme⁴
 - 87.4 Signage⁵
 - 87.5 Fish Flesh survey⁶
 - 87.6 Recreational Use Assessment⁷
 - 87.7 Recreational Water Quality monitoring in the Waihopai River⁸
88. These conditions are all detailed in the draft conditions and are in response to the various submissions.
89. The Applicant will also amend the period for notification of a trigger level to be as "*soon as practicable*".⁹ The report is to be provided to the Consent Authority within 96 hours.¹⁰

¹ See Condition 25 (d)

² Conditions 18-23

³ Condition 18

⁴ Condition 14

⁵ Condition 15

⁶ Condition 11

⁷ Condition 12

⁸ Condition 13

⁹ Condition 29(a)

¹⁰ Condition 29(b)

90. The original four week notification period was that contained in the previous Resource Consent and related to results for the whitening agents as these results took some four weeks to obtain. The Applicant agrees that where the whitening is not tested there is no justification for a delay of that magnitude and is therefore promoting the "*soon as practicable*" clause, as this allows for the variances that can occur in such events.
91. The Applicant has also listened to both the Fish and Game submission and Public Health South submission and will as part of the consent conditions agree to a recreational use assessment being undertaken specifically looking at the Waihopai River. This will also be linked to the Technical Review Group as will the recreational water quality monitoring for the Waihopai River.
92. The maps, that are part of the draft Conditions, are indicative only. Stormwater may be received from new developments beyond the existing map boundaries only where the Applicant accepts such discharges into its network, and where there is no measureable change to the volume or quality discharged from the current network. Where there is a significant change, or where new discharge points are needed, a variation to the consent (or a separate consent) will be required (assuming that in those circumstances the Applicant accepts the discharges to the network).
93. During the discussions with the Consent Authority there was an issue about defining "dry period" for Condition 9. The Applicant is of the view that defining a "dry weather period" for Invercargill is not appropriate.

Ms Bennett has undertaken an analysis of the weather data for the Waihopai Dam and the table at Appendix 4 is the result. The table shows: -

Definition of wet weather period:

Days when rainfall is more than 5mm: this generally occurs more than 5 days each month and is not a constraint on completing the required monitoring programme

-Definition of dry period, ie where there is no runoff, the typical rule of thumb is that 5mm of rain is required before runoff occurs:

Days with no runoff (<5mm) in the preceding 24 hrs: more than 20 days per month and is not a constraint on completing the required monitoring programme

Days with no runoff (<5mm) in the preceding 48 hrs: between 10 to 20 days per month and is not a constraint on completing the required monitoring programme

94. There is concern that when these two periods are combined, it significantly restricts the availability of days which comply with both dry period and wet conditions- that is to say generally no days in most years.
95. Because of these factors that Applicant is of the view that there should be no defined dry weather period in Condition 9(b).

Review of Consent - Limit Setting

96. As part of the conditions, the Applicant is also proposing a condition pursuant to Section 128(1)(a)(iii) and (1)(b) providing for the consent authority, the Southland Regional Council, to review the conditions of the Resource Consent.
97. Section 128(1)(a)(iii) sets out that a *"Consent Authority may serve notice on a consent holder of its intention to review the conditions of a Resource Consent at any time specified for that purpose in the Resource Consent for any of the following purposes or any other purpose specified in the consent."*
98. This in the Applicant's submission means that if the consent was granted with a provision in the conditions that the consent authority

is to review the conditions of the consent at the time the limit setting is completed for the Oreti River catchment, then such a review can take place in accordance with this section.

