

MEETING OF THE REGULATION HEARING COMMITTEE

TO THE CHAIRPERSON AND MEMBERS OF THE
COMMITTEE

MEMBERSHIP OF THE COMMITTEE

Cr A G Neill (Chairperson)
Cr E H Cunningham
Cr A S Carroll

A meeting of the Committee will be held on
Friday, 23 June 2006 at 9.00 a.m.

VENUE: Council Chamber
First Floor
Pegasus Building
Environment Canterbury
58 Kilmore Street
CHRISTCHURCH

BUSINESS: As per Order Paper attached

Dr Bryan Jenkins
CHIEF EXECUTIVE

**RECOMMENDATIONS IN REPORTS ARE NOT TO BE TAKEN
AS COUNCIL POLICY UNTIL ADOPTED BY COUNCIL**

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COMPLIANCE WITH LOCAL GOVERNMENT ACT 2002 DECISION-MAKING REQUIREMENTS

Except as below, a statement of compliance and a completed decision checklist is required for any agenda item on a council committee or the council recommending that a decision be made. This will be the responsibility of the person signing off the agenda item.

The compliance statement and checklist will not be used for:

- Recommendations that information be received or that the Council make a decision.
- Decisions taken under the Resource Management Act 1991 or the Biosecurity Act 1993 in relation to resource consents, decisions required when following the procedures set out in Schedule 1 of the Resource Management Act 1991, other permissions, submissions on plans, or references to the Environment Court.
- Decisions taken to proceed with enforcement procedures under various primary or secondary legislation or regulations, including procedures under the Resource Management Act 1991, the Biosecurity Act 1993, the Local Government Act 2002, and Environment Canterbury Bylaws.
- Administrative and personnel decisions that are entirely internal to Environment Canterbury.
- Other decisions where the procedures to be followed are set out in Legislation.

COMPLIANCE STATEMENT

The council committee (or the council) must formally certify that:

- (a) It is satisfied that it has sufficient information about the options and their benefits and costs, in terms of the region's social, economic, environmental and cultural well-being and the effects on community outcomes, bearing in mind the significance of the decisions.
- (b) It is satisfied that it knows enough about and has given adequate consideration to the views and preferences of affected and interested parties bearing in mind the significance of the decision.

INFORMATION CHECKLIST

(a)	A Statement of the Proposed Decision
(b)	A Statement of the Objective of the Proposed Decision and the Issue or Problem being addressed
(c)	A list of all reasonably practicable options, (including doing nothing).
(d)	For each option in (c): An evaluation of the Benefits and Costs, in terms of the region's social, economic, environmental and cultural well-being.
(e)	For each option in (c): A statement of the extent to which community outcomes would be promoted or achieved in an integrated and efficient manner.
(f)	For each option in (c): A statement of the Impact, if any, on Environment Canterbury's capacity to undertake its statutory responsibilities
(g)	If the Proposed Decision is a significant decision in relation to land or a body of water, a statement of how Maori values have been taken into account
(h)	A Statement of significant inconsistencies, if any, with any Existing Policy, Plan or Legislation arising from the Proposed Decision.
(i)	A statement how the views and preferences of affected or interested persons have been given adequate consideration during the definition of the problem or issue, the objective, the assessment of options and the development of the proposed decision, including the particular contribution of Maori to the decision-making process.

Notes:

The significance of proposals and decisions determines how much time, money and effort is put into exploring and evaluating options and obtaining the views of affected and interested parties. The significance of proposals and decisions is determined through reference to criteria contained in the policy on significance.

The policy on significance together with Section 76 of the Local Government Act 2002 set out the Council's requirements in relation to decisions. Some decisions can only be made through the Long-Term Council Community Plan, or after the Special Consultative Procedures set out in the Act have been used, (refer to the policy on significance and the Act).

All decisions of Environment Canterbury are subject to the decision-making requirements of section 76 of the Act unless inconsistent with specific requirements of other legislation.

ENVIRONMENT CANTERBURY

REGULATION HEARING COMMITTEE

ORDER PAPER

1. APOLOGIES
2. MINUTES OF PREVIOUS MEETINGS (to be tabled)
3. MATTERS ARISING

MATTERS FOR DECISION BY THE COMMITTEE

4. RESOURCE CONSENT APPLICATIONS FOR CONSIDERATION
5. APPOINTMENT OF COMMISSIONERS TO HEAR AND DECIDE RESOURCE CONSENT APPLICATIONS

6. QUESTIONS
7. EXTRAORDINARY AND URGENT BUSINESS
8. NEXT MEETING – to be confirmed
9. CLOSURE

4. RESOURCE CONSENT APPLICATIONS FOR CONSIDERATION BY THE COMMITTEE

The following resource consent applications are submitted for consideration and decision by the Committee without formal hearing.

Applications	Permit No.	Page No.
AML Limited	CRC061432	3 - 14
Selwyn District Council	CRC060440	15 - 44

Report endorsed by:
Leo Fietje, Principal Consents Advisor.

Recommendation

That the Committee acting pursuant to a delegation of the Council of 22 October 2004, having had regard to the requirements of Section 104 of the Resource Management Act 1991, grants consent, pursuant to Section 105 of the said Act, to the applications subject to the conditions and expiry dates, and for the reasons stated.

**Before the Regulation Hearing Committee appointed
by Canterbury Regional Council**

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Application CRC061432 by AML
Limited for a discharge permit
to discharge contaminants to
air.

Section 42A Officer's Report

Date of Hearing: 23 June 2006

Report of Kevin Swete

1. I am employed by the Canterbury Regional Council as a Consents Investigating Officer.
2. This report presents the audit of the application and addresses the relevant information and issues raised. It should be emphasised that any conclusions reached or recommendations made in this report are not binding on the Regulation Hearing Committee.

INTRODUCTION

3. AML Limited (the applicant) has applied for Resource Consent to discharge contaminants to air from a concrete batching plant located at McLeans Island Road, Harewood, Christchurch.
4. Ms Janice Carter and Mr Andrew Nichols of Glasson Potts Fowler Limited have prepared this application and Assessment of Environmental Effects (AEE) for the applicant.

Background

5. The applicant proposes to establish a concrete batching plant. The application was lodged on 28 October 2005 and includes the proposal to discharge stormwater to surface water (CRC061430) and domestic wastewater to ground via dripper irrigation (CRC061431).
6. CRC061430 was publicly notified on 13 April 2006, received submission by submitters who wish to be heard, and will proceed to a Hearing.
7. CRC061431 was granted non-notified on 1 May 2006 for a duration of 35 years.
8. CRC061432 (this application) was limited notified on 13 April 2006, received no submissions, and proceeds to this Regulation Hearing Committee (RHC), 23 June 2006.

9. The proposal also includes two applications to take water, two to undertake streambed works, one to install a bore, and one for roof-water disposal to ground.

Notification

10. Mr Rowe advised that he considered public notification of application CRC061432 was not necessary but that written approval from six neighbours was required. The decision-maker agreed. The applicant's consultant stated that they considered it was unlikely to obtain the written approval from at least one of the neighbours.
11. So, the application was limited notified and the notice below was forwarded to the neighbouring parties on 13 April 2006.

Applicant: AML Limited

Address: C/- Glasson Potts Fowler Limited, PO Box 13 875, CHRISTCHURCH

Attn: Andrew Nichols

CRC061432 - to discharge contaminants to air in the Christchurch Clean Air Zone 2, from a proposed concrete batching plant at 160 McLeans Island Road, Harewood, Christchurch, at or about map reference NZMS 260 M35:729-485. The contaminants to be discharged will include cement dust including suspended particulate (PM₁₀), dust from the handling and storage of aggregate and sand, and fugitive dust from site activities. The applicant has requested a consent duration of 35 years.

Submissions

12. No submissions were received within the 20 working day period specified in the RMA.

DESCRIPTION OF THE PROPOSED ACTIVITY

13. The applicant proposes to:
- (i) Discharge contaminants to air from a concrete batching plant located at 160 McLeans Island Road, Harewood, Christchurch, at or about map reference NZMS 260, M35: 7257-4880 (legally identified as part of Lot 1 DP83039);
 - (ii) Discharge contaminants of particulate matter resulting from the mixing and batching of concrete, and related activities such as vehicle movements, material conveying, and aggregate storage at a new site located adjacent to the raw material supply;
 - (iii) Discharge contaminants from processing an average of 15,000 m³ per month of concrete. This corresponds to a daily average of 625 m³ (174 truck loads) for a five and a half day week;
 - (iv) Discharge cement dust, sand and general site dust from activities on site such as concrete batching operations when cement is pumped to the silos, dust generated from load out area where various ingredients in the concrete mixture are loaded into the truck;
 - (v) Discharge yard dust contaminants to air from abraded shingle surfaces generated by vehicle movements in and out of the yard, which may also contain trace amounts of metals;
 - (vi) Use in-ground bins, above ground roofed-hoppers, covered conveyors, and walled stockpiles;

- (vii) Install self-cleaning filters within each of four, 24 m tall, cement storage silo;
- (viii) Use hard, high quality yard shingle and water sprinklers;
- (ix) Undertake close to 500 vehicle movements per day;
- (x) Cease operations, dismantle, and clear two existing batching plants at Johns Road and McLeans Island Road on completion of the new site;
- (xi) Seek a duration of 35 years.

