

MEETING OF THE REGULATION HEARING COMMITTEE

TO THE CHAIRPERSON AND MEMBERS OF THE
COMMITTEE

MEMBERSHIP OF THE COMMITTEE

Cr A R McKay (Chairperson)
Cr C J Evans
Cr J T Demeter

A meeting of the Committee will be held on
Friday, 20 November 2009 at 9.00 am

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

BUSINESS: As per Order Paper attached
Agendas are available on our website three days prior to the date of the meeting -
<http://ecan.govt.nz/news-and-notice/minutes/Pages/Default.aspx>

Dr B R 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. CONFLICTS OF INTEREST
3. MINUTES OF THE MEETING - to be tabled
4. MATTERS ARISING
5. DEPUTATIONS AND PETITIONS

MATTERS FOR DECISION BY THE COMMITTEE

6. RESOURCE CONSENT APPLICATIONS FOR CONSIDERATION BY THE COMMITTEE
7. QUESTIONS
8. EXTRAORDINARY AND URGENT BUSINESS
9. NEXT MEETING – to be confirmed
10. CLOSURE

6. RESOURCE CONSENT APPLICATIONS FOR CONSIDERATION

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

Application	Permit No.
H M MacDonald	CRC100609
Calder Stewart Industries Limited	CRC030980

Recommended

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 durations, 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 CRC100609 by Mr
H.M. MacDonald for a discharge
to air.

Section 42A Officer's Report

Date of Hearing: November 2009

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. Mr H.M. MacDonald (the applicant) has applied for a resource consent to discharge contaminants to air from outdoor burning at 215, 229, & 241 Marshlands Rd, Shirley, Christchurch.
4. Mr Hugh MacDonald of 241 Marshlands Rd has prepared this application and Assessment of Environmental Effects (AEE).

Background

5. Mr MacDonald has made this application for discharges to air from two other properties as well as his own. This is one consent application covering periodic discharges from three different land parcels.
6. When first processing this application it was not clear whether it should be notified or not. I constructed a memorandum to Mr Peter Savage, Team Leader of the Discharge Team, setting out the factors indicating notification and also the factors indicating non-notification. Mr Savage considered that the application required public notification.

Notification

7. The notice below was printed in The Press on Wednesday 30 September 2009. Submissions closed on 29 October 2009. The notice was also posted to 52 potentially affected parties as well as Community and Public Health, Ngai Tuahuriri

Runanga, Te Runanga O Ngai Tahu, Christchurch City Council, two Shirley residents Groups, and Mahaanui Kurataiao Limited.

8. The potentially affected area (that is 200 m radius from a point within the three land parcels that was a maximum from the boundaries) was identified from the Canterbury Regional Council's geographic information system (GIS).

<p>Applicant: Mr H.M. McDonald Address: 241 Marshlands Road, Shirley, Christchurch 8083</p>
<p>CRC100609 – To discharge contaminants into air from the burning of tree prunings, cuttings, etc. on three land parcels, up to a total of six times per year. The proposed discharge locations are at 215, 229, and 241 Marshlands Road, Shirley, Christchurch, at or about map reference NZMS 260, M35: 8250–4617. Contaminants to be discharged are combustion products including particulate matter, oxides of nitrogen, and carbon monoxide. A consent with a duration of 35 years is sought.</p>

Submissions

9. Eight submissions were received within the 20 working day period specified in the Act. Three supported the application and five were in opposition. No submitter wished to be heard so, now this application can be heard by the Regulation Hearing Committee (RHC).
10. A summary of submissions are as follows:

Submitter	Issues	Support/Neutral/Oppose	To be heard
Buxton Family Trust & Others	No objection to the burning. Removal of prunings allows for more winter sun.	S	N
Mr G Hanham	No objection to the burning but considers 35 years duration excessive. Suggests 5 years.	S	N
Ms AM Blair	No objection to the burning but considers 35 years duration excessive. Suggests 10 to 15 years.	S	N
Mr MJB Brevoort & Ms LH Kho	The area is surrounded by residences. Also concerned about respiratory issues.	O	N
Mr R Hocken	Questions that the area is rural and considers 35 years duration excessive.	O	N
Mrs VF Buller	Concerned about local air pollution. The area is surrounded by residences.	O	N
Mr R & Mrs A Keaney	Concerned about local air pollution in the Clean Air Zone. Also concerned about respiratory issues. Suggests 5 years duration.	O	N
Mrs Y Lee	Concerned about air pollution and damage to the environment.	O	N

Note that the applicant has subsequently amended the application to request a 5-year duration (see Attachment 3 of this report).

DESCRIPTION OF THE PROPOSED ACTIVITY

11. The applicant proposes to:
- (i) Discharge contaminants to air from outdoor burning at 215, 229, & 241 Marshlands Rd, Shirley, Christchurch, at or about map reference NZMS 260 M35: 8249-4618 (legally identified as Lot 2 DP17875, Lot 1 DP55298, & Lot 1 DP315316);
 - (ii) Burn seasoned dry vegetation only;
 - (iii) Burn only in March, April, September and October each year;
 - (iv) Burn a maximum of six times per year (up to two times on each property);
 - (v) Burn for a maximum of four hours per time;
 - (vi) Burn early in the morning when weather conditions are still or with a light southwest wind;
 - (vii) Site the fires at locations as indicated in Plan CRC100609A, see Attachment 1 of this report;
 - (viii) Have the property owner in attendance at all burning times;
 - (ix) Request a duration of 5 years.

LEGAL AND PLANNING MATTERS

The Resource Management Act 1991 (RMA)

12. Section 15 (2) of the RMA states that no person may discharge contaminants to air in a manner that contravenes a rule in a regional plan or proposed plan, unless it is expressly allowed by a resource consent.

Regional Plans

Transitional Regional Plan (TRP)

13. The Transitional Regional Plan includes the Christchurch City Fires Bylaw 1991, which states that *"No person shall set on fire ... any vegetation or other combustible material ... except during the months of March, April, September, and October each year"*.
14. So under the TRP a resource consent is not required as burning is proposed be in the allowed months.

Partly Operative Natural Resources Regional Plan (NRRP)

15. The proposed activity does not fall within the ambit of Rule AQL29 – *"Outdoor burning of vegetation, paper, cardboard and untreated wood - permitted activity"*.
16. Condition 1 of Rule AQL29 is that discharge shall not occur within 100 metres upwind from any sensitive activity. The proposed fire sites are within 100 m of residential housing so this condition is not met.
17. Further, condition 2 is that discharge shall not occur within a residential area and the proposed site is zoned Living 1A in the Christchurch City Plan. So, this condition is

not met either and the activity defaults to Rule AQL34 - *“Outdoor burning not permitted by Rules AQL28 to AQL35 – discretionary activity.*

18. At the time of application (12 August 2009) and currently, Rule AQL29 was under appeal and therefore not operative. Therefore both the TRP and the proposed Rule apply i.e. outdoor burning is a *discretionary* activity under the proposed NRRP.

National Environmental Standards (NES)

19. On 1 September 2005 NES regulations came into effect.

20. 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.”

21. For this application the discharges are proposed to be during March, April, September and October which are months when PM₁₀ issues with the Christchurch airshed are not a major issue. I consider it is unlikely that the proposed discharges will increase significantly the concentration of PM₁₀ in the air-shed. So, NES regulations do not appear to apply and the application for discharge to air can be processed as usual.

CONSULTATION

22. The AEE has provided two written approvals from residential land parcels (each about 700 m²) to the west of the proposed sites.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

23. In section 11 of the application form, the applicant briefly describes the environment as rural and not densely populated. A sketch map is also included with the application which shows the positions of the three proposed burning sites and distances to boundaries etc.
24. Based on the Canterbury Regional Council's GIS, the proposed site is made up of three land parcels totalling 6.3 hectares (16 acres) in area. Residential sections of about 700 m² abut the site to the west and are across Marshlands Road to the east. Land parcels to the north across Queen Elizabeth II Drive range between 2 and 8 hectares.
25. The land to the north is zoned Rural 3 while the proposed site is Living 1A. The site is approximately two kilometres from the northern boundary of Clean Air Zone 1.

ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS

26. The application form includes two statements about adverse effects.
27. *“We always burn very early in the morning ... which avoids any adverse effects on neighbouring properties.”*
28. *“To avoid any adverse effects on neighbouring properties each burning site will be located in the most suitable position within each property.”*

29. While these statements include the words *adverse effects*, they are not an assessment of the effects as such but are mitigation measures. However, the possible adverse effects from the proposed activity are obviously excessive visual smoke, particulate matter, or odour.
30. It is difficult to audit the degree to which adverse effects may occur as they are very much dependent on the management of the activity. So, I have set out below the various *pros and cons* and left it to the Committee to determine the outcome.
31. *Pros*
- (i) While the land is zoned for outer suburban living, the total land area of the three sites 6.3 hectares in area. Further the land to the immediate north across Queen Elizabeth II Drive is zoned Ru3 Rural (about 2400 hectares in total area).
 - (ii) The surrounding residential sections (of around 700 m²) have been developed on what was in the past land of a rural nature. The issue of reverse sensitivity is a factor.
 - (iii) It is proposed that the vegetation is seasoned prior to burning.
 - (iv) The activity is likely to occur over a maximum of six days per year;
 - (v) The burning is not in winter and proposed for March/April and/or September/October only.
 - (vi) The ECan database has only two recorded complaint (September 2003 and April 2008) in respect of the sites.
 - (vii) The proposal is for a continuation of past activities, now with consent conditions.
 - (viii) A 5 year duration only is sought.
 - (ix) While the proposed site is in a residential areas where kerbside collection of this waste is available, given that the land parcels are around 2 hectares in area, the quantity of waste to be disposed of is relatively large.
32. *Cons*
- (i) The area is zoned L1A – outer suburban living.
 - (ii) The area is within Christchurch Clean Air Zone 1.
 - (iii) The proposed fire locations are between 55 and 65 m from the boundaries of the various land parcels.
 - (iv) There are residential sections (of around 700 m²) within 65 m of one of the proposed fire locations.
 - (v) That it is proposed to have up to six fires per season of about four hours duration.
 - (vi) There are at least 50 affected parties within 200 m of the centre of the proposed three fire sites.
 - (vii) There are records of complaints on the ECan data base about the proposed activity.

- (viii) Proposed Variation 15 (to the NRRP) changes Rule AQL29 from *permitted* (with conditions to be met) to Rules AQL29A and AQL29B. Rule AQL29A is proposed for residential areas, where kerbside collection of this waste is available, and is *non-complying*. Rule AQL29B is proposed for residential areas, where kerbside collection of this waste is not available, and is *restricted discretionary*.

Cumulative Adverse Effects

33. Based on a search of the ECan's GIS, there are four other Consented discharges to air (two 180 kilowatt emergency generators and two residential pellet fires) within a 400 m radius of the proposed discharge site. However, there are a lot of residences in the locality which will likely be heated by combustion appliances.
34. Given the nature and separation distances, the potential cumulative adverse effects are likely to be negligible on persons and minor on the environment.

ADDITIONAL MITIGATION MEASURES

35. The applicant proposed a number of mitigation measures in the application, as outlined in paragraph 11 of this report.
36. Should the Committee decide that the application may be granted there are draft proposed conditions in Attachment 2 at the end of this report. These proposed conditions have been discussed with the applicant and are in line with the proposed activities.

CONSIDERATION OF ALTERNATIVES

37. The applicant suggests, in section 14(A) of the application form, that because of the volume of trimmings there is no other satisfactory method of disposal.