99. The Applicant also submits that Section 128(1) (b) is also relevant which states "*in the case of a discharge permit when a regional plan has been made operative which sets rules relating to minimum standards of water quality and in the Regional Council's opinion is appropriate to view the conditions of the permit or to enable the standards set by the rule to be met.*" This could also be used potentially by the Regional Council if the limit setting is included in a regional plan. That consent authority would again be able to review the consent conditions without requiring any other trigger.
100. The Applicant has included an advice note in the draft conditions relating to this issue (see paragraph 32). The Applicant is assuming for this purpose that the limit setting will be by way of a plan change (to make it enforceable). This means that the Consent Authority can review the conditions at any time in accordance with Section 128(1)(b).
101. However, if the consent authority will not seek to insert the limits into a plan then a specific provision will need to be included in these conditions to ensure the consent authority is able to do so.
102. This is an appropriate use of the provisions of Section 128 and enables the grant of longer term consent without any potential prejudice to the upstream users of the Oreti River catchment.
103. The power of review of the conditions of consent allows a consent authority to consider changing conditions to make them more appropriate in light of the circumstances triggering the review.¹¹

¹¹ PVL Proteins Limited v Auckland Regional Council EnvC AO61/01

104. In the Applicant's submission the review does not cause any difficulties in light of this as the consent authority is able to change the conditions to make them more appropriate in light of the circumstances triggering the review, namely the limit setting process being concluded for the Oreti River.
105. It is accepted that the review condition is discretionary on the consent authority and cannot be a mandatory review.¹²
106. However, a shorter term consent would have the effect of undermining the suite of improvements the Applicant has programmed, the function and effectiveness of the role of the Technical Review Group, and also means that the Applicant is forced into a cycle of going through the costly exercise of applying for a further Resource Consent.
107. A review condition coupled with the oversight of the Technical Review Group will provide ample opportunity to monitor the effectiveness of the consent and the effectiveness of the actions the Applicant is proposing to undertake, and for measurable water quality improvements to be achieved.
108. Should there be a circumstance where the Applicant is not meeting the target the Technical Review Group in the terms of reference will have a mechanism in which to deal with these issues.
109. Further, Section 128 provides for the ability of the Consent Authority to have conditions reviewed should there be a National Environmental Standard or Planning Standard change that impacts on the Resource Consent conditions¹³. This provides the certainty for the Applicant in terms of being able to operate its network and

¹² Queenstown Adventure Park (1993) Ltd v Queenstown Lakes DC CO96/ 94 (PT)

¹³ Section 128(1)(ba)

undertake the improvements and monitoring programme it is intending to do and also for the Consent Authority (and the Technical Review Group and wider submitters) that the Applicant is not being authorised to discharge at the same contaminant levels that is currently occurring.

110. The consent conditions specifically are anticipating continuous improvements through this network and time needs to be allowed for this to occur.

Term of Consent

111. The Applicant is opposed to the merging of the consent expiry date of this application with that of the Applicant's Waste Water Treatment Plant at Clifton consent which is due to expire in 12 years time on 30 June 2029.

112. While the Applicant can see some merit in having the two discharges linked in terms of the overall impact of the discharges (looking at offsets and other mitigation measures), the Applicant is of the view that having two significant Resource Consents due for renewal at the same time would create a significant amount of work for the Applicant and for the Consent Authority in terms of preparing applications as well as processing and determining two significant applications in parallel, both of which are likely to have a significant degree of public interest. It also risks confusing the public regarding what is being consented, diminishing the effectiveness of the public consultation/submission process.

113. The scientific and technical work would be enormous and would put a significant strain on the Applicant to resource at both a technical and financial level. The Applicant believes the Consent Authority's resources and ability to be able to get the consents through the process within the statutory time period would also be strained.

APPLICANT'S EXPENDITURE AND IMPROVEMENTS

114. As set out in the evidence of Mr Loan there is a significant improvement plan in place. One percent of the network per year is to be completely renewed and this equates to approximately 65% of the stormwater network's budget. The balance of the budget is used on maintenance items. The Applicant will continue to work to increase the pace of renewal where possible.
115. The focus of the improvements and renewal will be the aged parts of the network.
116. It needs to be stated, again, that from the Applicant's investigations undertaken to date, none of the contamination sources identified have come from the failure of the Applicant's stormwater network. Rather, each case there has been contamination it is traced back to a problem on private property.
117. The only exception to that statement is, of course, the constructed overflows.
118. The overflows are a historic public health safety mechanism. It is safe to say that this a public health issue. The concept at the time they were created was that it was better for sewage to overflow into the stormwater network than to back up and potentially pond around residential dwellings or streets.
119. As the sewerage network itself has been upgraded the constructed overflows have been eliminated and will continue to be eliminated.
120. When their existence emerged in the last Consent Hearing in 2011 it caused a significant amount of consternation. The Applicant has been monitoring all known constructed overflows since the grant of