LEGAL AND PLANNING MATTERS

The Resource Management Act 1991 (RMA)

- 14. Section 15 (1) of the RMA states that air discharges of contaminants from industrial or trade premises require a consent, unless the discharge is allowed by a plan or proposed plan.
- 15. However section 418 (1) of the RMA states that Section 15 (1) does not apply in respect of any discharge that would not have required any licence under the Clean Air Act, unless the regional plan provides otherwise.

Regional Plans

Transitional Regional Plan (TRP)

- 16. The requirements of the Second Schedule of the Clean Air Act (1972) are deemed to be part of the TRP under section 368(2)(g) of the RMA.
- 17. In Christchurch Part A, B, & C activities, listed in Part A, B, & C of the second schedule of The Clean Air Act, required a clean air licence.
- 18. Part C(7) includes emissions of air pollutants specified in the first schedule. Dusts and fumes containing organic and inorganic materials are listed in Schedule 1. The proposal includes cement dust, which is specified in part 5 of Schedule 1, therefore Resource Consent is required for these emissions under the TRP.
- 19. Part C processes as described in the Second Schedule to the Clean Air Act were all subject to licensing by the Christchurch City Council and are therefore *discretionary* activities.

Proposed Natural Resources Regional Plan (PNRRP)

- 20. The proposed shingle yard discharge activity does not fall within the ambit of Rule AQL38, fugitive dust emissions, as the applicant is uncertain that the site will always comply with the sole rule. So this activity falls within the ambit of Rule AQL57, *Industrial or trade premises and processes not complying with Rules AQL38 to AQL56 or not otherwise identified anywhere in Canterbury - discretionary*.
- 21. The proposed concrete batching discharge activity does not fall within the ambit of Rule AQL42, bulk material. The applicant states that compliance with three of the requirements is unlikely and the activity falls within the ambit of Rule AQL57.
- 22. So, a Resource Consent is required by **both** the operative plan **and** the proposed plan.

National Environmental Standards (NES)

23. On 1 September 2005 NES regulations came into effect.
24. S17(1) of the NES states that regulations 17A to 17C apply if:
- “(a) the concentration of PM₁₀ in the airshed already breaches its ambient air quality standard; and*
- (b) the discharge to be permitted by the resource consent is likely to increase significantly the concentration of PM₁₀ in the airshed.”*
25. With regard to (a), the Christchurch air-shed does already breach the standard.
26. This issue is addressed further in the section on POLICIES AND OBJECTIVES below.

CONSULTATION

27. The applicant’s consultant indicated that they had approached all the parties listed for limited notification as part of the whole suite of consents required.
28. I consider that further consultation has effectively been undertaken through the limited notification process.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

29. Section 3, page 3 of the AEE describes the site as 1.3 hectares of a larger 766 ha rural grazing area.
30. A schematic plan provided show the aggregate storage and mixing to be at least 300 m from McLeans Island Road and neighbouring properties.
31. Based on Environment Canterbury’s GIS I agree with this description and note that the land is zoned Rural 5 in the Proposed City Plan.

ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS

Scoping

32. The applicant has assessed the actual and potential adverse effects of the operation on the environment under the following areas:
- Effects of particulate matter.
 - Effects on local air quality.
 - Effects on amenity values of area.
 - Effects on people and community.
33. Given the subjective nature of the actual and potential effects of this activity, I agree with the AEE approach in this manner. I add further cumulative effects.

Audit of Assessment of Effects

Effects of Particulate Matter

Cement and Aggregate Dust from Concrete Batching

34. The AEE states that the raw material has little potential to cause adverse effects due to the large particle size, washing, and storage in bunkers.
35. The AEE further states that particle size, from cement handling into concrete, is 40 – 50% less than 10 microns. Extracted air from the cement silos is potentially dustiest and will be filtered high efficiency, self-cleaning filters.
36. I agree that, under normal operating conditions, most of the processes on site are unlikely to create significant quantities of dust.
37. The applicant infers that dust emissions are benign and has a nuisance effect only. I agree that this is the case for all of the dust sources with the exception of cement. This is certainly not benign, being caustic in nature and can cause eye, lung and skin problems. The requirement is to prevent spillage and provide for immediate cleanup of any cement spills. Given that cement is a material of some cost, minimising loss is likely to be a high priority for the applicant.
38. I agree that the filtration systems on the cement silos are likely to remove much of the particulate matter from the exhaust air.

Yard Dust

39. The application states that the unpaved yard will be constructed of hard high quality shingle and watered if necessary to reduce dust and it is not expected to cause adverse effects beyond the boundary.
40. I agree that, under normal operating conditions yard dust would not be expected to cause adverse effects beyond the boundary. See also proposed conditions <2> and <5> at the end of this report.

Effects on Local Air Quality

41. The applicant states that the discharges will be particulates and effects beyond the boundary will be minor.
42. The applicant states that the production of concrete is not expected to cause odour.
43. I agree that adverse odour effects are unlikely and adverse amenity effects are likely to be minor, provided the proposed mitigation measures are undertaken.

Effects on Amenity Values of Area

44. The applicant asserts that the proposed activity is unlikely to cause adverse impacts on amenity values as the particulate discharge is anticipated to be low, water sprinkling will be used, and the discharges are not significantly coloured.
45. Again, I agree that the adverse amenity effects of these activities are likely to be minor, provided the proposed mitigation measures are undertaken.

Effects on People and Community

46. The applicant asserts that given the open rural environment, the few local residences, the lack of complaints about dust from their two nearby sites, and the anticipate rapid reduction of effects with distance, the effect on people and the community is anticipated to be insignificant.
47. I agree that the site is an open rural environment being 1.3 hectares of a larger 766 ha rural grazing area.
48. I agree that there are few local residences and note that none of the six neighbours notified have made a submission.
49. There are no complaints on Canterbury Regional Council database with respect to the Ashby and Isaac current plants.
50. I disagree that there is likely to be a rapid reduction of effects with distance, especially with dust of small particulates from cement or yard surfaces.

Cumulative effects

51. Based on a search of ECan's GIS, there are no other Consented discharges to air within a 1,200 m radius of the proposed discharge site.
52. Given this the potential cumulative adverse effects are likely to be negligible.

Conclusion

53. Given the difficulty of estimating the quantity of material likely to be discharged from the site, and quantifying the effects of that discharge, a qualitative assessment is appropriate in this case. However, I consider that the information contained in the AEE itself is again, not on it's own, sufficient to guarantee that adverse effects on neighbouring properties will be minor. It appears that some PM₁₀ is likely to be discharged from the cement silos, however as long as the filtration systems work effectively and are kept in good condition I anticipate that these discharges will be minimal.
54. I note the practices to be adopted are similar to those adopted in other batching plants located in the Canterbury Region. The degree to how well they operate depends on the adequate and appropriate site management. The important management techniques have been developed into conditions.
55. Provided the information I have received is correct, the proposed mitigation measures are undertaken, and the proposed conditions are adhered to, I agree that the adverse effects of the discharge of dust from the proposed concrete batching plant will be minor.

ADDITIONAL MITIGATION MEASURES

56. The applicant proposed a number of mitigation measures in the AEE, as outlined in paragraph 13 of this report.
57. The applicant was sent a copy of this report, including the 2006 Draft Proposed Conditions, on 16 June.

CONSIDERATION OF ALTERNATIVES

58. The applicant has not provided information on alternative sites or methods of discharge. However, the proposed operation is planned to replace the applicant's two current plants at Johns Road and McLeans Island Road.

POLICIES AND OBJECTIVES

Regional Policy Statement (RPS)

59. Chapter 13 of the RPS (CRC 1998) sets out policies and objectives relating to air.
60. Objectives and Policies that are relevant to this application:

Objective 1.

Maintain or improve ambient air quality so that it is not a danger to people's health or safety, and to reduce the nuisance effects of low ambient air quality.

Policy 1(b)

... the discharge of contaminants into air shall only be allowed where the adverse effects of the discharge are minor.

Objective 2

Avoid, remedy, or mitigate the adverse effects on people, flora and fauna, and other natural and physical resources resulting from discharges of contaminants into the air.

Policy 3

Set standards, conditions, and terms for discharges of contaminants into the air to avoid, remedy, or mitigate adverse effects.

Policy 5a.

Activities which require resource consents to discharge contaminants into air should be encouraged to locate away from residential dwellings, educational facilities, hospitals, shops, and other similar public buildings unless adverse effects can be avoided or mitigated.