POLICIES AND OBJECTIVES

Regional Policy Statement (RPS)

38. Chapter 13 of the RPS (CRC 1998) sets out policies and objectives relating to air.
39. Issue 1 draws attention to health and nuisance effects of low ambient air quality in the urban areas especially Christchurch and Timaru.
40. Objective 1 is to maintain or improve ambient air quality.
- Policy 1 sets standards to maintain minimum ambient air quality, specifically in urban areas.
41. Issue 2 draws attention to nuisance and health effects and adverse effects of contaminants including smoke and gases.
42. The proposed draft conditions are recommended to avoid, remedy or mitigate adverse effects in accordance with Policy 3.
43. Policy 5 states that activities that require resource consent to discharge to air should be encouraged to locate away from sensitive areas.

While the applicant proposes mitigation measures and the site is 6.3 hectares in area, there are a number of effects on the ambient air in the area which are experienced by

the local residents. Therefore, the proposed activity could be seen as not totally being consistent with this policy.

Natural Resources Regional Plan (NRRP)

44. Chapter 3 of the NRRP sets out policies and objectives relating to air.
45. The proposed NRRP was publicly notified on 1 June 2002, submissions have been received, a hearing has been held, and the commissioners' decision was accepted by CRC as notified on 29 September 2007. At the time of writing there are a number of aspects of the plan that are currently under appeal. Rule AQL29 is one of these.
46. Issue 1 - Localised Air Quality Issues - draws attention to nuisance and health effects from various discharges. Discharges relevant to the application include: (a) contaminants from combustion processes (iv) outdoor burning.
47. 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.
48. Policy AQL4 is to restrict discharges to air of contaminants associated with outdoor burning.
49. Policy AQL5 addresses odour nuisance activities.
50. Policy 8 provides for management control of all other discharges to air.
51. There will be effects due to the proposed discharges and it is difficult to see how they could be avoided, remedied, or mitigated, once the emissions are in the atmosphere. The applicant has proposed mitigation measures to minimise the effects of the activity. Further, the proposed draft conditions relating to the discharges have been constructed with these policies in mind.
52. Issue 2 - Localised Air Quality Issues - draws attention to existing health and nuisance effects of poor urban ambient air quality, particularly in Christchurch (and Timaru), primarily from domestic heating emissions.
53. Objective AQL2 requires ambient air quality to be maintained at, or brought up to, an acceptable level to protect human health and reduce nuisance effects.
54. One of the primary air pollutants of Schedule AQL1 that has been identified at elevated levels in the area is PM₁₀. Comment on PM₁₀ is in paragraph 21 above.
55. Policy AQL9 requires air zones and management regimes to be specified. This policy is used as a management strategy by the Canterbury Regional Council.
56. Policy AQL10 requires a precautionary approach to discharges of hazardous air pollutants. This policy has been considered for the assessment of actual and potential effects above.
57. Objective AQL3 requires ambient air quality in Christchurch to have a reduction in concentrations of PM₁₀, to less than 50 µg/m³ (24-hour average), by 2012.
58. Further, for PM₁₀ in Christchurch, the main component of the management regime seeks to significantly reduce particulate emissions from domestic solid fuel burning, as this is the main source of ambient particulate. Mechanisms for achieving this

include prohibiting open fires, prohibiting solid fuel burners in new houses, and requiring existing burners to be replaced by lower emission burners over a period of time.

PART 2 MATTERS

59. Under s104 the consent authority must consider applications subject to Part 2 of the Act.

Purpose of the RMA (s5)

60. The purpose of the Act (s5) is to promote sustainable management of natural and physical resources. 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 are 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 s5.

Matters of National Importance (s6)

61. Sections 6(a) to 6(g), excluding (e), will not be affected by the discharge of contaminants from this activity.
62. Section 6 (e) of the Act 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.”*
63. 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 discharge.

Other Matters (s7)

64. The Canterbury Regional Council is required to have particular regard to the matters set out in section 7 of the Act. 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.”*
65. The emissions described, considered in isolation, will not enhance the quality of the environment. However, the trimming and removal from shelter trees etc may be considered as an enhancement of the environment by neighbours.

Principles of the Treaty of Waitangi (s8)

66. 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 12 August 2009 and again at notification (along with Te Runanga O Ngai Tahu). No reply has been received to date but past communication has stated that there was no objection on cultural or historic grounds if it proceeded according to guidelines in Whakatau Kaupapa and complies with Clean Air Policy.

67. The Ngai Tahu resource management strategy for the Canterbury Region, (Tau et al, 1990) was referred to and shows there are no silent files in the area.

OTHER RELEVANT MATTERS

68. Section 104(1) of the Act requires the Canterbury Regional Council to have regard to any other matters considered relevant and reasonably necessary to determine this application.

Previous Council Decisions

69. The Canterbury Regional Council has previously granted resource consent for the discharge of contaminants to air from outdoor burning of vegetation with similar conditions to those proposed. (CRC072271 - Mr G H McFadden, at 471 Hills Rd, Mairehau, 10-year duration)

Duration

70. The applicant has requested 5 years. I consider there is no reason to grant less.

RECOMMENDATION

Grant or Decline

71. Section 104 of the Act lists the matters that the consent authority shall have regard to when considering a consent application. Section 104B states that a consent authority may grant or refuse a consent for a discretionary activity, and may impose conditions under section 108.
72. Based on my audit of the application, and having considered all relevant matters under section 104, I consider that the Committee could grant the application if they consider the effects acceptable.
73. Should the Committee decide that the application may be granted, a draft set of proposed conditions are listed in Attachment 2 below.

Signed: _____

Date: _____

Kevin Swete
Consents Investigating Officer

REFERENCES

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

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

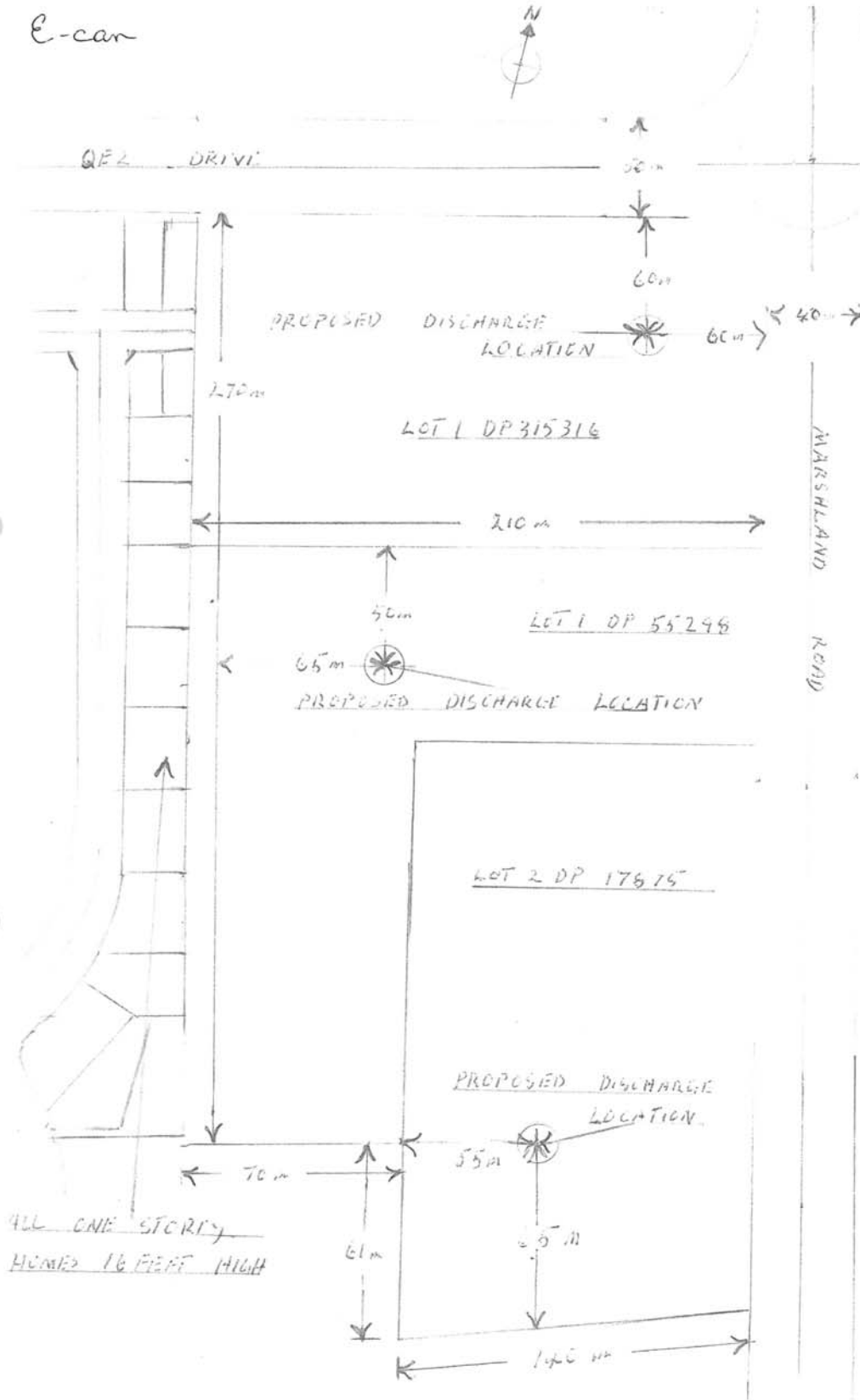
Canterbury Regional Council, 2002. *Proposed Canterbury Natural Resources Regional Plan: Air*.

Ministry for the Environment, (2004). *Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004*.

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.

ATTACHMENT 1

CRC100609A



ATTACHMENT 2

DRAFT CONDITIONS

CRC100609 To ... Mr H.M. MacDonald

<1> The discharge shall be only combustion products from outdoor burning of vegetation at 215, 229, or 241 Marshlands Road, Shirley, Christchurch, at or about map reference NZMS 260 M35: 8245-4614.

<2> Burnings shall occur only in March, April, September and October.

<3> (a) Burnings shall only be carried out at the three locations listed in Plan CRC100609A, which forms part of this consent.

(b) Burnings shall occur for a maximum:

(i) total of six times per calendar year; and

(ii) of two times per calendar year at any one location.

<4> (a) The combustion material shall be only vegetation from the properties to which this consent relates.

(b) All combustion material shall have at least five months to dry before burning.

(c) The vegetation shall be placed in piles prior to burning and only one pile shall be burnt at any one time.

<5> The consent holder shall inform the Canterbury Regional Council and the New Zealand Fire Service at least one hour prior to the proposed lighting of any fire.

<6> As far as is practicable, the discharge shall only occur when weather conditions are still or with a light southwest wind.

<7> The consent holder shall ensure that the owner is on the property at all times that a fire is burning.

<8> Burning shall be carried out for a maximum of four hours at any one time.

<9> The discharge shall not cause smoke, odour or deposited particulate material, which is offensive or objectionable beyond the boundary of the property on which the consent is exercised.

<10> The Canterbury Regional Council may, once per year, on any of the last five days of April or October, 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.

ATTACHMENT 3

Copy of the applicant's e-mail requesting that the duration be amended from 35 to 5 years

Page 1 of 1

Kevin Swete

From: Valerie [vmchick@ihug.co.nz]
Sent: Thursday, 5 November 2009 2:11 p.m.
To: Kevin Swete
Subject: Consent Application #CRC100609
05 November 2009

Mr K Swete
Consents Investigating Officer
Environment Canterbury
PO Box 345
CHRISTCHURCH

Dear Mr Swete

In reply to your email, 3 November 2009, we have chosen option two (2) i.e. 'Get the decision made by the Regulation Hearing Committee [RHC], where we will not be able to speak'.