the 2011 consent. Of the known constructed overflows only two have activated during the lifespan of the previous consent. One of those overflowed directly into the Otepunu Stream.

121. This overflow has now been electronically monitored. It has been identified that it overflows when there is a blockage in the sewer pipe that flows underneath the Otepunu Stream at the Lindisfarne bridge. The electronic monitoring sends an alert, when there is a build-up in the pipe, to Council's contractors who are required to immediately go and attend to the blockage thereby alleviating the pressure on the network preventing it from overflowing.

122. The Applicant is of the opinion that the second overflow that has operated may be linked to this Lindisfarne overflow and will undertake a comprehensive study to discover whether there is a link between the two overflows. If there is then the Applicant will ensure that the monitoring programme currently in place on the Otepunu Stream discharge is effective at monitoring the issues relating to the second overflow. If the Applicant discovers no link then it will take such other steps as to ensure the effective monitoring of this overflow until such time as these overflows can be replaced by the sewerage network renewal.

123. The Applicant also wishes to highlight the significant expenditure and improvements it has already made and is continuing to make in terms of improving water quality in areas outside of the immediate urban area.

124. In 1997 the Applicant extended the Otatara sewerage reticulation network to additional areas and connected the system to the Invercargill City network. Previously in 1989 Southland County Council constructed a sewerage network for parts of Otatara with the treatment system being an oxidation pond.

125. Between 2005 and 2008 the Applicant identified a significant problem with septic tanks operating in the Moore Road area. Moore Road is a small suburb that was incorporated into the city after the 1989 Council amalgamations. It is on State Highway 6 heading north to Queenstown from the city. Because of the identified issues with the failing septic tanks, the Applicant has undertaken and completed a sewerage network for Moore Road to prevent sewage entering the Waikiwi Stream.
126. Having completed the Moore Road area the Applicant next focussed on the village of Kennington. Kennington sits to the east of the city urban area on State Highway 1 heading towards Gore. Kennington was also incorporated into the city as the result of the 1989 Council amalgamations. Kennington is dissected by the Waihopai River. Again there have been a number of problems of failed septic tanks within the Kennington area and as a consequence a reticulated sewerage system has been constructed within Kennington to prevent again the potential of contamination of human sewage in the Waihopai River.
127. Silver Fern Farms has a meat processing facility at Kennington and this has been connected to the city sewerage system for nearly 30 years.
128. The Niagara Sawmilling Company Limited plant and other industries sit astride the Waihopai River and will be connected to the reticulated sewerage network which can also accommodate trade waste.
129. The Applicant will continue to work on areas it identifies as problematic and are contributing to the discharge of sewage into the rivers or the New River Estuary itself.

CONCLUSION

130. The Applicant respectfully submits that in light of the evidence submitted by it, that the Resource Consent can be granted for the term of 25 years as sought.

131. The Applicant has listened to concerns of submitters in regard to these matters and addressed these where possible in the draft conditions it is proposing.

132. The suite of conditions imposes a significant but realistic technical, financial and regulatory obligation on the Applicant to continue to improve the discharges into the receiving waterways will help, in conjunction with changes to discharges from the wider community including upstream users, to improve the overall health of these waterways and, ultimately, the New River Estuary. The proposal represents a substantial and sustained undertaking on the part of the Applicant, in recognition of their obligations and desire to meaningfully contribute to ongoing improvements to water quality in the district.

Dated at Invercargill this 25th day of August 2017



.....