61. The proposed activity is unlikely to significantly reduce ambient air quality, provided the recommended conditions are complied with. Any nuisance effects should be mitigated by the measures outlined in the recommended conditions. Effective operation and servicing of filtration systems and water mist devices, and good site practices, should ensure that emissions are minimised as far as possible. I consider that the discharges from this activity are able to be consistent with Objective 1, Policy 1(b) of the RPS.
62. Objective 2 and Policy 3 require adverse effects to be avoided, remedied, or mitigated. There will be effects due to the proposed discharges and mitigation measures such as the location, covers and walls, and water sprays should minimise effects of airborne dispersal.
63. Regarding Policy 5a, the proposed site is within a large site zone rural, the discharges are in support of a batching activity, and the adverse effects can be mitigated therefore, the proposed site is consistent with this policy.

Proposed Natural Resources Regional Plan (NRRP)

64. Chapter 3 of the proposed NRRP sets out policies and objectives relating to air, and the rest of this section should be read in conjunction with the proposed NRRP.
65. Objective AQL1 is that localised discharges of contaminants to air should not result in significant adverse effects on the environment, including adverse effects on human health and offensive or objectionable odours. The applicant considers that the proposed discharge will not result in adverse effects.
66. Policy AQL6 is to avoid dust nuisance. This is to be done by location away from sensitive areas, promotion of best practicable options, and to avoid encroachment of sensitive activities on existing activities discharging dust. Given the location of the site and that it is within a larger rural area it is consistent with this policy.
67. Proposed condition <2> requires that the discharges do not cause suspended or deposited particulate material or dust to the extent that it is offensive or objectionable. If this is complied with, the discharges will be consistent with Objective AQL1 and Policy AQL6.
68. Objective AQL2 requires that ambient air quality that is below the "acceptable" level be brought up to that level, and that air quality currently above that level be maintained at that higher quality. More specifically, Policy AQL9 requires specific management regimes. The main component of this management regime seeks to significantly reduce particulate emissions from domestic solid fuel burning, as this is the main source of ambient particulate in Christchurch. So, the concrete batching activity could be seen as in accord with this air quality management regime.
69. As stated in paragraphs 21 to 23 above, the proposed shingle yard activity does not fall within the ambit of Rule AQL38 but AQL57 and the proposed concrete batching activity does not fall within the ambit of Rule AQL42 but AQL57. These Rules and others are a second component of specific management regimes.
70. Policy AQL10 requires that the precautionary principle be applied when considering resource consent applications to discharge hazardous air pollutants. I consider that after applying the precautionary principle the effects of the activity will still be minor and that no people or environment will be adversely affected.

National Environmental Standards (NES)

71. Further to paragraphs 24 to 27 above.
72. Again, the Christchurch air-shed does already breach the PM₁₀ standard.
73. The proposed discharge site is outside Clean Air Zone 1 by approximately 2.0 kilometres and any particulate discharges are likely to be localised and in Clean Air Zone 2. So, particulate emissions will not increase significantly the concentration of PM₁₀ within the defined Christchurch airshed (CAZ 1), regulations 17A to 17C do not apply and the application can be processed as usual.

PART 2 MATTERS

Purpose of the RMA (s5)

74. Under section 104(1) the consent authority must consider applications 'subject to Part 2' of the RMA. The purpose of the RMA is to

“ ... promote the sustainable management of natural and physical resources.” (s. 5(1)).

75. If it is seen that, when the mitigation measures described above are implemented, the activity can be undertaken such that the life-supporting capacity of air is safe-guarded and adverse effects are adequately mitigated in accordance with the purpose of the RMA, then this proposal could be seen as consistent with this aspect of section 5.

Matters of National Importance (s6)

76. Sections 6 (a) to 6 (d) will not be affected by the discharge of contaminants from this activity.
77. Section 6 (e) of the RMA requires the consent authority to recognise and provide for
“The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.”
78. Concerns of Tangata Whenua regarding air quality include the possible contamination of waterways, mahinga kai, wildlife and indigenous plants. I consider that these matters should not be adversely affected by the proposed air discharges. See further s8 below.

Other Matters (s7)

79. The Canterbury Regional Council is required to have particular regard to the matters set out in Section 7 of the RMA. Matters requiring consideration in this case include:
- (b) *The efficient use and development of natural and physical resources:*
 - (c) *The maintenance and enhancement of amenity values: and...*
 - (f) *Maintenance and enhancement of the quality of the environment.”*
80. The discharges described, considered in isolation, will not enhance the quality of the environment. However, the availability of concrete and concrete products, to the wider population, could be considered as an enhancement of the environment.

Principles of the Treaty of Waitangi (s8)

81. The principles of the Treaty of Waitangi form the basis of developing a relationship of partnership and communication. Accordingly, the Tuahuriri Runanga was advised of this application on 16 July 1997. A reply was received on 21 July stating that: *“This is a traditional village – reserved in and by the Native Land Court. Proceed according to guidelines of Whakatau Kaupapa.”*
82. Te Whakatau Kaupapa, the Ngai Tahu resource management strategy for the Canterbury Region, (Tau et al, 1990) was referred to and Appendix A shows no silent files in the area.
83. Appendix B further indicates no presence of registered archaeological sites in the application area.
84. The following comment on mining comes from page 4-3. *“While Ngai tahu are not opposed to mining of itself, they are opposed to mining which destroys or interferes with land or waterways that are culturally important.”*

85. This application is not for mining itself but the subsequent use of the local raw material and the activity addressed here is discharges to air.
86. After consultation with Iwi Liaison Manager, Mr Bob Tai, I consider that given that the activity is required to meet Regional Council consent conditions, when it is undertaken, it is not contrary to Ngai Tahu management strategies.

OTHER RELEVANT MATTERS

Previous Council Decisions

87. The Canterbury Regional Council has previously granted resource consent for the discharge of contaminants to air from concrete batching activities, with similar conditions to those proposed. {CRC950482, Ashby Concrete Ltd, Johns Road, and CRC041965, Allied Concrete Ltd, Ashburton}

RECOMMENDATION

Grant or Decline

88. I consider that the Committee could *grant* the application if it considers the effects acceptable.

Duration

89. The applicant has requested 35 years. I consider there is no reason to grant less.

RECOMMENDED CONDITIONS

90. The applicant has directly and indirectly proposed a number of conditions for the consent. I have listed these conditions, with the wording altered to improve the certainty and enforceability, and to reflect what was notified.

CRC061432 To discharge contaminants to air

Draft Proposed Conditions

<1> The discharges to air shall only consist of particulate matter derived from the mixing and batching of concrete, located at the premises of AML Limited, 160 McLeans Island Road, Harewood, Christchurch, at map reference NZMS 260, M35: 7257–4880, as shown on Plan CRC061432A which forms part of this consent.

<2> The discharges to air shall not cause deposited or suspended particulate material which is offensive or objectionable beyond the boundary of the property, which for the purposes of this consent is outlined on Plans CRC061432B and CRC06432C, which form part of this consent.

<3> The consent holder shall take all practicable measures to prevent the emission of dust when the concrete components are being loaded onto trucks and handled at the site. This may include but not be limited to, the use of water spray dust suppression.

<4> Any spillages associated with the handling of sand, aggregate or cement materials involved in the batching process shall be cleaned up immediately.

<5> Water sprays shall be applied to bulk material stockpiles and any other unconsolidated surfaces as required in order to minimise airborne dust dispersal.

<6> The filtration systems in the cement silos shall operate at all times when the concrete batching plant is in operation.

<7> The filtration systems in the cement silos shall be maintained in an effective operating condition at all times and in accordance with the manufacturers instructions, if any. A record of any maintenance carried out on the filtration systems shall be kept. This record shall be provided to the Canterbury Regional Council upon request.

<8> Within one month of the commencement of this consent, a management plan for the controlling air discharges from the site shall be submitted to the Canterbury Regional Council. This management plan shall set out how conditions of this consent shall be complied with. A copy shall also be held by the consent holder along with a copy of the consent.

<9> A record of any complaints relating to particulate matter shall be maintained and shall include:

- (a) location where the particulate matter was detected by the complainant;
- (b) date and time when the particulate matter was detected;
- (c) a description of the wind speed and wind direction when the particulate matter was detected by the complainant;
- (d) the most likely cause of the particulate matter detected; and
- (e) any corrective measures undertaken.

<10> The Canterbury Regional Council may, once per year, on any of the last five working days of May or October each year, serve notice of its intention to review the conditions of this consent for the purposes of:

- (a) dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
- (b) requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or

<11> The lapsing date for the purposes of section 125 shall be 30 June 2011.

Signed: _____

Date: _____

Kevin Swete
Consents Investigating Officer

REFERENCES

Canterbury Regional Council, 1991. *Transitional Regional Plan*.

Canterbury Regional Council, 1998. *Regional Policy Statement*.

Canterbury Regional Council, 2002. *Proposed Canterbury Natural Resources Regional Plan: Air*.

Department of Labour. 2002. *Workplace Exposure Standards*. Occupational Safety and Health Service, Department of Labour, Wellington.

Ministry for the Environment/Ministry of Health, (2002). *Ambient Air Quality Guidelines*.

Tau, T.M., Goodall, A., Palmer, D. and Tau, R. *Te Whakatau Kaupapa. Ngai Tahu Resource Management Strategy for the Canterbury Region*. Aoraki Press, 1990.