Further to our telephone conversation this afternoon we wish to amend the time frame on the Consent Application from thirty five (35) years before the next review to five [5] years in hope that this time frame is more appropriate and acceptable to all concerned parties.

Yours sincerely

Hugh Macdonald
241 Marshland Road
Marshland
Christchurch

Phone (03) 385 1317
email: hughmacdonald@slingshot.co.nz

6/11/2009

**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 CRC030980 by
Calder Stewart Industries Ltd for
a discharge permit to discharge
stormwater to land.

Section 42A Officer's Report

Date of Hearing: 20 November 2009

Report of Brent John Hamilton

1. I hold the position of Senior Planner at Beca Carter Hollings & Ferner Limited (Beca). Beca companies provide engineering, planning, project management and related consultancy services. My qualifications include a Bachelor of Science (Hons) degree from the University of Canterbury in Geography.
2. I have over six years experience in planning and resource management. This includes my current role as a Senior Environmental Planner, and previous employment as a Senior Consents Investigating Officer and Senior Environmental Protection Officer at Environment Canterbury.
3. Primarily my resource management experience has focused on discharges of stormwater from subdivision earthworks and occupied residential and industrial development within the North Canterbury Region.
4. 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

5. Calder Stewart Industries Limited ("the applicant") has applied for a discharge permit to discharge stormwater from a 16.16 hectare industrial subdivision at Shands Road, Hornby. The applicant has not provided restrictions on the types of activities that will be allowed to take place within the industrial subdivision. The applicant has sought a 35 year duration.
6. The application and assessment of environmental effects (AEE) was prepared by Pattle Delamore and Partners (PDP) on behalf of the applicant.
7. The applicant proposes to discharge stormwater into land from roads and hardstand areas within the subdivision via an infiltration basin.

8. The applicant is relying on the Christchurch City Council (CCC) current resource consent to discharge stormwater into land from industrial roofs (CRC000315).
9. I note that the application submitted was "*to discharge stormwater from hardstand areas and roads at a new commercial/light industrial subdivision to ground via two soil lined soakage basins*". Therefore the applicant has not applied to discharge stormwater off site during construction, as such I have not given these potential discharges any consideration. Should discharges of such a nature occur this would have to be expressly allowed by a rule in a plan and a proposed plan, or separate resource consent.

Background

10. The applicant currently holds several consents throughout Christchurch City, but hold the following stormwater discharge consents within the industrial subdivision located across the road that authorise the discharge contaminants to land at 9 (CRC093199), 15 (CRC091691), 17 (CRC073908), and 20 (CRC070470) Sir James Wattie Drive, Hornby.
11. A subdivision/landuse consent was lodged with the CCC at the same time as the discharge consent application. This has been publicly notified and has yet to have a hearing to decide the application.
12. Given the considerable timeframe that this discharge permit application has been in process, a breakdown of the application progress is considered appropriate.
13. The application was lodged and receipted on 18 December 2002. Yvette Rodrigo was the Investigating Officer at the time of lodgement. Due to a large volume of consent applications at that time, timeframes for processing the consent were doubled under section 37A(2)(a) of the RMA.
14. Ms Rodrigo requested further information from the applicant via email on 12 and 13 February 2003 and the time frames were extended with the consent of the applicant under section 37A(2)(b), until Mr Brough of PDP provided the further information on 11 April 2003.
15. Ms Rodrigo drafted an s42a report which was reviewed. Draft conditions were prepared and provided to the applicant to consider in May 2003. The conditions were also provided to CCC for consideration as a potentially affected party. The applicant advised the CCC would take over the consent and maintenance of the stormwater system and roading within the industrial subdivision. Also the discharge was to enter the roadside CCC network in less than a 1 in 50 year event. The application remained on hold with the approval of the applicant while discussions with the CCC by the applicant took place.
16. Ongoing discussions (for a two and half years), took place between the CCC and the applicant.
17. On 8 February 2006 Mr Rodrigo discussed the application with Mr Brough regarding the fact that CCC had not confirmed that they would comply with the conditions and take over the consent. Ms Rodrigo discussed the applicant's three options at that time: withdraw the application; obtain CCC's approval; or notify application.
18. On 10 February 2006, Mr Brough stated an intention to gain CCC's approval and the application remained on hold.

19. In October 2006, Ivan Holland (ECan Team Leader Consents Investigations – Discharges) became the investigating officer (due to the departure of Ms Rodrigo) for the application. Mr Holland met with CCC staff on 17 October 2006 to discuss their concerns with the draft conditions. The CCC representatives advised that according to their records the site had existing land contamination for historic pesticide use (due to being land owned previously by Applefields).
20. On 27 October 2006, Mr Holland identified that historic use of the site included an orchard with an ECan Contaminated Sites Officer, which is included in the Ministry of Environments Hazardous Activities and Industries List (HAIL). The previous landuse and classification as a HAIL site was not disclosed in the application for a discharge consent.
21. On 19 June 2007, Mr Brough submitted modified stormwater calculations to ECan, based on changes to the subdivision layout. In subsequent emails, Mr Holland expressed his concerns in relation to the proposal, particularly with regard to secondary flow paths, the previous storage and use of hazardous substances on site and the long-term maintenance of the stormwater system.
22. On 9 August 2007 and 10 September 2007, Mr Brough supplied additional information to ECan in relation to these issues.
23. On 6 November 2007, Mr Holland provided draft conditions to the applicant for comment.
24. On 19 November 2007, I took over as the ECan Investigating Officer for the application (due to Mr Holland's departure). I provided a revised set of draft conditions to Mr Brough on 28 November 2007. Mr Brough responded with a number of changes but did not provide an explanation for these. I sought an explanation for the changes, which Mr Brough provided on 12 December 2007.
25. On 30 January 2008, I provided the draft conditions to the applicant to facilitate the CCC providing a written response that they found the conditions acceptable and would 'take over' the consent and stormwater system once it was constructed and the maintenance obligations were met by Calder Stewart. This written 'approval' was not obtained.
26. On 11 February 2008, in my capacity as a consultant acting on behalf of ECan I recommended that the application should be notified, given that I was not satisfied that the effects potential effects of no maintenance and the fact that CCC had not confirmed that they would be responsible with long term maintenance.
27. Tim Mallett (ECan Principal Investigating Officer) again allowed the applicant time to obtain written 'approval' from the CCC, which did not occur.
28. Mr Mallett (with the appropriate delegation to notify the application) confirmed that the application was to be publicly notified (based on my recommendation dated 11 February 2008) on the 7 October 2009.

Notification

29. The application was publicly notified in "the Press" on Saturday 11 October 2008. A copy of the notification wording is shown below.

Applicant: Calder Steward Industries Limited Address: C/- Pattle Delmore & Partners Limited, PO Box 389, Christchurch Attn: Andrew Brough
CRC030980 – to discharge stormwater containing contaminants associated with a 16.6 hectare, industrial subdivision located at 206 Shands Road, Hornby, Christchurch. Stormwater from roading, and hardstand areas will be discharged into land via an infiltration basin located at map reference NZMS260:M36:7048-3892. Contaminants may include suspended sediments, hydrocarbons, metals, pathogenic micro-organisms and other contaminants associated with activities that may occur in the industrial area. The applicant has requested duration of 35 years for the above application.

Service of Notice

30. Regulation 10(2) *Service of applications for resource consents or for review of conditions*, of RMA Regulations 2003 that applies to publicly notified applications, states:

"..the consent authority must serve that notice on -

- (a) the persons who, in the opinion of the consent authority, may be adversely affected if a consent is granted;*
- (b) any person (other than the applicant) who the consent authority knows to be an owner or occupier of land to which the application relates;*
- (c) the relevant council for the region or district to which the application relates;*
- (d) any iwi authority, body, or person that the consent authority considers should have notice of the application;...."*

31. In accordance with Regulation 10(2) (a) to (d), approximately 80 parties were served notice. These parties included:

- Christchurch City Council (Programme Manager, Healthy Environment);
- Christchurch City Council (District Planner);
- Tuahuriri Rununga; and,
- All landowners within a 500m radius of the subject site.

Submissions

32. A total of five submissions were received on the application, four in support and one neutral submission. Of these five submissions only the CCC requested to be heard. A summary of the submissions is presented in the table below.

Submitter	Issues	Support/ Neutral/ Oppose	To be heard
Heinz Watties Ltd	None provided	Support	No
Mr R K Allen	None provided	Support	No
Mr A J O'Neill	None provided	Support	No
Christchurch City Council	CCC has concerns about: the appropriateness of the recommended conditions; the volume and frequency of stormwater overflows down Shands Road swale; the frequency and duration of ponding on internal roads; and the risk of contaminated runoff from individual lots entering the stormwater system. CCC seeks that consent is granted subject to conditions suitable to CCC.	Support	Yes
Canterbury DHB	The submitter supports the application of a dilution attenuation factor of zero for discharge levels of copper chrome and arsenic and the monitoring of arsenic and lead in the soil. The submitter seeks that conditions be imposed which mitigate any effects on public health, including groundwater quality in accordance with Variation 6 of the PNRRP.	Neutral	No

33. The CCC provided written notice (letter dated 31 July 2009) that they no longer wished to be heard at the hearing, given their concerns had been met through discussions with the applicant that occurred on the 24 July 2009. Specifically the reasons for their concerns being met were:
- (a) The conditions that the Council expects to be responsible for are now consistent with other recent consents granted for treatment basin.
 - (b) The volume and frequency of stormwater overflows down Shands Road swale will be reduced because one basin of greater storage capacity will now replace the five smaller basins previously proposed.
 - (c) The frequency and duration of ponding on internal roads during long duration storm events will be reduced from a 10 year standard to a 20 year standard
 - (d) The on site treatment design in terms of minimising the risk of contaminated runoff from individual lots entering the stormwater system is considered 'best practice'.
34. It should be noted that although the CCC does not wish to be heard their submission is still valid and therefore needs to be considered, as is the submission by Canterbury DHB.
35. It is my understanding that the CCC / Applicant do not wish to schedule a hearing to decide the subdivision/landuse application at the present time. As there are no submitters to be heard for the discharge permit it was decided that the applications

will not be heard jointly under s102 of the RMA (pers. com. Donald Fraser - ECan Consents Hearing Officer 13/10/09).

DESCRIPTION OF THE PROPOSED ACTIVITY

36. The applicant proposes to discharge stormwater onto land in circumstances which may result in those contaminants entering groundwater. A description of the proposed activity can be found in Section 2.0 of the AEE. Additional information can also be found in Sections 6.0 and 9.0 of the AEE.
37. The application submitted in 2003 was *"to discharge stormwater from hardstand areas and roads at a new commercial/light industrial subdivision to ground via two soil lined soakage basins"*.
38. Further information has also been provided by way of letters:
 - (a) A letter from PDP dated 11 April 2003 in response to a request for further information;
 - (b) A letter from PDP dated 19 June 2007 provides revised information resulting from a changed layout of the subdivision;
 - (c) A letter from the applicant (Calder Stewart) dated 10 September 2007 provides information regarding the storage of hazardous substances on site.
39. The main changes that occurred during the course of processing the application was an amendment to only have one infiltration basin. However this is to provide the equivalent stormwater quality and quantity mitigation as the two basins originally proposed.
40. The applicant amended their application to adopt the recommended conditions on the 7 October 2009. This is documented on file.
41. The recommended conditions are contained at the end of this report and represent an accurate summary of the application to be heard. Therefore I have not repeated the activity in detail here.

LEGAL AND PLANNING MATTERS

42. An investigation of legal and planning matters associated with the consent application can be found in Section 3.0 of the AEE.