Michael Morris
Counsel for the Applicant

Michael Morris

From: Dunning, Janan <Janan.Dunning@stantec.com>
Sent: Friday, 25 August 2017 1:35 p.m.
To: Michael Morris
Subject: FW: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

From: Stephen West [mailto:stephen.west@es.govt.nz]
Sent: Friday, 25 August 2017 11:44 a.m.
To: Dunning, Janan <Janan.Dunning@stantec.com>
Subject: FW: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

Janan,

I didn't state it in my previous email, but this comment from your email is spot on.

Importantly, the areas where ES / ICC currently don't agree in respect of conditions have been whittled down to:

- **Consent term:** this was not discussed or revisited in any detail in the meeting, and there has been no change of view following the hearing;
- **Preference for limits** to be reflected in conditions: while it is noted that ES prefers to set limits within the conditions, it was discussed at length and ultimately accepted by all parties that limits in this case can't be set for the reasons set out in evidence and under questioning at the hearing, primarily because of the 'other factors' that influence water quality that are either beyond the control of the ICC (i.e. originate from upstream sources, including natural sources), or environmental reasons (e.g. the urban channelization of the Otepunu Stream, affecting water temperature, absence of riparian planting, impacts on DO, etc. that are not related to the stormwater discharges). You may recall that the one parameter that the parties agreed could be monitored was ammonia, and that has now been added to the set of proposed conditions, with reference in the conditions to a new Appendix 5 to the conditions, which adopts Table 1 from Appendix G of the RWP.

From: Stephen West
Sent: Friday, 25 August 2017 11:23 a.m.
To: 'Dunning, Janan'
Subject: RE: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

Hi Janan.

The change to Condition 7(a) doesn't work. "If triggered by Condition 6(b)..." means that the known sites won't be caught by the condition until there is a further triggering under 6(b). I know that isn't the intent, but it should be worded so that the known sites go straight onto the indicator programme. I suggest inserting a new Condition 7(b):

- 7
- (a) If triggered by Condition 6(b), the consent holder shall commence an 'Indicator Programme' for the identified sampling location, 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) The consent holder shall also carry out an 'Indicator Programme', as described in Condition 7(a), from the date of commencement of this resource consent for the locations where sewage had been detected (but not yet traced and eliminated) in stormwater discharges under Resource Consents 206936, 206937, 206938, 206939 and 206940.
 - (c) Grab samples shall be collected in dry weather conditions as defined by Condition 5(b).
 - (d) The information specified in Condition 5(d) shall be recorded for each sampling event.

From: Dunning, Janan [<mailto:Janan.Dunning@stantec.com>]
Sent: Thursday, 24 August 2017 8:51 p.m.
To: Stephen West
Subject: RE: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

Hi Stephen –

Thanks for the response.

Yep – have noted that input into condition 9 is still needed – tomorrow morning would be excellent thanks, as we now need to submit the RoR by around midday, possibly early afternoon at a squeeze.

Happy to amend condition 31 as noted below.

Can you please also confirm that the conditions, the margin comments accurately reflect the meeting and outcomes from ESs perspective, and also confirm our understanding of the outstanding matters? (I've highlighted the relevant bits in green).

We will need to confirm all that in the RoR to the Panel. Thanks Steve – almost done with the hearing.

Cheers – Janan

From: Stephen West [<mailto:stephen.west@es.govt.nz>]
Sent: Thursday, 24 August 2017 4:33 p.m.
To: Dunning, Janan <Janan.Dunning@stantec.com>
Subject: RE: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

Hi Janan,

Great work keeping track of the conversation!

A few points:

Condition 9(b) is still missing a rainfall period. I have asked for return period information for 5 mm events for 2, 6 and 12 hour rainfall durations from Hydrology and expect a response tomorrow morning.

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:
- 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 Waihoi Dam and

Commented [D315]: ES concerned about receiving environment monitoring versus monitoring the discharge – i.e. there is no discharge monitoring proposed.