US Department of Health and Human Services, (2005). *NIOSH Pocket Guide to Hazards*.

US Environmental Protection Agency *AP-42 Emission Factors, 5th Edition*.
<http://www.epa.gov/ttn/chief/>

**Before the Regulation Hearing Committee appointed
by Canterbury Regional Council**

IN THE MATTER OF The Resource Management Act
1991

AND

IN THE MATTER OF Application CRC060440 by
Selwyn District Council for a
discharge permit to discharge
stormwater that may contain
contaminants into land.

Section 42A Officer's Report

Date of Hearing:

Report of *Ivan Holland*

1. I hold the position of Team Leader for the Consents Investigations – Discharges Team at the Canterbury Regional Council (CRC). I hold a Bachelor of Applied Science and Bachelor of Laws degree from the Queensland University of Technology. I have over seven years experience in the environment and resource management sector.
2. This report presents the audit of the application and addresses the relevant information and issues raised. It should be emphasised that any conclusions reached or recommendations made in this report are not binding on the Regulation Hearing Committee.

INTRODUCTION

3. Selwyn District Council has applied for a resource consent to discharge stormwater to ground from roads and driveways, car parking, heavy transport/loading areas and building roofs, from a proposed industrial subdivision at Izone Drive, Rolleston.
4. The subdivision will be a business park and is referred to as the Izone Industrial Park in the application.

Background

5. Selwyn District Council proposes the subdivision of a council-owned block of land in Rolleston into multiple industrial lots. At the time of application, the land was leased to a local farmer for grazing.
6. Glasson Potts Folwer Limited (GPF) prepared the application and assessment of environmental effects (AEE) on behalf of Selwyn District Council. Bianca Sullivan (Kingett Mitchell Limited) conducted an initial audit of the application on behalf of the CRC and recommended the application be notified as the effects of the activity on the environment would be more than minor and parties likely to be adversely affected by the activity had not provided written approval. Tim Mallett (Team Leader) concurred with this recommendation and public notification was undertaken.

Notification

7. This application was publicly notified in The Press newspaper on 19 November 2005 (shown below).

<p>Applicant: Selwyn District Council Address: C/- Glasson Potts Fowler Limited, PO Box 13875, CHRISTCHURCH Attn: Andrew Nichols</p>
<p>CRC060440 - To discharge stormwater containing contaminants into land, in circumstances which may result in these contaminants (or others emanating as a result of natural processes from these contaminants) entering water. The stormwater discharges will be from roads, driveways, carparking and heavy transport/loading areas and other hard standing areas and building roofs via sumps, oil and sediment traps, infiltration basins and swales. The site is the proposed Izone Industrial Park, Izone Drive, Rolleston, at or about map reference NZMS 260: M36 5940-3540.</p> <p>The discharges of stormwater described above may contain contaminants such as suspended sediments, heavy metals, hydrocarbons, nutrients and micro-organisms and other industrial and activity specific contaminants which will depend on the businesses which locate in the subdivision (unknown at this conceptual stage).</p> <p>A consent duration of 35 years has been requested.</p>

8. Seventy one letters were sent to affected parties on 22 November 2005. Affected parties notified included adjacent landowners, the Rolleston Residents Association, Te Taumutu Runanga, Community and Public Health and the Selwyn District Council and Environment Canterbury district planners.

Submissions

9. A total of 2 submissions were received, as follows:

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Mr & Mrs Nigel Craig & Marie Louise Lilley	None specified	Support	No
Tim Nominees Ltd	Owner of adjacent property concerned about effects of contaminant discharge on their property and their tenants. Wish to be notified of what activities will be undertaken in the subdivision and what contaminants the activities will generate.	Oppose	No

10. Environment Canterbury was provided a copy of a letter from Claire Holloway, on behalf of TIM nominees Ltd, sent to Connell Wagner on 13 March 2006, stating that based on the receipt of further information, TIM Nominees Ltd wished to retract their objection to the proposal.

DESCRIPTION OF THE PROPOSED ACTIVITY

11. The applicant proposes to:

- (i) Discharge contaminants into land from a proposed 72 hectare, industrial subdivision of SDC-owned land at Izone Drive, Rolleston.
- (ii) The proposed subdivision will be of Lot 1 Deposited Plan 342459 (115.5 hectares) into 7 lots as per Attachment 1. The discharge consent relates to stormwater from proposed Lots 1-5 and Lot 7 being a total area of 69.245 hectares. The proposed Lot 7 (5650m²) will be used to extend Izone Drive.
- (iii) The discharge of contaminants will be stormwater from roads and driveways, car parking, heavy transport/loading areas and building roofs.

Road stormwater

- (iv) The stormwater from the subdivision **road**ing will be managed for each of the 6 subcatchments (as per Appendix 2) being Eastern Roundabout, North Road, Boulevard, Izone Drive Extension, Western Roundabout and Big Square as follows:
 - The Eastern Roundabout: Stormwater from the South Road will be directed to sumps, then oil/sediment traps before being discharged into land via soakpits spaced approximately 200 metres apart. Stormwater from the East Road will be directed to a sump, then an oil/sediment trap before being discharged into land via a soakpit. Secondary flow from South Road and East Road will be directed via bubbleup sumps to discharge into land in a 750m³ infiltration basin within the roundabout. The roundabout stormwater will flow into the basin through a slotted nib kerb. Low flow field drains will be installed in the basin. A raised orifice soakpit will receive stormwater in excess of 250m³ being the 25 millimetre first flush.
 - North Road: Stormwater will be directed to one of 4 sumps, then oil/sediment traps before being discharged into land via soakpits spaced approximately 200 metres apart. Secondary flow will be directed to, and discharged into land via, a 320m³ infiltration basin at the eastern corner of the subdivision.
 - Boulevard: Stormwater will be directed to two long (210 metres) and one short (85 metres) grassed swales located in the road traffic islands. The swales will be 5 metres in width and have check dams. The discharge into land will occur via soakpits at the eastern/lower ends of the swales.
 - Izone Drive Extension: Stormwater will be directed to a swale (150 metres in length) located in the road traffic island. The swale will be 5 metres in width and have check dams. The discharge into land will occur via a soakpit at the southeastern/lower end of the swale.
 - Western Roundabout: Stormwater will be directed to a sump, and then oil/sediment traps before being discharged into land via a soakpit. Secondary flow will be directed via a bubbleup sump to discharge into land in a 250m³ infiltration basin within the roundabout. The roundabout stormwater will flow into the basin through a slotted nib kerb. Low flow field drains will be installed in the basin.
 - Big Square: Stormwater will be directed to an unspecified number of sumps and discharged into land via an unspecified number of bubbleup sumps to a basin within the square. The capacity of the basin will be 370m³. A raised orifice soakpit will receive stormwater in excess of 175m³ being the 25 millimetre first flush.

Individual lot stormwater

- (v) The stormwater from the **individual lots** within the subdivision will be managed for driveways, car parking, heavy transport/loading areas and building roofs as follows:
- Driveways: Stormwater will be directed via bubbleup sumps into grassed swales adjacent to the driveways. The discharge into land will occur via infiltration trenches located along the base of the swales. The infiltration trenches will be constructed with a 300 millimetre deep sand/soil layer.
 - Car parks: Stormwater will be directed through slotted kerb spacers to rain gardens. The rain gardens will be infiltration trenches planted with vegetation.
 - Heavy transport/loading areas: Stormwater will be directed to sumps, then oil/sediment traps, before being discharged into swales and infiltration trenches.
 - Building roofs: Stormwater will be directed via pipes sealed from surface water runoff to be discharged into land via soakpits.
- (vi) A detailed subdivision plan was not provided with the application. Stormwater catchments areas for individual lots were not provided. Stormwater treatment and disposal information for the driveways, car parking, heavy transport/loading areas and building roofs was limited to a concept plan.

LEGAL AND PLANNING MATTERS

The Resource Management Act 1991 (RMA)

12. Section 15(1)(b) of the RMA states that:

“No person may discharge any – contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water ... unless the discharge is expressly allowed by a rule in a regional plan and in any relevant proposed regional plan, a resource consent, or regulations.”

13. The SDC intends to discharge the contaminants entrained in stormwater into land within Izone Industrial Park, Rolleston and therefore the discharge must be expressly allowed in accordance with section 15(1).

Regional Plans

Transitional Regional Plan (TRP)

14. The TRP contains a general authorisation for the discharge of stormwater, subject to the following relevant conditions:

“(1) The discharge of roof stormwater from buildings and structures either into the ground or directly into groundwater provided it is via a sealed system that excludes all other stormwater; except in the following areas:

(e) that part of the Selwyn District Council area east of the Halswell River;

(4) The discharge of stormwater from roading into the ground, outside of the Christchurch City Council urban area.”