The Resource Management Act 1991 (RMA)

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

"No person may discharge any –

- (a) *Contaminant or water into water; or*
- (b) *Contaminant onto or into land in circumstances that may result in that contaminant entering water ...*
- (c) *Contaminant from any industrial or trade premises into air; or*
- (d) *Contaminant from any industrial or trade premises onto or into land*

unless the discharge is especially allowed by a rule in a regional plan and in any relevant proposed plan, a resource consent or regulations.”

44. The application states that given the proposal is for the discharge of stormwater to land in a manner which may result in contaminants entering stormwater, it must be authorised by a regional plan or a resource consent. I agree with the applicant's determination that the activity cannot be undertaken as of right, and must be allowed by a regional plan or a resource consent.

Regional Plans

Transitional Regional Plan (TRP)

45. The application states that the TRP permits stormwater discharge from subdivisions less than 40 allotments, but that as the application is for greater than 40 allotments, resource consent is required as a non-complying activity.
46. I note, however, that the General Authorisation in relation to subdivisions only applies to residential or rural-residential subdivisions involving fewer than 30 allotments for the discharge of stormwater to surface water.
47. The proposed discharge of stormwater from the industrial subdivision requires consent as a discretionary activity, as the discharge of stormwater to land from hard-standing areas and from roading to land, within the Christchurch City boundary, is not authorised by the TRP.

Proposed Natural Resources Regional Plan (PNRRP)

48. As the application was lodged prior to the notification of the PNRRP, it cannot be considered against the rules of this plan. However, the objectives and policies of the PNRRP can be considered, and I will address these in other sections of this report below.

CONSULTATION

49. The applicant considers that the environmental effects resulting from the proposed discharge will be no more than minor and no other parties will be adversely affected by the activity. Therefore it is stated on page 7 of the AEE that no consultation was undertaken prior lodgement in relation to this application.

DESCRIPTION OF THE AFFECTED ENVIRONMENT

50. The proposed subdivision is located in west-south-west Christchurch. Section 5.0 of the AEE describes the soils and geology of the site and provides a description of the groundwater resource beneath the site based on a technical report (Brown and Weeber, 1992¹). The key aspects of the affected environment, as described in the application, are:
- (a) The soil types present on the site include Waimakariri deep fine sandy loam on sand, and Waimakariri shallow sandy loam and moderately deep fine sandy loam;

¹ Brown and Weeber, 1009. Geology of Christchurch Urban Area. Institute of Geological and Nuclear Sciences Limited.

- (b) The site is underlain by dominantly alluvial sand and silt overbank deposits;
 - (c) Top soil with silt and clay extend to 4.59 metres bgl, with layers of sandy gravel strata separating layers of low permeability silt and clay at greater depths;
 - (d) Water levels in the shallow gravel aquifer range from 9.7 to 15.65 metres bgl with groundwater flowing in an east to south-easterly direction;
 - (e) Concentrations of nitrate-nitrogen and bacteria are the two primary health concerns with groundwater quality in the area;
 - (f) The site is located in the Halswell River Catchment. The nearest natural waterway is Knights Stream, approximately two kilometres from the site. The site is bounded by an open drain on the northern boundary which is not part of CCC's stormwater network.
51. The site formerly operated as an orchard, with a central service area where hazardous material storage (fuel and pesticides etc) was present. An initial investigation by Golder Associates in February 2006 indentified exceedances of commercial and industrial landuse guidelines for hydrocarbons in the central service area and pesticide and heavy metal exceedances also were noted. No significant residual ground contamination was observed in the former orchard areas sampled. The expected contaminants associated with the site's horticultural land use are heavy metals (arsenic, lead, copper) and organonitrogen and organophosphorus pesticides.
52. The site is zoned Rural 2 in the Christchurch City Plan, and borders Business 4P (Suburban Industrial – Produce Park) Zone to the north and Business 5 to the east.
53. I also make the following points based on ECan's online GIS (accessed on the 15 September 2009):
- (a) The site is located in the Christchurch West Melton Groundwater Allocation Zone;
 - (b) There are 12 wells within a 500 meter radius from the site which are used for domestic and stock supply and irrigation;
 - (c) The site is not located within 500 metres of a community supply well or community water supply protection zone;
 - (d) The site is located over an unconfined / semi confined aquifer;
 - (e) Branches of the Waimakariri Water Race adjoin the site on its northern and southern boundaries.
54. Ms Rodrigo considered at the time of the drafting of her s42A report, and I still agree, that given the unconfined nature of the aquifer beneath the site, the depth to groundwater and the extensive use of shallow groundwater for potable supply, the receiving environment is highly sensitive to discharges of contaminants from the site.

ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS

55. I have used a checklist developed from similar activities and published on ECan'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 discharges of hazardous substances
- Adverse effects on groundwater quality;
- Adverse effects on surface water quality;
- Adverse effects on land from slow entry of stormwater to groundwater;
- Localised changes in groundwater;
- Cumulative effects of contaminants on soil.

Adverse effects of discharges of Hazardous Substances

56. PDP have stated that discharges of contaminants at the site could also result from accidental spillages, traffic accidents or deliberate discharges of contaminants into the stormwater system. They have stated that quantifying these discharges is problematic and have instead focussed on the risk of fuel spills from traffic accidents, based on data provided by the Christchurch Fire Service on call-outs between 1986 and 1996, which indicates that the risk of a fuel spill from an accident is low.
57. In Ms Rodrigo's opinion at the time of writing her report, the problems associated with quantifying the risks of accidental discharges and the low frequency of these incidents does not necessarily mean that the environmental effects will be minor, if these discharges occur.
58. PDP states that the proposed use of the site for commercial / light industrial purposes will pose a lower risk to stormwater from accidental discharges than if the subdivision contained heavy industry. In a letter dated 11 April 2003, PDP stated that while the site is proposed to be zoned Business 4 in the then Proposed Christchurch City Plan, it will have its only zoning classification with specific requirements for storage and handling of hazardous substances (e.g. restrictions on the size of containers that are brought onto, used or stored at the site). PDP state that these restrictions on container sizes will be dealt with via conditions of the land-use consent from CCC and will minimise the risk of large volume discharges.
59. Ms Rodrigo at the time of drafting her s42A report did not consider that smaller containers of hazardous substances stored or handled on-site will effectively reduce the risk to the aquifer from contamination. She was concerned that forklifts could puncture pallets of containers or spillages could occur during the handling of stored products, which may result in contaminants entering the stormwater system and the infiltration basin if emergency procedures are not carried out. These contaminants have the potential to affect the infiltration basin, with subsequent effects on groundwater. Other than a limit of the size of containers used to store hazardous substances on individual lots under the CCC land use consent, the applicant did not propose any other measures to address this issue.
60. In addition, the description of the types of activities expected within the subdivision includes general businesses, offices, stores selling industrial products and warehousing. In general, the "types of activities found in Birmingham Drive (Middleton)." Ms Rodrigo spoke to Ms Shirley Hayward (Environmental Quality Analyst, ECan) regarding the quality of groundwater down-gradient of the Birmingham Drive area. Ms Hayward stated that groundwater monitoring in the area had detected the presence of chlorinated hydrocarbons in relatively deep wells (26-33 metres bgl) down-gradient of Birmingham Drive. The results of this monitoring can be found in

CRC Technical Report R99/11. It is not clear whether the contamination is a result of present or historical site management practices or due to the inadequacy of the treatment systems in the area, but it does illustrate the potential for these types of land uses to result in contamination of groundwater.

61. As discussed Ms Rodrigo noted a number of hazardous substances may be stored within the subdivision and other than restrictions on the sizing of containers, the CCC will have very little control of what is stored on the individual lots. Also, as the individual lots will be sold, the applicant or CCC will not be responsible for on-site maintenance or have control over how these sites are managed, once the lots are sold and the system is handed over to them. While the risk or frequency of large spillages, where contaminants are discharged into the infiltration basins may be low, it is unclear whether mitigation measures proposed by the applicant are sufficient to ensure that resulting effects on groundwater quality will still only be minor, or whether subsequent effects on down-gradient water users will still be negligible.
62. As I have discussed the applicant has now amended their application to include conditions to mitigate hazardous substance storage, handling and use.
- Recommended Condition 6 requires shut off valves be installed on each lot to allow for spill containment,
 - Recommended condition 26 requires that no discharges from the areas used for the handling and storage of hazardous substances on individual lots shall occur.
 - Effectively this requires storage, handling areas to be segregated from the stormwater hardstand. This usually involves a roofed canopy over a large area that drains to trade waste.
 - Recommended condition 27 and 28 provides for spill responses (in the unlikely event a spill occurs).
63. Given the mitigation proposed by the applicant above and the stormwater treatment system (soil lined infiltration basin) described further in the next section of this report, I consider that the effects of hazardous substances in the discharge will be no more than minor.

Adverse Effects on Groundwater Quality

64. Contaminants entrained in the stormwater from urban sources can contaminate groundwater and effects are particularly significant when this water is used for human consumption. Nutrients, such as nitrogen, dissolve readily in water, move rapidly through soil and can cause illness when ingested in excessive amounts. A number of pathogenic microorganisms present in pets and other animals can cause disease in humans, while contaminants such as hydrocarbons make drinking water unpalatable, even at low concentrations.
65. During construction of buildings and hardstand areas on the individual lots contaminated soils associated with the previous horticultural landuse may be entrained in vehicle movements and stormwater where it enters the stormwater system
66. PDP consider that the proposed method of stormwater treatment and disposal will provide a good level of treatment and ensure that residual contaminant concentrations reaching groundwater will meet the New Zealand Drinking Water

Standards (NZDWS). Their analysis of this effect takes into account the effects on the infiltration basin and groundwater quality resulting from routine stormwater discharges (and as a result of spillages of contaminants), on the sites within the subdivision.

Contamination Concentrations

67. Routine stormwater discharges, prior to treatment were characterised by PDP based on contaminant concentrations typical of stormwater discharges from commercial / light industrial sites, as reported in the literature. The data shows that while median concentrations for most of the contaminants measured were below MAV values for drinking water, some median concentrations and upper ranges measured exceeded these standards.
68. The literature reviewed by PDP appears to be relatively extensive and includes data from New Zealand and industrial sources in Canterbury, and included consideration of a full range of heavy metals that may present in the commercial/industrial discharge. Mr Rodrigo considered that this literature gave a reliable indication of the types of contaminants and concentrations expected from the operative site.

The Stormwater Treatment System

69. PDP predict that the design of the infiltration basin will ensure that contaminants resulting from both routine stormwater discharges and spills are filtered within the basins prior to the discharges entering groundwater.
70. This prediction is based on treatment efficiencies for infiltration basins as reported in the literature and on the lack of the presence of faecal coliform bacteria in groundwater down-gradient of the wastewater disposal area belonging to Heinz-Watties.
71. Ms Rodrigo commented that the information efficiencies may be valid, however, these efficiencies only relate to a limited range of contaminants and therefore it is unclear whether similar levels of treatment would apply to the range of contaminants that may be stored or handled at the site.
72. Ms Rodrigo noted, in terms of using monitoring data from the Heinz-Watties site, PDP have not provided information to indicate that the results are transferable to this application. For example, the effects on groundwater from applying wastewater at a controlled loading rate to land evenly may not be comparable to concentrating stormwater in an infiltration basin.
73. In conclusion Ms Rodrigo advised that the stormwater treatment system proposed by PDP is used elsewhere in Canterbury to treat stormwater discharges from urban and residential sources, where the protection of shallow, unconfined groundwater is considered important. Similar systems have also been used to treat stormwater from the storage of warehousing facilities for storage of dry goods at the Hornby Industrial Park.