ES view is that the discharge monitoring is a performance measure, versus the receiving environment monitoring being an effects assessment. Concerned that receiving environment monitoring isn't robust enough to protect human health.

Concern is about all contaminants, not just sewage. The 2011 consent seems to be getting ignored, when the issues raised at that time still hasn't been resolved – sediment is also a concern.

ICC Response: Include reference in condition 7 to the sites that are known to discharge sewage, as part of the indicate programme (see addition to Condition 7(a)).

Commented [D316]: Define what wet weather is (either in the condition or through an advice note).

SUS to refer to previous ES conditions on this.

Condition 31:

Subject: ICC Stormwater application - ES / ICC meeting notes and subsequent changes to conditions

Importance: High

Hi Stephen –

Thanks for the time you and your team took to meet with us on Tuesday and work through these conditions. I think there was real value in doing so, hopefully for both your team and the applicant. We appreciate the way you and your team approached the discussions.

The outcome is the attached pdf file which shows:

- The **matters discussed**, primarily in margin notes;
- **Changes to conditions** in tracked changes highlighted in blue (provided on a 'without prejudice' basis at this stage).

It would be great if you and / or your team could please provide feedback on this document as soon as you can, specifically to **confirm that**:

- it is an accurate record of what we discussed, and the agreed outcomes (or otherwise amend where this is not so);
- the changes made (highlighted in blue) reflect discussions and are accurate / acceptable; and
- there are no other changes agreed at the meeting that haven't been reflected in this version.

Importantly, the areas where ES / ICC currently don't agree in respect of conditions have been whittled down to:

- **Consent term**: this was not discussed or revisited in any detail in the meeting, and there has been no change of view following the hearing;
- **Preference for limits** to be reflected in conditions: while it is noted that ES prefers to set limits within the conditions, it was discussed at length and ultimately accepted by all parties that limits in this case can't be set for the reasons set out in evidence and under questioning at the hearing, primarily because of the 'other factors' that influence water quality that are either beyond the control of the ICC (i.e. originate from upstream sources, including natural sources), or environmental reasons (e.g. the urban channelization of the Otepunu Stream, affecting water temperature, absence of riparian planting, impacts on DO, etc. that are not related to the stormwater discharges). You may recall that the one parameter that the parties agreed could be monitored was ammonia, and that has now been added to the set of proposed conditions, with reference in the conditions to a new Appendix 5 to the conditions, which adopts Table 1 from Appendix G of the RWP.

We intend to include these points in the applicant's right of reply, along with the attached conditions. The right of reply is due by COB tomorrow, so we would really appreciate you doing your best at providing a response to this email as soon as you can.

Many thanks - Janan

Janan Dunning

Senior Planner / Team Leader: Urban Planning & Environmental Services – South Island

Stantec New Zealand Ltd
Hazeldean Business Park
6 Hazeldean Road
Christchurch 8141, New Zealand

Phone: +64 3 341 4790
Mobile: +64 27 600 8432

janan.dunning@stantec.com



MWH is now part of the Stantec Family.