15. Rolleston and the Izone Industrial Park are west of the Halswell River and stormwater from the buildings roofs of the subdivision will be discharge into land via a sealed system. In isolation, the roof stormwater discharge into land could be considered a permitted activity (expressly allowed) under the TRP.
16. North Road, South Road, East Road and the Izone Drive Extension will be under the control of the Selwyn District Council and appear to fall within the Local Government Act 1974 definition of "road". In isolation, the stormwater discharge from these roads into land could be considered a permitted activity (expressly allowed) under the TRP.
17. The stormwater discharge into land from the driveways, car parking areas and heavy transport/loading areas is not expressly allowed by the general authorisation and must be authorised by a resource consent as a discretionary activity.

Proposed Natural Resources Regional Plan (PNRRP)

18. Rule WQL5 within Chapter 4 of the PNRRP allows a discharge of stormwater containing contaminants onto or into land to be a permitted activity, subject to conditions.
19. Condition 5 of Rule WQL5 states that:

The discharge shall not be from a stormwater collection system established after the date of notification of this rule which collects stormwater from:

(b) an area greater than two hectares elsewhere in the region.
20. The subdivision is not within Zone BP and the consent application is for an area greater than 2 hectares. As such the discharge of stormwater associated with the subdivision must be authorised by a resource consent as a discretionary activity under Rule WQL57.
21. The proposed stormwater discharge may also breach other conditions of Rule WQL5 however as the discharge requires consent, these have not been considered.

CONSULTATION

22. The applicant consulted with the following neighbours to the proposed subdivision site: AJ, AJ, JP & JM Cockburn and KF Chaney. The AEE states that no further consultation is planned.
23. Environment Canterbury notified Te Taumutu Runanga of the above stormwater discharge application on 12 August 2005. Te Taumutu Runanga responded with a list of queries on 17 August 2005. A response to the relevant queries was provided by Environment Canterbury on 9 May 2006. No further correspondence from Te Taumutu Runanga has been received.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

Land use

24. The subject land of the proposed subdivision is zoned Business 2. The AEE states that zone Business 2 provides for activities such as warehousing, distribution centres and light industrial activities. The AEE acknowledges that zone Business 2 also allows for a wider range of activities, many of which would require resource consent,

including: meat processing, cement manufacture, asphalt paving manufacture, timber treatment, oil refining, power generation and steel fabrication.

Rainfall

25. The AEE uses rainfall data from Wigram Aerodrome (approximately 15 kilometres northeast of Rolleston) to provide an approximation for Rolleston rainfall. The AEE relies on rainfall data between 1938 and 1969 to conclude that the mean monthly rainfall ranges between 42 and 75 millimetres, with May and July recording the greatest mean rainfall (75, 62).

Soils

26. The AEE relies on Environment Canterbury GIS information to determine that the site soils are Eyre shallow sandy loam with bands of Templeton moderately deep silt loam. The AEE predicts that these soils are likely to be underlain by fine sands and clay silts based on test pits and bore logs (Appendix D and E of the AEE). The AEE states that infiltration should be between 30 and 50 mm/hr based on measurements from other sites of similar soil type (These measurements and locations were not included in the AEE).

- Based on my review of Environment Canterbury GIS information, I agree with the applicant's determination of expected soil types on the proposed subdivision site.
- I have reviewed the six test pits included in the AEE. The test pits are from the Park Grove subdivision (approximately 1 kilometre southeast of the proposed subdivision). The test pits show sandy and/or siltbound gravels commencing at between 0.2 and 2 metres below the ground surface.
- I have reviewed the bore log for M36/7533. Of the bore logs provided in the AEE, only M36/7533 is located on the proposed subdivision site. The bore log for M36/7533 (located at the southeastern corner of proposed subdivision) shows gravels and sands commencing at 0.3 metres below ground level (bgl).
- John Weeber (Hydrogeologist – Environment Canterbury) provided informal advice that the soils will be well drained, infiltration rates may reach 60-70 mm/hr and that as such flooding would be unlikely. John also stated that in some areas vertical percolation would be slow but that the layers inhibiting vertical transport would not be continuous and consequently vertical water movement would be variable.

Groundwater

27. The AEE states that the proposed subdivision is located over a semi-confined/unconfined aquifer within the Selwyn-Waimakariri Groundwater Allocation Zone.
- Based on my review of Environment Canterbury GIS information, I agree that the proposed subdivision is located over a semi confined or unconfined aquifer.
28. The AEE states that there are 17 wells within 1 kilometre of the proposed subdivision site that range in depth from 25 to 195 metres bgl and that the shallowest water (in the bore logs included in the AEE) is 20 metres bgl. The AEE states that although water level observation results indicate groundwater levels <10 metres bgl, that these

levels are unlikely to represent a water table aquifer as the deeper water-bearing strata are confined by a clay rich layer.

- Based on my review of Environment Canterbury GIS information, the proposed subdivision is located within a “groundwater >6 bgl” region. The calculated minimum water level for the 17 wells within 1 kilometre of the proposed subdivision ranged between 16.1 and 25.9 metres bgl.
29. The AEE states that there are 7 wells used for domestic or irrigation supply between 295 and 670 metres downgradient of the proposed subdivision and that these wells are between 39.8 and 54 metres deep.
- Environment Canterbury GIS information shows 15 wells within 1 kilometre of the downgradient boundary of the site. The wells are recorded as having a range of uses including domestic supply, stock drinking and commercial. The calculated minimum water level for these wells ranges between 15.7 and 24.1 metres bgl. There are two community supply wells within 1 kilometre of the proposed subdivision site. The community supply wells are between 750 and 950 metres from the site and neither are located directly downgradient. The subdivision site is over 500 metres from the closest community supply protection zone. The nitrate concentrations in samples collected from downgradient wells between 1978 and 1997 range from 0.8 to 12 mg/L and have not exceeded 8 mg/L since 1992.
30. The AEE states that groundwater in the locality runs in an eastsoutheast direction based on piezometric information from local public supply bores (M36/2495 - 1700 metres east of proposed subdivision - flow direction of 99 degrees, and M36/3922 - 1080 metres southeast of proposed subdivision - flow direction of 116 degrees).
- Based on my review of Environment Canterbury GIS information, groundwater is expected to flow in a southeast direction based on piezometric information from local public supply bores (M36/3074 - 800 metres west of proposed subdivision - flow direction of 124 degrees, and M36/0026 - 930 metres south of proposed subdivision - flow direction of 136 degrees).

Surface water

31. The AEE states that although the Waimakariri stock water race runs parallel to the southern and Railway Road boundary, there are no functioning surface water bodies on the site of the proposed subdivision. The AEE states that land drainage under the existing land use of the property is to ground with no visible surface run-off and predicts (based on soils types) that most water will dissipate rapidly horizontally with only slow vertical percolation until the cleaner gravels below are reached.
- The Environment Canterbury GIS information shows a stream crossing the northwest boundary of the proposed subdivision. The stream is shown to extend a short distance into the subdivision area. A stream is shown running along the Railway Road boundary. The gradient of the proposed subdivision site is shown to be less than 20 degrees.

ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS

32. The applicant advised of the following potential adverse effects on the environment from the proposed stormwater discharge:

- effects on groundwater quality;
- effects on drinking water or irrigation supplies
- effects on flooding
- effects of the build-up of contaminants in the subsoil

33. I have used a checklist developed from similar activities and published on the Canterbury Regional Council's web site to determine if all relevant effects have been considered. The following list of effects are considered relevant to this activity:

- Adverse effects of the discharge on groundwater quality;
- Adverse effects of the discharge of contaminants on surface water quality;
- Adverse effects on land from slow entry of stormwater into groundwater (flooding);
- Adverse effects of localised changes in groundwater level;
- Cumulative effects of contaminants on soil; and
- Adverse effects of the discharge on tāngata whenua values.

Adverse effects of the discharge on groundwater quality

34. The AEE states that the activities that will occupy the subdivision lots are not known. The zoning of the proposed subdivision allows a wide range of activities and as such, the stormwater may also include hazardous chemicals (stored or handled on site) depending on the occupation of the industrial lots within the proposed subdivision. Consequently, the following audit of adverse effects of the discharge on groundwater is limited to contaminants commonly present in stormwater.
35. The AEE includes a table of predicted concentration ranges and means for some of the contaminants commonly present in stormwater (Table 4 – based on Urban Runoff Data Booklet, Williamson, 1993). The AEE also envisages the stormwater will contain litter and that the proposed subdivision is likely to result in an increase of the concentration of the contaminants (listed in para. 34 above) in the stormwater.
36. The AEE includes a table of the predicted performance of the various components of the proposed stormwater system (Table 5 – based on industry and independent sources assuming proper maintenance). The AEE states that sumps have the potential to remove the majority of sediment over >500 microns and capture 58% of total sediments in the stormwater. The oil/sediment traps should remove the “finer residue” and oil/hydrocarbons from the stormwater prior to discharge to the soakpits. Finer suspended contaminants and oils/hydrocarbons are predicted to settle out of the stormwater in the infiltration basins, swales and rain gardens.
37. Contaminants commonly present in untreated stormwater include:
- Suspended sediments (fine sediment)
 - Hydrocarbons (from fuel/oil leaks and spills)
 - Nutrients (including nitrogen and phosphorus)