Contaminated Land

74. As discussed the AEE did not identify the site as contaminated land. Discussions with CCC revealed, and subsequently it was confirmed, that previous uses of the site included an orchard, being a HAIL activity had resulted in contamination.

75. There is potential that storage and use of pesticides could have resulted in significant elevation (although unlikely at the depth of the basin invert) of contaminants such as arsenic and organonitrogen and organophosphorus pesticides at the location of the stormwater treatment and disposal area.
76. Recommended Conditions 12 to 18 require that an investigation and validation of the area of the proposed infiltration basin occurs to determine that the soils at the depth the basin is excavated to are of an acceptable concentration as to not effect groundwater quality significantly when the basin is commissioned.

Summary

77. It was Ms Rodrigo's opinion (at the time of her drafting her report), the proposed stormwater system is considered an appropriate option for treating discharges from the site. If the stormwater system is installed as proposed, and along with the sites within the subdivision, maintained and monitored vigilantly, Ms Rodrigo considers that the effects on groundwater from routine stormwater discharges may be no more than minor and any effects on down-gradient users will be negligible.
78. Given the requirement to validate the sub-soils below the basin invert, the treatment of stormwater by the infiltration basin proposed, conditions limiting a maximum soakage rate to 50 millimetres per hour, I agree with Ms Rodrigo's original audit that the effects on groundwater quality will be no more than minor.

Adverse Effects on Land from Slow Entry of Stormwater to Groundwater

79. Stormwater discharged onto land or into the ground may cause ponding if the disposal system has been inadequately sized or not maintained properly. Ponded stormwater can affect the amenity of an area and cause inconvenience, damage to property and cause potential hazard. It can be a breeding ground for insects and a source of odour if the base of the disposal system does not or cannot support a healthy vegetative cover, thereby allowing the accumulation of fine sediment and organic matter, decomposing under anaerobic conditions resulting in the release of odorous gasses.
80. PDP state that over time accumulation of sediment within the basins may result in ponding occurring for a longer period of time. They further state that if this occurs, the soil within the basins will have to be remediated.
81. Tony Oliver (ECan – Principal Hazard Analyst) was asked to comment on the reliability of the method used to calculate runoff volumes, which were used by PDP to design the capacity of the treatment system. He confirmed that PDP had used an appropriate method and that the inputs used were valid. The treatment system would therefore have the capacity to meet the standards proposed by the applicant, in terms of storage.
82. Given the size and capacity of the treatment system, temporary nature of this ponding and the location of the infiltration basins within an area of low amenity values, Ms Rodrigo considered this effect to be minor, providing the infiltration basins are maintained to ensure that the infiltration rate of the topsoil layer is above 20 millimetres per hour and that the vegetation is in a healthy state.
83. Also, given that any overland runoff will only occur in extreme events and small to moderate events will be contained within the subdivision, Ms Rodrigo considered that the potential effects on any person were negligible.

84. I advise that the recommended conditions specify that the infiltration rate shall be not less than 20 millimetres per hour.

Adverse Effects on Surface Water Quality

85. Rainwater can collect a range of contaminants as it flows over surfaces. If the water has sufficient energy it can entrain loose contaminants such as litter, leaves, sediment and faecal material. Some contaminants, such as zinc from roofs, nutrients and micro-organisms, dissolve or are readily suspended in water. Unless removed these contaminants will enter the receiving water, resulting in a range of effects dependant on the range of contaminants present.
86. PDP have not provided an analysis and evaluation of this effect. Given that the closest surface waterways of any significance (e.g. Knights Stream and a stock water race) are some distance from the subdivision and that stormwater from all rainfall events with a 1 in 50 year return period will be retained on site, Mr Rodrigo considered this effect to be negligible.
87. I agree with Ms Rodrigo conclusions.

Localised Changes in Groundwater

88. Interception of rainfall and subsequent discharge at different locations will 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 soil supporting structures, plant health and nuisance effects resulting from undated seepage or high groundwater levels.
89. PDP predict that changes to groundwater levels beneath the site will not result in any adverse effects. Using Hunt's Recharge Pulse calculation, they have estimated that the expected mound resulting from a 1 in 50 year, 24 hour storm will be no more than 0.35 metres. They state that the depth between the base of the basins and highest recorded groundwater (8.2 metres) is sufficient to ensure that this effect is minor.
90. Ms Rodrigo did not investigate this further but considered that given the depth of groundwater, flat gradient of the site and given the area available for infiltration, any effects will be localised and likely to be confined within the site boundaries. Similar infiltration basins have been proposed and used in the area and Ms Rodrigo was not aware of any adverse effects resulting from the groundwater mound beneath the basins. Infiltration will also allow re-charge to the underlying aquifer. Ms Rodrigo considered this effect to be minor and thought it unlikely that anyone would be affected.
91. I agree with the applicants assessment and Ms Rodrigo's conclusions.

Cumulate Effects of Contaminants on Soil

92. Stormwater contains contaminants such as heavy metals, which persist in the environment and can accumulate in filtration treatment systems, such as swales and infiltration basins. Over time, this may lead to concentrations of these contaminants exceeding guideline values designed to protect human and ecosystem health.
93. PDP have assessed the exposure risk (inhalation and ingestion) to the public from accumulated contaminants within the treatment system and have recommended

trigger levels for the removal or remediation of contaminated soil. These triggers should also provide for protection of groundwater quality.

94. The assessment was based on median concentrations of heavy metals as reported in a number of national and international publications and calculates the accumulation time for contaminants to reach trigger levels. It is also assumed that the type of industry occupying the site would be commercial or light industrial.
95. Using median concentrations may underestimate the time contaminants may take to accumulate within the infiltration basins, however, recommended trigger levels appear to be conservative in that they are based on the lowest recommended guideline values.
96. PDP have proposed that soil in the infiltration basins is monitored for zinc and benzo(a)pyrene after the first five years. They consider that this will be sufficient based on their assessment that zinc concentrations are expected to be lower than estimated (in their assessment it is expected to take approximately two years to reach guideline values) because roof stormwater is discharged separately. Also, they do not consider it necessary to measure concentrations of other contaminants until after the subdivision is fully completed, which is expected to take up to ten years.
97. The frequency of monitoring differ from those proposed recently for the stormwater swales and infiltration basin of the Tumara Park Subdivision in Belfast and for the infiltration basin of the Shands Road industrial subdivision (CRC030994). For these consents it was proposed to monitor concentrations once every five years.
98. In Ms Rodrigo's opinion, if it is proposed to monitor contaminants within the soils of the infiltration basins, it should occur more frequently than once every ten years for all contaminants, given that potentially higher concentrations of contaminants may be entrained in discharges from individual sites.
99. Ms Rodrigo had reservations that the frequency of monitoring and range of contaminants measured may not adequately address this effect, given the uncertainties regarding the types of contaminants that may enter the treatment system from the different industries that may occupy sites within the subdivision. This condition however, will provide some measures of the accumulation of contaminants within the treatment system from routine stormwater discharges, and in conjunction with good site management practices and the maintenance of the treatment system should ensure that this effect is no more than minor and any effect on workers within the subdivision will be negligible.
100. As a result of the site having a past horticultural landuse the known associated contaminants that are likely to be entrained in stormwater during on lot construction and from landscaped areas have now been included in the recommended conditions for soil monitoring (22 to 25). The frequency proposed is every five years.
101. Given the monitoring and action required in the recommended conditions I consider the effects of cumulate effects of contaminants on soil will be less than minor.

ADDITIONAL MITIGATION MEASURES

102. I do not consider that there needs to be any additional measures imposed on the consent if granted.

CONSIDERATION OF ALTERNATIVES

103. Section 7.0 of the AEE provides a consideration of three alternatives to the proposed method of discharge to land: discharge to surface water; soil soakage basins; and soakpits.
104. Ms Rodrigo considered, and I agree, that the proposed stormwater treatment and disposal system would provide an effective means of disposing of routine discharges from the site, provided the system is maintained and operated properly.

POLICIES AND OBJECTIVES

Overview

105. Section 104(1) states:

"When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part2, have regard to –

(b) any relevant provisions of:....

(iii) a regional policy statement or proposed regional policy statement

(iv) a plan or proposed plan; and

Regional Policy Statement (RPS)

106. The RPS has been operative since 26 June 1998 and is currently under its 10 year review.
107. Since the RPS was made operative, one change (Proposed Change 1) was notified in July 2007. Hearings are currently underway to hear the submissions on PC1 including Variation 4 which includes "Identification of a New Greenfields Outline Development Plan Area - Residential South West Christchurch" which is relevant to this application.
108. In summary Proposed Change 1 ("PC1") adds a new Chapter 12A (Development of Greater Christchurch) to the RPS, setting out for the next 35 years the land use distribution in the Greater Christchurch area, particularly the areas available for urban development, the household densities for various areas and other key components for consolidated and integrated urban development, and that land which is to remain rural for resource protection and enhancement and other reasons. It includes maps defining areas for development and applies to Christchurch City.
109. The area of the proposed commercial/light industrial subdivision is within the PC1 urban boundary.

Natural Resources Regional Plan (PNRRP)

110. Section 88A(2) of the Act states "any plan or proposed plan which exists when the application is considered must be had regard to in accordance with section 104 (1)(b)."
111. Chapter 1 and 2 of the PNRRP were notified in June 2002. Chapters 2, 4 – Water Quality, 6 and 8 of the PNRRP were notified in July 2004 (Variation 1), and submissions to the plan have closed. Hearings on Variation 1 were completed in June 2009 with decisions not expected until 2010.

112. Variation 6 Christchurch Groundwater Protection Zones, to Chapter 4 - Water Quality (WQL) was notified 28 July 2007. The policies and objectives have particular relevance to this application and overall Variation 6 provides more specific reference to Christchurch groundwater issues, and has significantly changed objectives and policies relating to the Christchurch Groundwater protection. Further submissions are closed on Variation 6 and a hearing has yet to be scheduled.
113. Given the stage that Variation 1 and 6 have reached, some weight can be placed on their provisions and the proposed objectives and policies shall be had regard to however they do not necessary need to determine what the outcome should be.
114. Given that Variation 6 is more specific with provisions with regards to groundwater quality in Christchurch accordingly I have placed more emphasis to this document in my assessment of the application against the proposed provisions of the NRRP.

Objective and Policy Analysis

115. For the evaluation of key environmental effects I will cite the relevant extracts of the various objectives and policies within the plans referred to above according to issues. The issues are in the order detailed in the relevant Chapters contained within the RPS.

Soils

Slow Entry into Land, Soil Quality

116. Policy WQL6 (1) of the PNRRP states:

(b) if, after the application of Policy WQL6(1), a point source discharge onto or into land is to be authorised, the discharge shall be applied in a way and at a rate that:

(i) does not exceed the infiltration capacity of the soil or subsoil at the site of the discharge; and “

(ii) does not exceed the capacity of physical properties, or chemical and biological processes in the soil or subsoil, to reduce the contaminant concentration in the soil drainage water and to minimise the concentration of any contaminant entering groundwater; and

117. With respect to item (b)(i) of Policy WQL6 the soils in the area are free draining, as such the sub-soil capacity is not expected to be exceeded.
118. With respect to item (b)(ii) of Policy WQL6 the applicant is proposing soil quality monitoring. The range of contaminants monitored for the infiltration basin have considered key urban stormwater contaminants and the contaminants associated with the historic horticultural use, assuming these measures are adopted the activity is consistent with this policy.

Groundwater Quality

119. RPS Chapter 9, Policy 9 (under Objective 3 above) states:

To manage point and non-point source discharge and set water quality conditions and standards and terms in plans, and conditions on resource consents, that achieve (a) to (h) of Objective 3. Adverse effects of discharges on existing water quality should be avoided, remedied or mitigated and, where appropriate, degraded water quality should be enhanced.