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorisation. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Column Labels																									
Row Labels	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sum of Days with Rainfall > 5																									
1		6	11	7	4	4	2	1	3	5	10	2	8	5	4	13	6	5	6	10	7	7	8	7	3
2		7	3	5	1	3	5	6	1	3	4	7	4	10	8	4	2	3	4	3	5	5	4	2	7
3		9	7	5	9	1	6	10	5	3	2	8	2	5	4	9	9	4	6	7	8	5	2	4	4
4		4	4	7	1	6	9	7	6	6	5	5	2	10	4	3	4	3	2	6	4	4	9	5	7
5		5	4	5	7	9	7	4	4	10	11	9	8	8	6	5	4	8	8	2	6	6	8	10	5
6		4	8	8	12	10	6	6	10	9	7	9	8	6	9	7	10	8	3	7	3	8	5	3	12
7		9	3	7	10	4	10	4	8	5	5	2	9	2	6	4	4	5	7	4	12	1	7	4	6
8		8	7	5	6	2	5	6	7	3	7	8	3	5	6	4	5	6	6	3	6	0	1	5	4
9		3	3	5	5	2	3	7	4	3	8	6	4	5	3	12	2	8	4	10	8	6	6	1	
10		2	9	2	9	9	6	8	6	7	1	8	7	1	3	10	12	9	5	3	3	10	8	8	
11		1	4	5	3	10	9	2	9	8	4	8	8	7	8	11	5	8	8	1	8	6	3	9	
12	1	8	11	5	9	4	11	7	4	6	5	8	3	14	10	5	4	4	9	5	1	7	6	4	
Sum of Days with no runoff within 24hr																									
1		24	20	24	27	27	29	30	28	26	23	28	22	25	26	18	25	25	25	20	23	23	21	24	28
2		21	25	23	26	26	23	22	27	26	24	21	24	19	19	23	26	25	24	25	22	24	24	25	21
3		22	24	26	22	30	25	21	26	28	28	22	29	25	27	22	22	27	24	24	23	25	29	27	27
4		26	26	23	28	23	21	22	24	27	25	25	28	20	25	27	26	27	28	24	24	26	20	24	22
5		25	27	26	24	20	24	25	27	21	20	22	21	23	23	26	27	23	23	27	24	24	23	20	25
6		26	22	22	17	19	24	24	18	21	24	19	21	23	20	22	19	22	26	23	27	21	25	26	18
7		22	28	24	21	27	21	27	22	25	25	29	21	28	24	27	27	25	24	27	19	30	24	26	25
8		23	24	26	25	28	26	25	23	28	24	21	28	24	25	27	25	25	25	27	25	31	29	24	27
9		27	27	25	24	28	27	22	26	25	22	24	25	24	27	22	28	22	25	20	22	24	24	29	
10		29	22	29	22	22	24	22	24	24	29	21	24	30	28	25	19	22	26	27	28	18	21	23	
11		29	26	25	26	18	21	28	21	22	26	22	21	22	22	19	25	22	21	28	21	23	27	21	
12	23	23	20	25	22	26	19	23	27	23	26	23	27	17	20	26	26	27	21	27	30	24	25	27	
Sum of Days with no runoff within 48 hours																									
1		17	15	18	23	22	26	27	26	23	18	24	18	20	20	12	22	20	17	14	19	20	16	18	23
2		16	22	19	24	23	18	19	26	20	20	17	20	10	14	17	22	22	22	22	17	19	22	21	17
3		18	19	23	15	27	18	14	22	24	25	15	26	21	22	19	19	24	21	17	17	19	27	24	18
4		22	18	17	26	18	14	16	21	23	19	20	24	16	19	25	17	23	26	19	18	24	14	19	17
5		20	23	21	17	11	21	19	24	15	18	17	14	19	17	21	22	18	16	23	21	19	16	13	19
6		21	16	16	10	15	16	15	9	14	17	11	16	17	15	16	13	16	21	20	21	14	18	23	10
7		14	22	18	13	25	15	23	17	22	20	22	18	24	19	23	19	21	18	24	15	27	19	18	21
8		15	17	24	19	24	21	17	19	23	17	15	26	19	21	25	16	19	20	21	22	30	26	19	16
9		24	21	19	17	24	22	17	24	21	18	16	20	15	22	15	26	17	21	14	11	16	19	26	
10		28	12	21	16	19	18	17	17	16	26	14	19	23	24	22	11	14	19	23	26	10	14	15	
11		28	23	19	22	9	12	27	16	16	21	13	14	17	18	9	18	17	16	24	13	20	24	15	
12	21	17	12	20	16	22	9	16	22	16	18	20	24	7	14	13	22	23	14	23	29	17	18	24	
Sum of Days with rainfall more than 5mm and no runoff within 24hrs																									
1		0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
9		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum of Days with rainfall more than 5mm and no runoff within 48hrs																									
1		0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
9		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
11		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0