- Heavy metals (both absorbed to particles and dissolved)
 - Micro-organisms (from sources such as animal faeces)
 - Organic matter (including leaves and detritus).
38. The AEE states that the majority of metals and some nutrients in the stormwater can be expected to be adsorbed to sediment. These adsorbed contaminants can be expected to be removed with the sediment removed by the sump and oil/sediment trap combination and by the infiltration basins, swales and rain gardens.
39. The stormwater treatment information provided in the AEE indicates that dissolved contaminants such as nutrients and biochemical oxygen demand (BOD) will not be treated or removed by the sumps. The AEE states that a small proportion of dissolved nutrients and BOD should be removed from stormwater in the infiltration basins, swales and rain gardens through plant and microbiological uptake and some nutrients may be removed by the oil/sediment trap.
40. The AEE states that the effects of the discharge of the dissolved contaminants in the stormwater on groundwater should be low as: (i) the clay and sand bound gravels will force a high level of horizontal dispersion over downward migration, and (ii) there is a strong semi-confinement of the groundwater.
41. The applicant has used urban runoff information to predict the likely concentration of contaminants in the stormwater. These concentration figures are likely to be an underestimate of the concentrations of contaminants in stormwater from an industrial subdivision.
42. Limited independent information is available on the performance of the treatment devices proposed in relation to contaminant removal. However, it is generally accepted that best practice stormwater management requires the first flush (generally taken to be the first 25 millimetres of rain) to be given the highest level of treatment as the first flush contains the highest levels of contaminants. This proposal involves the first flush stormwater from some sections of roading being direct to soakpits (lower level of treatment) and additional stormwater being directed to infiltration basins (higher level of treatment). In essence, providing a lower level of treatment to the stormwater expected to have the higher levels of contaminants.

Adverse effects of the discharge of contaminants on surface water quality

43. According to the AEE, the only functioning surface water near the site is a water race that runs parallel to the southern and Railway Road boundary of the proposed subdivision. Further, the AEE states that there are no functioning natural or constructed water bodies on the site and that under the existing landuse there is no visible off-site runoff. As noted previously, Environment Canterbury GIS information shows a stream just crossing the northwest boundary of the proposed subdivision. The applicant has not proposed a discharge to surface water and as such contamination of surface water from the subdivision stormwater has not been considered any further.

Adverse effects of the discharge on land from the slow entry of stormwater into groundwater (flooding)

44. Discharge of stormwater onto or into land can cause localised flooding if the stormwater system has been insufficiently sized or has not been maintained

adequately. Ponds of stormwater can cause damage to neighbouring properties, affect amenity values, and cause odour.

45. The AEE states that the hydraulic capacity of the road stormwater systems substantially exceeds the volume expected to result from a 2% annual exceedence probability (AEP) or 50 year average recurrence interval (ARI) event. Modelling (Modified Rationale Method using Hydrocad) outputs for runoff volumes from the roads (8 hectares) were included in the AEE.
46. The AEE states that the soakpits are capable of discharging stormwater into the ground at a rate of 19 L/sec. The following basin volumes have been proposed: Eastern Roundabout - 750 m³, North Road – 320 m³, Western roundabout - 250 m³, and Big Square - 370 m³. The following sizes have been proposed for the swales: Boulevard – two at 210 metres and one at 85 metres in length, 5 metres in width, and Izone Drive Extension – 150 metres in length, unspecified width.
47. The applicant indicated in correspondence dated 9 May 2006 that first flush volumes (based on 25mm of rainfall) were calculated for the roading catchments using a percent contribution from pervious and impervious surfaces. The percent contributions of pervious and impervious surfaces used in the volume calculations for the roading catchments were not provided in the AEE.
48. The applicant indicated in correspondence dated 9 May 2006 that stormwater flow in addition to the capacity of the infiltration basins will be directed “onto the adjacent road crown which will be contoured appropriately”.
49. Tony Oliver (Hazards Analyst – Environment Canterbury) provided the following comments in relation to the proposed stormwater system described in the AEE:
 - The infiltration rates were estimated based on results from tests at other adjacent areas. On-site infiltration tests should be carried out to ensure the rate for adequate treatment does not exceed 50mm/hr. An infiltration rate of 20mm/hr is generally allowed when designing an infiltration basin to allow for future clogging.
 - The first flush volumes were difficult to validate in the absence of information on the percent of pervious and impervious surfaces used in the calculations.
 - Limited information was provided on individual lot stormwater discharges particularly relating to the capacity of the stormwater system and the secondary flow paths.
 - The rainfall design (HIRDS 2) used to calculate stormwater quantities should be modified to take into account local variation and predicted changes to rainfall.

Adverse effects of localised changes in groundwater level

50. Interception of rainfall and subsequent discharge at a different location may affect natural groundwater levels. Duration of such change depends on distance between interception and discharge, as well as permeability of the aquifer and groundwater levels affecting slope. Localised increases in groundwater levels can cause adverse effects resulting from saturation of soils resulting from unwanted seepage or high groundwater levels.

51. SDC has not specifically assessed this effect. However, the proposed stormwater system comprises numerous discharge locations and except in significant rain events that trigger secondary flow, stormwater is expected to discharge within 200 metres of where it is collected. As there is no significant surface drainage on the property, rain on previous areas within the subdivision is highly likely to infiltrate where it falls.

Cumulative effects of contaminants on soil

52. Stormwater contains contaminants such as heavy metals and petroleum hydrocarbons that persist in the environment and can accumulate in filtration treatment systems such as swales. Over time, this may lead to concentrations of these contaminants exceeding guideline values designed to protect human and ecosystem health.
53. The AEE states that a significant proportion of key contaminants in urban stormwater are adsorbed to suspended sediment. The AEE supports this statement in relation to metals with a reference to a soil science publication.
54. The AEE states that suspended sediment will be removed from the stormwater by the sumps (up to 58%) and oil/sediment traps (75-95%) prior to discharge to soakpits. The AEE relies on a “mix of qualitative and quantitative information ... from a mixture of industry and independent sources” to support the above statement. I was not able to confirm the estimated sediment removal percentages via other sources.
55. Based on the substrate, the AEE predicts that any build-up of contaminants is not likely to migrate far from the soakpit. The soakpits will be lined with geofabric filter material which may further remove fine sediment and associated contaminants.
56. There is a potential for soil to be contaminated from stormwater runoff over the long term, particularly as this will be an industrial subdivision. The AEE details proposed inspection and maintenance of the stormwater system which includes cleaning the sumps and soakpits, pumping out the oil/sediment traps, visible contaminant removal and soil sampling of the infiltration basins, swales and rain gardens.
57. Although not specifically addressed in the AEE, monitoring of soil in the infiltration basins and rain gardens for a range of expected contaminants was included in the applicants proposed conditions. The proposed soil monitoring has been assessed with reference to PDP (2004) and soil monitoring required on resource consents for similar stormwater discharges.

Adverse effects of the discharge on tāngata whenua values

58. The majority of relevant queries raised by Te Taumutu Runanga have been addressed in the application:
- Comprehensive monitoring – the applicant has proposed an inspection and maintenance programme for the stormwater system and has incorporated this programme into draft consent conditions.
 - No discharges within 20 metres of surface water body – the proposed stormwater discharge is into land greater than 20 metres from any surface water body.
 - Soil contamination monitoring every five years – The applicant has proposed a monitoring programme for soil contamination in the stormwater system (sampling every 5 years) and has incorporated this programme into draft consent conditions.

59. The following query was not addressed in the application:

- Use riparian and wetland plants - The application did not specify the types of plants to be used in the proposed rain gardens. The use of native plants has been included as a recommended condition.

ADDITIONAL MITIGATION MEASURES

60. Mitigation measures were not specifically addressed in the AEE. The AEE did detail the expected performance of the proposed stormwater treatment devices and a proposed maintenance regime for the devices.

61. The following additional mitigation measures are recommended and have been addressed in the proposed conditions:

- A requirement that the rain gardens be planted with riparian and wetland plants. This will enable the consent holder to address rununga concerns.
- A requirement for the consent holder to keep and provide records of all inspection and maintenance of the stormwater system. This will enable the consent holder to demonstrate ongoing compliance with maintenance requirements other than through one-off compliance inspections by Environment Canterbury.
- A requirement to minimise the discharge of sediment into the stormwater system during the construction period. Stormwater discharges during the construction period are likely to be high in suspended sediments which may reduce the efficacy of stormwater treatment devices.
- A requirement to manage spills of hazardous substances in the stormwater catchment area. Although the subdivision is zoned to allow activities likely to use hazardous substances, the AEE did not investigate the effects of stormwater contaminated by hazardous substances. As such, measures are required to prevent hazardous substances entering the stormwater.

CONSIDERATION OF ALTERNATIVES

62. SDC has not specified their consideration of alternatives to the proposed activity in the AEE.

POLICIES AND OBJECTIVES

Regional Policy Statement (RPS)

63. The Regional Policy Statement contains the following objectives and policies that are relevant to this application.

64. Chapter 6 – Provision for the Relationship of Tāngata Whenua with Resources

- Objective 1 and Policies 1 and 2 relate to recognising the role of and allowing involvement of rununga in resource management.
- The discharge lies with the rohe of Te Taumutu Runanga and they were informed of the application. Input made by the Runanga has been included in this report for consideration of their issues by the RHC.