120. Drinking water standards apply to groundwater used for potable supply. Carl Hanson advised me that at most monitored sites in the area, contaminant concentrations in groundwater have decreased since the late 1980s and early 1990s.
121. With respect to operational discharges these are considered to be no more than minor on groundwater quality, faecal coliforms are not expected to be contained in the stormwater generated at the site, or in the discharge after treatment in significant concentrations that would extend downgradient in groundwater to private water supply takes. Accordingly I determine that the activity is consistent with Chapter 9 of the RPS.
122. Relevant policies contained in Variation 6 of the PNRRP are
- Policy WQL14 (Variation 6): General control of activities
 - Policy WQL19 (Variation 6): Control of existing and future urban development within Christchurch Groundwater Protection Sub-Zone 1A or Zone 2:
- (2) *Enable the City of Christchurch to develop for urban purposes within Christchurch Groundwater Protection Sub-Zone 1A on:*
- (a) *land yet to be developed for urban purposes but which is zoned for such purposes in the City of Christchurch District Plan on 1 August 2007; or*
 - (b) *land yet to be zoned for urban purposes within City of Christchurch District Plan but which is within the Urban Limits identified in the Canterbury Regional Policy Statement.*
- (3) *Ensure that for all new activities in the areas identified in Policy WQL19(2):*
- (a) *sewage collection, treatment and disposal systems are designed, constructed and maintained in accordance with best management practices; and*
 - (b) *stormwater collection, treatment and disposal systems are designed, constructed and maintained in accordance with best management practices.*
123. The development and mitigation will occur is within Zone 1A, however the land has yet to be zoned for urban (for commercial/light industrial) purposes, but is within the urban limits identified in the PC1 (Variation 4) of the RPS. The stormwater collection, treatment and disposal system is considered best practice.
124. Accordingly I determine that the activity is consistent with Policies WQL14 and WQL19 of the PNRRP.

Hazardous Substances

125. RPS , Chapter 9, Policy 12 states:

Activities which could result in a release of hazardous substances should not be located in areas where water resources are vulnerable to contamination unless adequate precautionary measures are implemented to avoid that contamination.

Explanation: *Activities such as the storage or use of hazardous substances without adequate precautionary measures should not be carried out close to surface water bodies, coastal water or above unconfined aquifers. Principal Reasons: Unlawful (deliberate) or accidental discharges or discharges which occur as a result of normal use of hazardous substances may have long lasting effects. They cannot be prevented through enforcement of discharge controls alone.*

126. As stated mitigation via avoidance, spill containment, treatment and emergency responses is being provided for by the activity.
127. RPS, Chapter 17 is specific to Hazardous Substances. RPS, Chapter 17:
- Objective 1 states: *“Prevent or mitigate the adverse effects on the environment from the storage, use, disposal and transportation of hazardous substances.”*
 - Policy 3 states: *“Ensure that the adverse effects on the environment of unintended releases of hazardous substances from the storage, use, disposal or transportation of such substances are prevented or mitigated as far as practicable.”*
 - Policy 4 states: *“Discharges of hazardous substances should only be authorised when adverse environmental effects are prevented or mitigated.”*
128. Mitigation via avoidance, spill containment, treatment and emergency responses is being provided for by the activity.
129. Accordingly I determine that the activity is consistent with Chapter 9 and 17 of the RPS.
130. Policy WQL15 (Variation 6) Control of hazardous facilities, within Christchurch Groundwater Protection Zone 1 or Sub Zone 1B, states:
- (1) *Ensure existing authorised hazardous facilities implement the design and management standards required under the Hazardous Substances and New Organisms legislation and regulations.*
 - (2) *New hazardous facilities, and additions or extensions to existing hazardous facilities, must:*
 - (i) *not aggregate quantities of hazardous substances on a site where any substance is classified under the Hazardous Substances and New Organisms Act 1993 as ecotoxic (hazardous classification 9), and the aggregate quantity would exceed the minimum ecotoxicity quantity specified in Schedule 4 of the Hazardous Substance (Emergency Management) Regulations 2001, and*
 - (ii) *be designed, constructed and maintained in accordance with best management practice so as to stop hazardous substances entering groundwater as a result of day-to-day use, leakage, accident or a natural hazard event.*
131. Policy WQL19: Control of existing and future urban development within Christchurch Groundwater Protection Sub-Zone 1A or Zone 2.
- (1) *For existing activities occurring in existing urban areas within Christchurch Groundwater Protection Sub-Zone 1A, or Christchurch Groundwater Protection Zone 2, encourage all practicable management measures to protect groundwater quality be implemented, including:*
 - (a) *current industry design standards, and*
 - (b) *where appropriate, any relevant codes of practice.....*
 - (4) *Any extension to existing hazardous facilities, or any new hazardous facility, within Christchurch Groundwater Protection Sub-Zone 1A must provide adequate measures to prevent toxic, mobile or persistent contaminants entering groundwater as a result of:*
 - (a) *the routine use of a hazardous substance;*

(b) leakage or spill from a hazardous facility or pipeline;

(c) seismic activity that is likely to result in structural damage from ground motion; or

(d) emergency situations.

(5) All hard surfaces and vehicle standing areas associated with urban activities within Christchurch Groundwater Protection Sub-Zone 1A must be designed, constructed and maintained so as to avoid hazardous substances and contaminants entering groundwater.

132. I expect that the new hazardous facilities that may occur will be consistent with the objectives and policies of the PNRRP. Mitigation via avoidance, spill containment, treatment and emergency responses is being provided for by the activity.

133. Comments I have made with regards to the RPS, Chapter 17 apply equally to the activities status against Policy WQL15 and WQL19.

PART 2 MATTERS

Purpose of the RMA (s5)

134. The purpose of the RMA is to promote the sustainable development of natural and physical resources.

135. Based on Ms Rodrigo's and my audit of the application, I am in a position to conclude that the proposed activities can be carried out in a sustainable manner.

Matters of National Importance (s6)

136. In achieving the purpose of the RMA, the consent authority shall 'recognise and provide for' a number of matters of national importance. None of these matters are considered relevant to this application.

Other Matters (s7)

137. Section 7 contains other matters which the consent authority is directed to have 'particular regard to'.

138. I consider that granting the application would not cause a conflict with s7, subject to the recommended conditions.

Principles of the Treaty of Waitangi (s8)

139. Section 8 of the Resource Management Act requires the consent authority to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). This discharge lies within the rohe of Te Ngai Tuahuriri Runanga. Brief details of the application were provided to the Te Ngai Tuahuriri Runanga by ECan upon lodgement.

140. Mr Bob Tai (Iwi Liaison Manager, ECan), on behalf of Tuahuriri Runanga, responded, requesting that all waterways and natural resources be protected.

141. Tuahuriri Runanga was also served notice of the application and no submission was received.

142. There are no silent file areas on the ECan GIS system covering the area.

OTHER RELEVANT MATTERS

Decisions of the Environment Court

143. I am unaware of any decisions of the Environment Court of direct relevance to this application that would preclude the granting of resource consent.

Previous Council Decisions

144. As discussed in the background section of this report, Council has granted consents for stormwater discharges from individual sites (lots) for similar activities and with similar conditions as those proposed in this application. CRC063956 was granted non-notified for 35 years, while CRC070470 was publicly notified and subsequently granted for 35 years. CRC070470 included activities involving Schedule WQL3 activities, and CRC073908 included the storage, handling and use of hazardous substances.

145. Consent was granted to the Selwyn District Council for a discharge of stormwater onto and into land from driveways, car parks and paths, storage and loading areas; and roofs, associated with a industrial subdivision located at Izone Drive, Rolleston (CRC060440).

RECOMMENDATION

Grant or Decline

146. Pursuant to section 104B, a consent authority may grant or decline an application for a discretionary activity and may impose conditions under section 108.

147. Based on Ms Rodrigo's and my audit of the application that is in agreement with the applicant that the activity will have a no more than minor effect on the environment, I recommend that this application can be granted.

Duration

148. Section 123 specifies the maximum period for which a resource consent can be granted. Discharge permits must be granted for a maximum of 35 years. I consider that the application can be granted for a period of 35 years.

RECOMMENDED CONDITIONS

CRC030980 To discharge contaminants (being those found in stormwater) onto land in circumstances which may result in those contaminants entering water.

DESCRIPTION

(1) The discharge shall be only stormwater from;

(a) Roads; and

(b) Hardstand areas;

within a 40.7 hectare commercial/light industrial subdivision at 206 Shands Road, Hornby being Lot 1 to Lot 13 DP 54203, shown as the 'Applicant's Site' on Plan CRC030980A which forms part of this consent.

(2) Stormwater shall be discharged into land at map reference NZMS 260 M36:7045-3884.

DEFINITIONS

(3) The following definitions form part of this consent:

(a) "Stormwater" is defined as the runoff from land or hard surfaces that is a result of precipitation events. It excludes discharges from spilled or deliberately released contaminants or hazardous substances and wash down of such spills or releases onto and into land.

(b) "Stormwater collection area" is defined as the roading, hardstand and landscaping areas within the industrial subdivision that contribute runoff from precipitation events to the stormwater system.

STORMWATER SYSTEM

(4) Stormwater from roads and hardstand areas shall be conveyed to collection sumps then piped to an infiltration basin as shown on Plan CRC03098B which forms part of this consent.

(5) Each collection sump shall have submerged outlets.

(6) A shut off valve shall be located within each lot prior to the connection to the piped stormwater system that discharges to the infiltration basin.

(7) The infiltration basin shall:

(a) Be constructed in general accordance with Plan CRC030980C which forms part of this consent

(b) Have a forebay with a minimum capacity of at least 100 cubic metres;

- (c) Be designed to have sufficient capacity to treat and dispose of stormwater from all rainfall events up to and including events with a 1 in 20 year return period;
 - (d) Be lined with a layer of topsoil/sand mix with a minimum thickness of 150 millimetres; and
 - (e) Be vegetated.
- (8) For rainfall events with return periods between 1 in 20 and 1 in 50 years, stormwater shall be contained within the subdivision road reserve prior to being directed to the infiltration basin once capacity is available.
 - (9) Stormwater in excess of that generated in a 1 in 50 year return period rainfall event shall overflow the infiltration basin and discharge to a swale along Shands Road as shown on Plan CRC030980C which forms part of this consent.
 - (10) At least one month prior to the construction of the subdivision and stormwater system, the consent holder shall submit to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, design plans of the stormwater system to be constructed.
 - (11)
 - (a) A certificate shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement to certify that the stormwater systems have been constructed in accordance with Conditions (7) to (9) of this consent.
 - (b) The person responsible for designing the stormwater systems, detailed in Conditions (7) to (9), or a suitably qualified person shall sign the certificate.

INFILTRATION BASIN PRE-CONSTRUCTION INVESTIGATION

- (12)
 - (a) Validation soil sampling shall be undertaken following excavation of the infiltration basin.
 - (b) A total of ten discrete soil samples shall be collected from the remaining soils within the base of the infiltration basin using a grid sampling pattern.
- (13) The discrete soil samples collected under Condition 12 shall be analysed for the following contaminants:
 - Total Recoverable Lead
 - Total Recoverable Zinc
 - Total Recoverable Arsenic
 - Total Recoverable Copper
 - Organonitrogen and Organophosphorus pesticides
- (14) The results of the soil validation sampling analysis shall be compared with the background soil Acceptance Criteria values presented below:

Variable Acceptance Criteria

Total Lead 41 [milligrams per kilogram dry weight soil]

Total Zinc 93.9 [milligrams per kilogram dry weight soil]

Total Arsenic 12.6 [milligrams per kilogram dry weight soil]

Total Copper 20.3 [milligrams per kilogram dry weight soil]

Organonitrogen and Organophosphorus pesticides Non-detect [screen level]

- (15) If any of the contaminants in the validation samples are greater than the acceptance criteria specified in Condition (14), the validation samples shall be further analysed using the Synthetic Precipitation Leaching Procedure (SPLP, USEPA Method 1312) using reagent water and the leachate extract compared with the following screening levels:

Contaminants Screening Levels

Total Lead 0.2¹ [milligrams per litre]

Total Zinc 30² [milligrams per litre]

Total Arsenic 0.2¹ [milligrams per litre]

Total Copper 40¹ [milligrams per litre]

Organonitrogen and Organophosphorus pesticides Non-detect [screen level]

(1) 20 x MAV (Maximum acceptable value) Drinking-water Standards New Zealand 2005 (Revised 2008).

(1) 20 x GV (Guideline value) Drinking-water Standards New Zealand 2005(Revised 2008).

(16)

- (a) If any of the contaminants in the SPLP analysis are above the screening levels presented in Condition (15), further excavation shall occur from the base of the infiltration basin, followed by additional sampling and analysis as specified in Conditions (12) and (13).
- (b) Validation sampling or SPLP analysis shall continue until all sample results are at or below the respective Acceptance Criteria or Screening Levels.
- (c) If required, prior to any soil being imported to back fill the infiltration basin the soil shall be confirmed as having concentrations of contaminants not exceeding those detailed in Condition (14).

(17)

- (a) The excavation of soil within the areas to be used for the infiltration basin and, and any validation sampling, shall be supervised and undertaken by an independent, suitably qualified and experienced person.

- (b) A certificate signed by the person supervising the works undertaken in accordance with Conditions (12) and (16) shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 10 working days certifying that the requirements of Conditions (12) to (16) have been met.
- (c) Results of the analyses including the name of the person who collected the samples, the methods used and the date the samples were collected, shall be provided to the Manager, within one month of the date the samples were collected.

(18)

- (a) Any material removed during the excavation of the infiltration basin shall be used either onsite or disposed of at a facility authorised to receive such material.
- (b) The consent holder shall provide the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, with written confirmation of such disposal within 10 working days.

INSPECTION & MAINTENANCE

(19)

- (a) The stormwater system, including the key sump, forebay and the infiltration basin shall be inspected at least once every six months.
- (b) Any litter or debris in the stormwater system shall be removed immediately if it is blocking any inlets, outlets, or grates.
- (c) Any visible hydrocarbons in the stormwater system shall be removed within five working days of the inspection.

(20)

- (a) The infiltration basin shall have an infiltration rate not exceeding 100 millimetres per hour and not less than 50 millimetres per hour as determined using a double ring infiltrometer test; or
- (b) The infiltration basin shall have an infiltration rate not exceeding 50 millimetres per hour and not less than 20 millimetres per hour as determined using a flooded basin test.

(21) The vegetation in the infiltration basin shall be:

- (a) Maintained in a healthy and uniform state; and
- (b) Replanted where erosion or die-off has resulted in bare or patchy soil cover that exceeds five percent of the area of the first flush or soakage basins.
- (c) Maintained, if grass is present, at a length not less than 50 millimetres.

SOIL MONITORING

(22)

- (a) A sample of the soil shall be collected from the forebay and the infiltration basin at least once every five years.
- (b) The samples shall be collected by a suitably qualified or experience person in accordance with the most appropriate method.
- (c) The samples shall be taken at a depth of between zero and 50 millimetres below the ground surface at the point of lowest elevation.

(23)

- (a) The samples collected under Condition (22) shall be analysed for the following contaminants:

Total Recoverable Lead

Total Recoverable Zinc

Total Recoverable Arsenic

Total Recoverable Copper

Benzo(a)pyrene (equivalent)

Total petroleum hydrocarbons (TPH) (C7-C9)

Total petroleum hydrocarbons (TPH) (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 including the name of the person who collected the samples, the methods used and the date the samples were collected, shall be provided to the Canterbury Regional Council, Attention: RMA Compliance & Enforcement Manager, within one month of the date the samples were collected.

- (24) Soil will be considered contaminated if any of the concentrations of the contaminants analysed under Condition (23) exceed the following concentrations:

Total Lead 300 [milligrams per kilogram dry weight soil]

Total Zinc 300 [milligrams per kilogram dry weight soil]

Total Arsenic 30 [milligrams per kilogram dry weight soil]

Total Copper 370 [milligrams per kilogram dry weight soil]

Benzo(a)pyrene (equivalent) 7.5 [milligrams per kilogram dry weight soil]

TPH (C7-C9) 500 [milligrams per kilogram dry weight soil]

TPH (C10-C14) 510 [milligrams per kilogram dry weight soil]

- (25) In the event that soil within the forebay and infiltration basin is considered contaminated under Condition (24), the consent holder shall:
- (a) Determine the extent of soil considered to be contaminated;
 - (b) Remove any soil considered to be contaminated;
 - (c) Replace any contaminated soil with soil that does not exceed the concentrations specified in Condition (24); and
 - (d) Provide a report, detailing any action taken under Condition (25)(a), (b) and (c), to the Canterbury Regional Council, Attention: RMA Compliance & Enforcement Manager, within one month of the detection of any contaminated soil.

SITE MANAGEMENT

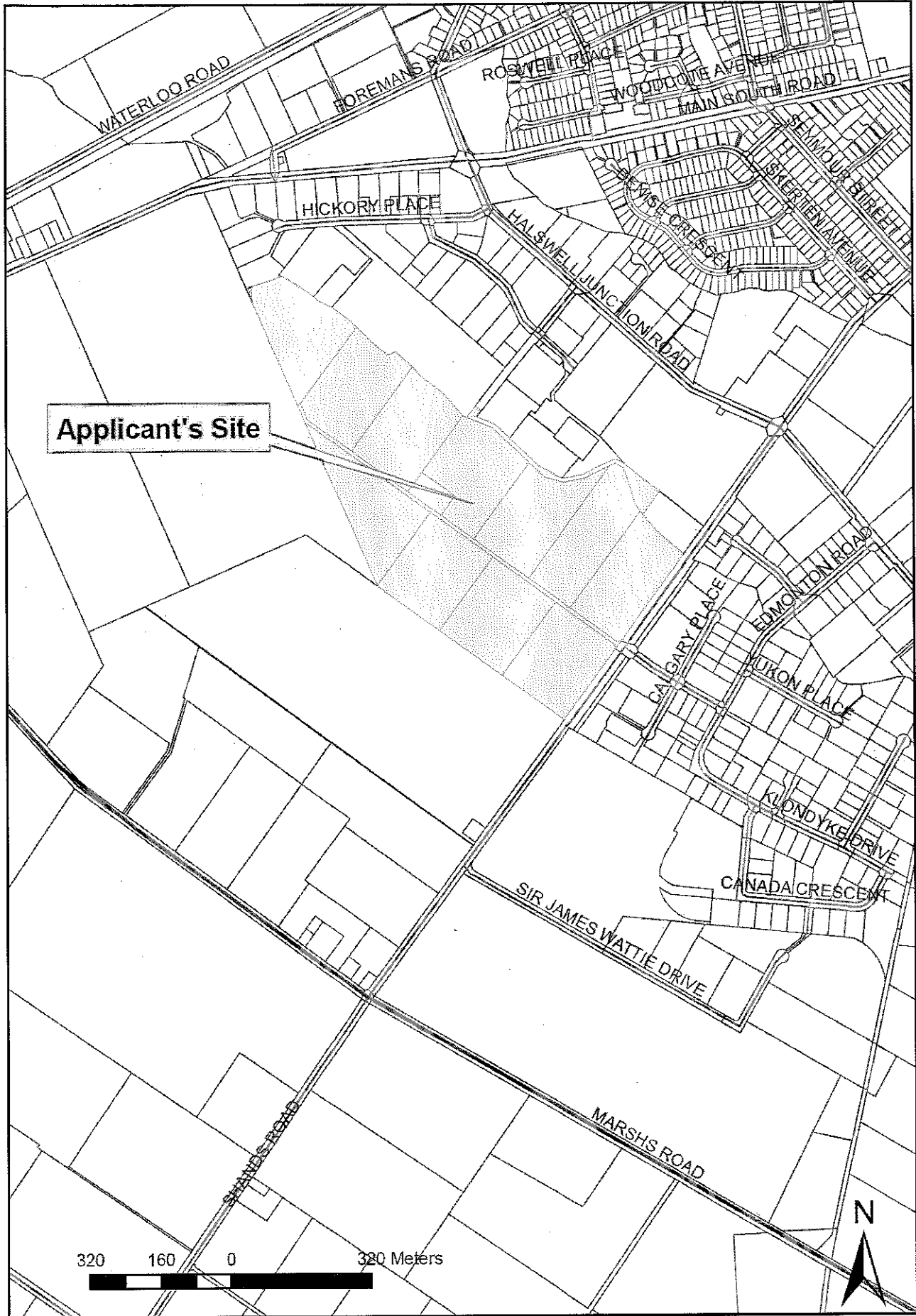
- (26) There shall be no discharge of stormwater from the areas used for the handling and storage of hazardous substances.
- (27) In the event of a spill of a hazardous substance that enters a stormwater collection area or collection sump, all practicable measures shall be taken to:
- (a) Prevent the hazardous substance being discharged onto and into land via the stormwater system;
 - (b) Remove the hazardous substance; and
 - (c) Determine if the contaminant has entered the infiltration basin.
- (28) In the event that a spill of hazardous substance enters the infiltration basin, the consent holder shall:
- (a) Record and provide to the Canterbury Regional Council Attention: RMA Compliance & Enforcement Manager within 24 hours of a spill:
 - (i) The date, time, location and volume of the spill;
 - (ii) The hazardous substance spilled; and
 - (iii) Measures taken to prevent the spilled substance being discharged into land via the stormwater system;
 - (b) Determine the extent of the soil within the infiltration basin considered to be contaminated;
 - (c) Remove any soil within and below the infiltration basin considered to be contaminated;
 - (d) Replace any contaminated soil with soil that is uncontaminated; and
 - (e) Provide a report, detailing action taken under Condition (28)(b) to (d), and any potential effects of the spill on groundwater to the Canterbury Regional Council

Attention: RMA Compliance and Enforcement Manager within one month of the detection of a hazardous substance entering land.