65. Chapter 9 – Water

- Objective 3 relates to safeguarding the value and quality of water resources. Policy 9 promotes that management of discharges and the potential adverse effects of discharges on water quality. Policy 10 promotes investigating and providing for water bodies which should be sustained as far as possible in their natural state. Policy 11 promotes land use practices which maintain and where appropriate enhance water quality. Policy 12 promotes locating activities involving hazardous substances away from vulnerable water resources in the absence of adequate precautionary measures.
- In general terms, this application is consistent with the relevant water policies of the RPS. The applicant has proposed measures to reduce the stormwater discharges into land contaminating groundwater and the groundwater has a degree of natural protection from contamination by the discharges. The applicant has not proposed to discharge to surface water.

66. Chapter 17 – Hazardous Substances

- Objective 1 relates to preventing or mitigating adverse environmental effects from hazardous substances. Policy 4 promotes only authorising discharges of hazardous substances where environmental effects are prevented or mitigated.
- The land to be subdivided is zoned Business 2 which allows for industries likely to use hazardous substances. The occupation of the subdivision is unknown, however the applicant has not requested authorisation for the storage or discharge of hazardous substances.

Proposed Natural Resources Regional Plan (PNRRP)

67. Chapter 4: Water Quality of the PNRRP sets out objectives and policies relating to water.

68. Objective WQL2 outlines water quality outcomes for groundwater and contaminated land and sets guidelines for groundwater quality for semi-confined and unconfined aquifers. The guidelines require that where the water quality is affected by human activities, the groundwater quality must meet certain values: the maximum nitrate nitrogen concentration shall not exceed 11.3 mg/L, the water quality shall remain within the aesthetic determinands listed in the Drinking Water Standards in New Zealand, the *E coli* shall be less than one per 100 ml and other determinands, of health significance, shall not be greater than 1/10 the Maximum Acceptable Value.

- Given the vertical distance to groundwater and the proposed stormwater treatment measures, the down-gradient groundwater quality is unlikely to be degraded beyond the specified levels.

69. Policy WQL6 promotes the management of point source discharges onto or into land which affect soil or groundwater quality. Policy WQL8 promotes preventing the entry of hazardous contaminants to groundwater.

- The proposed subdivision is not serviced by a reticulated stormwater network and the stormwater system has been designed to suit the soil infiltration capacity, measures have been proposed to reduce contamination of the soils and groundwater. The applicant has not requested authorisation of the discharge of hazardous substances or waste from industrial or trade processes. In light of the

above, I don't consider the application to be inconsistent with the objectives and policies of the PNRRP.

PART 2 MATTERS

70. Under section 104 the consent authority must consider applications subject to Part II of the RMA.

Purpose of the RMA (s5)

71. Section 5 of the RMA states:

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

72. I am of the opinion that, provided proposed mitigation measures are implemented, the discharge of stormwater from the proposed subdivision will not be inconsistent with the purpose of the RMA.

Matters of National Importance (s6)

73. Section 6 of the RMA states:

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:

74. I am of the opinion that the discharge of stormwater from the proposed subdivision will not compromise any of the matters of national importance.

Other Matters (s7)

75. Section 7 of the RMA states:

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 have particular regard to –

76. I am of the opinion that the discharge of stormwater from the proposed subdivision will not compromise any of the other matters listed in section 7.

Principles of the Treaty of Waitangi (s8)

77. Section 8 of the RMA states:

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 take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

78. Environment Canterbury has consulted Te Taumutu Runanga regarding the proposed activity (see Consultation). The proposed stormwater discharge will not occur in a silent file area and a response was provided to Te Taumutu Runanga in relation to their queries.

OTHER RELEVANT MATTERS

Decisions of the Environment Court

79. I am not aware of any decision of the Environment Court that would preclude the granting of this consent.

Previous Council Decisions

80. The Russley Business Park Limited was granted consent to discharge stormwater into land from an industrial subdivision in Harewood (CRC052460), with similar conditions to those proposed for this discharge, on 21 July 2005.

RECOMMENDATION

Grant or Decline

81. Based on the audit of the information provided with the application and having considered all relevant matters under section 104 of the Act, I recommend that the application could be granted by the Regulatory Hearing Committee (RHC), subject to the recommended conditions.
82. A copy of the draft recommended conditions were provided to SDC. SDC have provided comments on the draft recommended conditions some of which have been incorporated into the recommended conditions (see Attachment 2).

Duration

83. The applicant has requested a consent duration of 35 years.

RECOMMENDED CONDITIONS

84. The recommended conditions have been tabled in Attachment 1.

Signed: _____

Date: _____

Ivan Holland
Team Leader Discharges

Reviewer's comments:

Signed: _____

Date: _____

Tim Mallett
Principal Investigations Officer

REFERENCES

Canterbury Regional Council 2004. Proposed Natural Resources Regional Plan - Chapter 4: Water quality.

Canterbury Regional Council 1998. Regional Policy Statement. Report No R98/4. ISBN 1-86937-337-5.

Canterbury Regional Council 1991. Transitional Regional Plan. October 1991.

The Resource Management Act 1991. Consolidated version including the Resource Management Amendment Act 1995. August 2005.

Christchurch City Council 2003. Waterways, Wetlands Drainage Guide – Part B: Design. February 2003

Pattle Delamore Partners Ltd 2002. Assessment of Trigger Levels for Soil Contamination at Tumara Park Subdivision, October 2002

Attachment 1

CRC060440 To discharge contaminants into land

DESCRIPTION

1. The discharge shall be only stormwater from:

- (a) roads;
- (b) driveways, car parks and paths;
- (c) storage and loading areas; and
- (d) roofs;

within a 69.25 hectare industrial subdivision of Lot 1 DP 3424589 on Izone Drive Rolleston, labelled as Lots 1, 2, 3, 4, 5 and 7 on Plan CRC060440A (Drawing No.164, Rev.B), which forms part of this consent.

STORMWATER SYSTEM - ROADS

2. Stormwater from roads shall be discharged into land within the industrial subdivision, at or about map reference NZMS 260 M36: 594-354, as detailed in conditions 3 to 9 and shown on Plan CRC060440B (Drawing No.8801- 01B), which forms part of this consent.

3. (a) Stormwater from South Road, North Road and East Road shall be directed to sumps, and then oil/sediment traps before being discharged into the ground via soakpits.

(b) The sump, oil/sediment trap and soakpit systems shall be installed as per Plan CRC060440C (Drawing No.8801- 08A), which forms part of this consent.

(c) A sump, oil/sediment trap and soakpit systems shall be installed at least every 200 metres along South Road, North Road and East Roads.

4. (a) Stormwater from South Road and East Road, in excess of the first 25 millimetres of rainfall, shall be directed to an infiltration basin located within the East Roundabout.

(b) The infiltration basin shall be installed as per Plan CRC060440D (Drawing No.8801- 03A), which forms part of this consent.

(c) The infiltration basin shall have a capacity of at least 750 cubic metres.

(d) The infiltration basin shall be vegetated with grasses and native plants.

5. (a) Stormwater from North Road, in excess of the first 25 millimetres of rainfall, shall be directed to an infiltration basin located within the short road reserve at the eastern corner of the subdivision.

(b) The infiltration basin shall be installed as per Plan CRC060440D (Drawing No.8801- 03A), which forms part of this consent.

(c) The infiltration basin shall have a capacity of at least 320 cubic metres.

(d) The infiltration basin shall be vegetated with grasses and native plants.

6. (a) Stormwater from the Boulevard and Izone Drive Extension shall be directed to swales, located within traffic islands, before being discharged into land via soakpits.

(b) The Boulevard shall have two 210 metre swales and one 85 metre swale;

(c) Izone Drive Extension shall have one 150 metre swale.

(d) The swales shall be:

i. installed with check dams as per Plan CRC060440E (Drawing No.8801- 05A);

ii. at least five metres in width;

iii. grassed.

7. (a) Stormwater from the Big Square shall be directed to sumps, before being discharged into ground via an infiltration basin.

(b) The infiltration basin shall have a capacity of at least 370 cubic metres.

(c) Stormwater in excess of the first 25 millimetres of rainfall shall be discharged into ground via a raised orifice soakpit.

8. (a) Stormwater from West Road shall be directed to a sump, then oil/sediment trap before being discharged into the ground via a soakpit.

(b) The sump, oil/sediment trap and soakpit system shall be installed as per Plan CRC060440C (Drawing No.8801- 08A), which forms part of this consent.

9. (a) Stormwater from West Road, in excess of the first 25 millimetres of rainfall, shall be directed to an infiltration basin located within the West Roundabout.

(b) The infiltration basin shall be installed as per Plan CRC06440D (Drawing No.8801- 03A), which forms part of this consent.

(c) The infiltration basin shall have a capacity of at least 250 cubic metres.

(d) The infiltration basin shall be vegetated with native riparian and wetland plants.