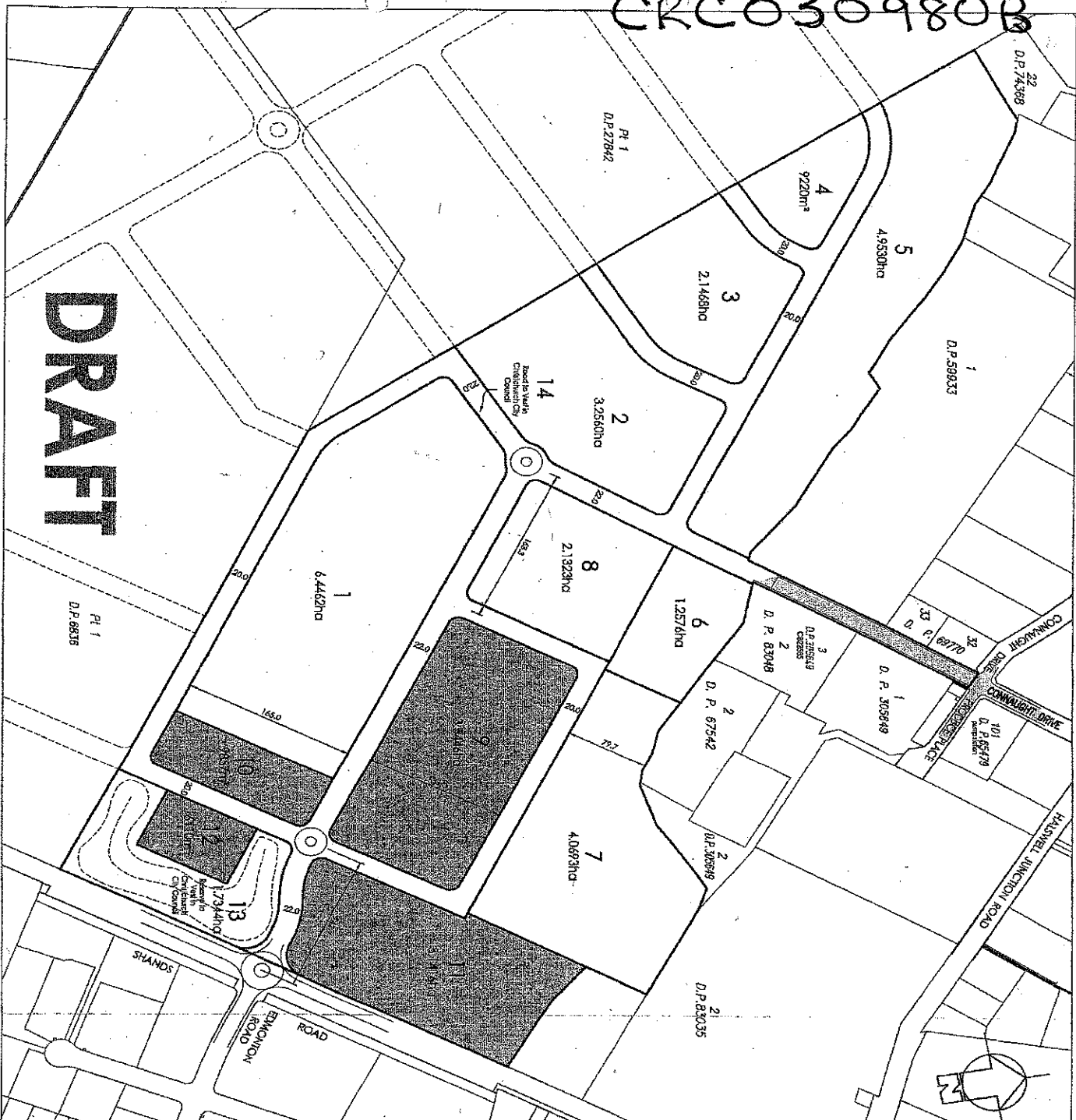
- (29) Any material removed in accordance with Conditions (18), (19), (25), (27) and (28) shall be disposed of at an appropriate facility.
- (30) Records of the inspection, maintenance and soil monitoring of the stormwater system and material disposal shall be kept by the consent holder. The records shall include, but not be limited to information that demonstrates compliance with Conditions (19) to (25), (27) and (28). Copies of these records shall be provided to the Canterbury Regional Council on request.

ADMINISTRATION

- (31) The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 31 December 2012.
- (32) The Canterbury Regional Council may, once per year, on any of the last five days of March or September, 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
 - (c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.



CRC0309808



DRAFT

Pl 1
D.P. 6835



AMENDMENTS:	
NO.	DESCRIPTION

NOTES:

1. This plan is a preliminary plan and is subject to the approval of the Council.
2. The plan is subject to the approval of the Council.
3. The plan is subject to the approval of the Council.
4. The plan is subject to the approval of the Council.
5. The plan is subject to the approval of the Council.



General Builders Assoc

Blk. XII Christchurch S.D.
Christchurch City Council
Comprised in C6138A/1263-1268,
388/952 & 228B5



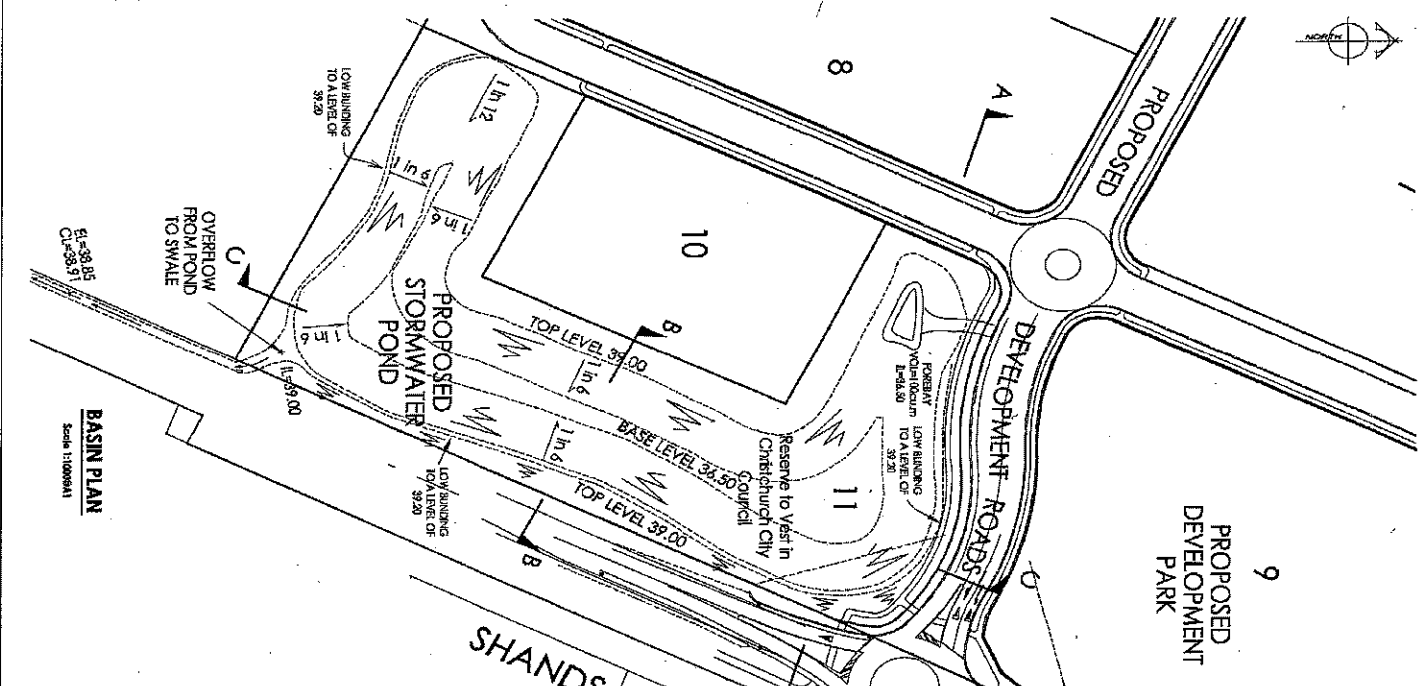
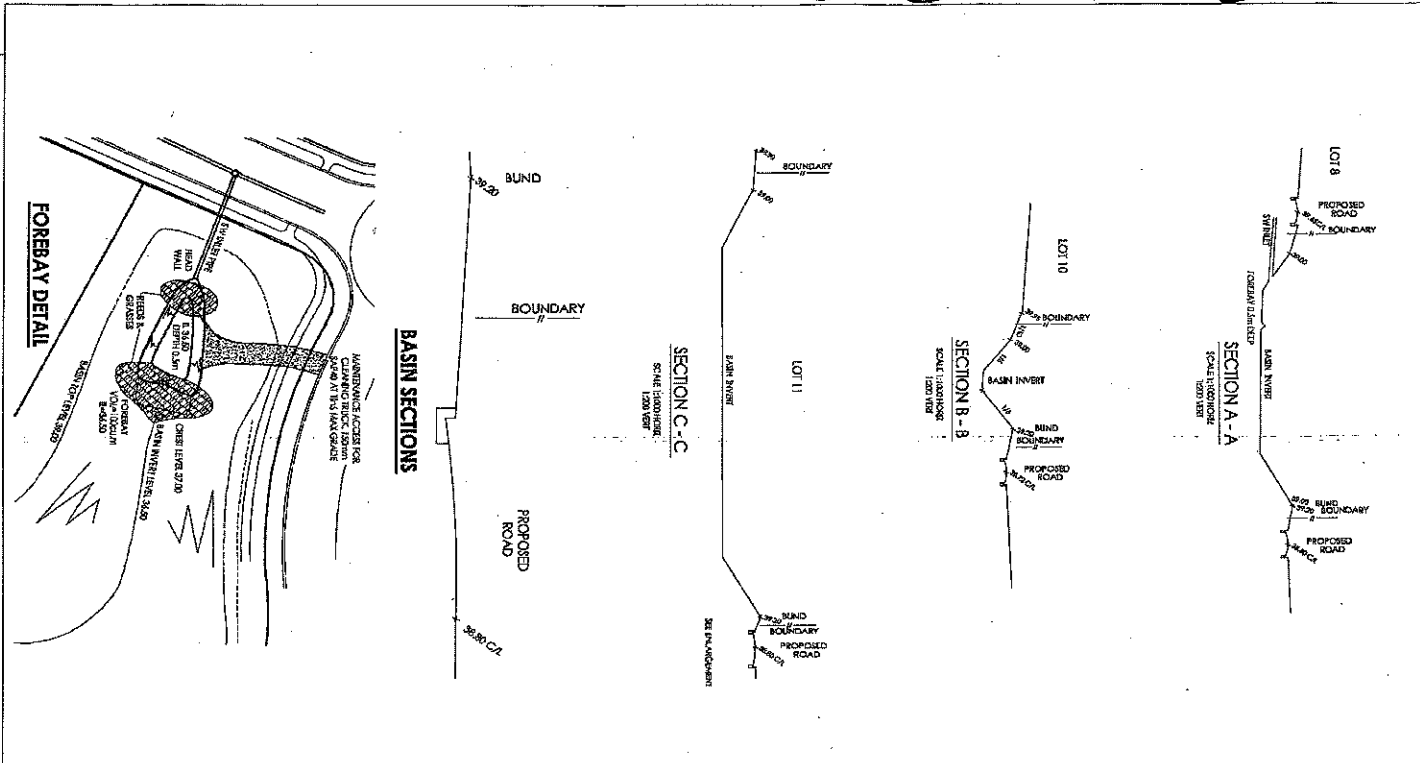
DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

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Telephone: 03 378 4444 Fax: 03 378 4444
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SHEET TITLE:
Possible Future
Development Plan

STATUS:
FOR DISCUSSION PURPOSES ONLY

SCALE: 1:2500000 DATE: 8.4.2007
DRAWN BY: CA760
CHECKED BY: R14



<p>DAVIDE LOVELL & SMITH PLANNING SURVEYING ENGINEERING</p>	<p>Calder Stewart Industries Ltd Shands Road - Hornby Stormwater Options Basin Plan and Sections</p>	<p>Engineering Concept</p>	<p>DATE: March 2008</p>	<p>SCALE: AS SHOWN</p>	<p>PROJECT: C.4760</p>
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Signed: _____

Date: 12/11/2009

Brent Hamilton
Consultant – Senior Environmental Planner

Reviewer's comments:

Signed: _____

Date: 12/11/2009

Tim Mallet
Principal Investigations Officer

REFERENCES

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Canterbury Regional Council 2004. Proposed Natural Resources Regional Plan - Chapter 4: Water Quality (Variation 1). July 2004, Report No.R04/15/4.

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