STORMWATER SYSTEM – INDIVIDUAL LOTS

10. Stormwater from driveways, car parks, paths, storage and loading areas and roofs of each individual lot shall be discharged into land within the same lot, at or about map reference NZMS 260 M36: 594-354, as detailed in conditions 11 to 15.

11. Stormwater from driveways shall be directed to swales before being discharged into ground via infiltration trenches, located at the lowest point of the swales, installed as per Plan CRC060440F (Drawing No.8801- 02A) which forms part of this consent.

12. Stormwater from car parks and paths shall be discharged into ground via rain gardens, installed as per Plan CRC060440F (Drawing No.8801- 02A) which forms part of this consent.

13. Stormwater from the storage and loading areas shall be directed to sumps, then oil/sediment traps, then swales before being discharged into via infiltration trenches, located at the lowest point of the swales, installed as per Plan CRC060440F (Drawing No.8801- 02A) which forms part of this consent.

14. Infiltration trenches and rain gardens shall have a sand or soil layer of at least 300 millimetres in depth.

15. Stormwater from roofs shall be directed via a system sealed from other sources of stormwater, to be discharged into ground via soakpits, installed as per Plan CRC060440G (Drawing No.8801- 09A) which forms part of this consent.

16. (a) A certificate shall be submitted to the Canterbury Regional Council (Attention: RMA Compliance and Enforcement) within one month of development of any road or lot within the subdivision to certify that the stormwater systems have been installed in accordance with Conditions 2 to 15 of this discharge permit.

b) The certificate shall be signed by the person responsible for designing the stormwater systems detailed in conditions 2 to 15, or a suitably qualify or experienced person.

INSPECTION & MAINTENANCE

17. The stormwater system shall be inspected at least once every six months.

18. (a) Sumps shall be cleaned at least every six months.

(b) Oil/sediment traps shall be cleaned at least every twelve months.

(c) Visible hydrocarbons, sediment and litter shall be removed from the sumps and oil/sediment traps.

19. Soakpit inlet pipes and the pipe in the centre of the soakpit shall be cleaned at least every six months.

20. (a) Swales, infiltration basins and rain gardens shall be cleaned at least every six months.

(b) Visible hydrocarbons, sediment and litter shall be removed from the swales, infiltration basins and rain gardens.

21. (a) The swales and infiltration basins shall be grassed.

(b) The grass in the swales and infiltration basins shall be:

i. Maintained in a healthy and uniform state;

ii. Maintained at a length of between 50 and 150 millimetres; and

iii. Replanted where erosion or die-off has resulted in bare or patchy soil cover.

22. (a) The rain gardens shall be vegetated with native plants.

(b) The vegetation in the rain gardens shall be:

i. Maintained in a healthy and uniform state; and

ii. Replanted where vegetation has died.

23. The consent holder shall keep records of the inspection and maintenance of the stormwater system and shall provide the records to the Canterbury Regional Council (Attention: RMA Compliance & Enforcement) upon request.

SOIL MONITORING

24. (a) A sample of the sand or soil shall be collected from each infiltration basin and rain garden at least once every five years.

(b) The samples shall be collected by a suitably qualified or experience person.

5. (a) The samples collected under condition 24 shall be analysed for the following variables:

Total Chromium

Total Nickel

Total Cadmium

Total Copper

Total Zinc

Benzo(a)pyrene

Total petroleum hydrocarbons (C₇-C₉)

Total petroleum hydrocarbons (C₁₀-C₁₄)

(b) The samples shall be analysed using the most appropriate method, by a laboratory that is certified for the method by an accreditation authority such as International Accreditation New Zealand.

(c) The results of the analysis shall be reported in milligrams per kilogram dry weight soil.

(d) Results of the analyses undertaken in accordance with this condition, including the name of the person who collected the samples and the date the samples were collected, shall be provided to the Canterbury Regional Council (Attention: RMA Compliance & Enforcement) within one month of the date the samples were collected.

26. Sand or soil will be considered contaminated if any of the concentrations of the variables analysed under condition 25 exceed the following concentrations:

Total Chromium	600 [milligrams per kilogram dry weight soil]
Total Nickel	35 [milligrams per kilogram dry weight soil]
Total Cadmium	3 [milligrams per kilogram dry weight soil]
Total Copper	130 [milligrams per kilogram dry weight soil]
Total Zinc	200 [milligrams per kilogram dry weight soil]
Benzo(a)pyrene	1.64 [milligrams per kilogram dry weight soil]
Total petroleum hydrocarbons (C ₇ -C ₉)	1600 [milligrams per kilogram dry weight soil]
Total petroleum hydrocarbons (C ₁₀ -C ₁₄)	3200 [milligrams per kilogram dry weight soil]

27. In the event that sand or soil is considered contaminated under condition 26, the consent holder shall:

- (a) determine the extent of sand or soil considered to be contaminated;
- (b) remove any sand or soil considered to be contaminated;
- (c) replace any contaminated sand or soil with sand or soil that does not exceed the concentrations specified in condition 26; and
- (d) provide a report, detailing any action taken under condition 27(a), (b) and (c), to the Canterbury Regional Council (Attention: RMA Compliance & Enforcement) within one month of the detection of any contaminated sand or soil.

28. Any material removed in accordance with Conditions 18(c), 20 (b) and 27(b) shall be disposed of at an appropriate facility, and the consent holder shall provide the Canterbury Regional Council (Attention: RMA Compliance & Enforcement) with written confirmation of such disposal within ten working days.

SITE MANAGEMENT

29. The storage and use of hazardous substances, as defined in Chapter 4: Proposed Natural Resource Regional Plan, July 2004, shall not occur on roads, driveways, car parks, paths, storage and loading areas and roofs within the industrial subdivision.

30. In the event of a spill of a hazardous substance, the consent holder shall:

- (a) Take all practicable measures to prevent the hazardous substance being discharged into land via the stormwater system;
- (b) Remove the hazardous substance from the stormwater system;
- (c) Record and provide to the Canterbury Regional Council within 24 hours of a spill:
 - i. the date, time, location and volume of the spill;
 - ii. the substance spilt;
 - iii. measures taken to prevent the spilt substance being discharged into land via the stormwater system;
 - iv. the cause of the spill and measures that will be taken to prevent a reoccurrence and the timeframes for such measures.

31. During construction of the subdivision, the consent holder shall take all practicable measures to minimize the discharge of sediment into the stormwater system.

GENERAL

32. At least one month prior to the development of any lot within the industrial subdivision, the consent holder shall submit to the Canterbury Regional Council (Attention: RMA Compliance & Enforcement):

- (a) A description of the activities to be undertaken on the lot; and
- (b) Design plans of the stormwater system for the lot.

27. The Canterbury Regional Council may, on any of the last five days of September each year, serve notice of its intention to review the conditions of the consent for the purposes of:

(a) Dealing with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage;

(b) Requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment; or

(c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

28. The lapsing date for the purpose of section 125 shall be 30 June 2011.

Attachment 2

5. APPOINTMENT OF COMMISSIONERS TO HEAR AND DECIDE RESOURCE CONSENT APPLICATIONS

5.1 T J MALLETT AND H J BRACE – CRC063364

Application

To discharge contaminants septic tank effluent to land at Carters Road, Greenpark at or about map reference NZMS 260 M36: 6873-2448.

It is Council policy to appoint a commissioner when resource consent applications are lodged by a person employed by the Council.

The Commissioner recommended has satisfied Council staff he has the necessary criteria, including technical ability and availability, to carry out the duties required.

Report prepared by Donald Fraser, Consents Hearings Officer.
Endorsed, Don Rule, Consents Operations Manager.

Recommendation

That the Committee appoint Barry Loe as a Commissioner in respect of resource consent application CRC063364 by T J Mallett and H J Brace with the full power of the Council as a consent authority to:

- (a) decide whether the resource consent application shall be processed with or without notification;*
- (b) determine any preliminary matters associated with the resource consent application; and*
- (c) decide the resource consent application with or without a hearing.*

5.2 CENTRAL SOUTH ISLAND FISH & GAME – CRC030996

Application

To take and use water at a maximum rate of 800 litres per second from the Dead Arm of the Waihao River when levels are between 0.8 and 1.3 metres, at or about map reference NZMS 260 J40:6391-0827 as estimated by the Canterbury Regional Council. Water will be used for maintaining water levels within 26 hectares of the Wainono Reserve wetland. Wainono Reserve is a waterfowl and wetland habitat on Poingdestres Road, Studholme. A consent duration of 23 years is sought. This is an application to replace consent CRC940668B which was inadvertently surrendered.

The Commissioner recommended has satisfied Council staff he has the necessary criteria, including technical ability and availability, to carry out the duties required.

Report prepared by Donald Fraser, Consents Hearings Officer.
Endorsed, Don Rule, Consents Operations Manager.

Recommendation

That the Committee appoint Robert Nixon as a Commissioner in respect of resource consent application CRC030996 by Central South Island Fish & Game with the full power of the Council as a consent authority to:

- (a) hear and decide the resource consent application; and*
- (b) decide any preliminary issues associated with (a).*