

In the matter of
The Resource Management Act 1991

And

In the matter of
An Application CRC072888 by **STANWOOD HOLDINGS LIMITED** to discharge Domestic Water Waste from a proposed 59 lot subdivision on Mathias Road, Darfield.

DECISION OF THE HEARING COMMISSIONERS

Heard on the 9th day of April 2009 in the council chambers at the offices of the Canterbury Regional Council, Kilmore Street, Christchurch

Hearing Commissioners

Cr Alec Neill (Chair)

Cr Ross Little

Cr Pat Harrow

APPEARANCES

The Applicant

Mr Gerard Cleary/Ms Olivia Burge (Anderson Lloyd) – counsel for the applicant

Mrs Lynn Torgerson (Pattle Delemore & Partners Ltd)

Mr Jim Brooker (Director of Applicant, Stanwood Holdings Limited)

Mr Tony Barrett (Oasis Clearwater Environmental Systems)

Investigating Officer

Ms Catherine Challies

Date of decision 22nd June 2009

DECISION

On behalf of the Canterbury Regional Council, pursuant to sections 104, 105, and 108, Resource Management Act 1991, we have determined as follows:

Resource Consent Application CRC072888 by Stanwood Holdings Limited to discharge domestic waste water from a proposed 59 Lot subdivision on Mathias Road, Darfield, Canterbury be granted

The Resource Consent shall be for the duration of 35 years subject to consent conditions (see Annexure)

INTRODUCTION

This is the decision of the Hearing Commissioners Cr Alec Neill, (Chair) Cr. Ross Little and Cr. Pat Harrow appointed by the Canterbury Regional Council ("CRC") to hear the applications by the applicant Stanwood Holdings Limited, (SHL) to discharge domestic waste water to land.

- 1 Resource consent application CRC072888 was first considered by Regulation Hearing Committee (RHC) on 7 November 2008. Following a series of adjournments and final resumption on 3 December 2008, a verbal decision was made that the consent application be refused.
- 2 Prior to the written decision being issued by the committee, the applicant advised that they had not received a copy of the Investigating officer's Section 42A report and had indicated that it was likely the applicant would have requested the right to be heard on the basis of the recommendation contained in the Section 42A report. The applicant subsequently advised in writing that they hereby reserved the right to be heard.
- 3 Legal advice received from the Council's solicitor advised that the statutory provisions of the Resource Management Act (RMA) required that a decision be made in writing for due process to occur. The legal advice also advised that it would have been natural justice for the applicant to have sighted a copy of the Section 42A report before councillors considered and decided the application and the applicant has the right to request they be heard. As the decision had not been completed in writing there was an opportunity for the applicant to be heard; a formal hearing scheduled to hear from the applicant and the same members of RHC who considered the application to be appointed as a formal hearing panel to decide the application.
- 4 The RHC (comprising Councillors Neill, Harrow and Little) met on Thursday 12 March 2009 at 9 a.m. and following deliberation of the procedural issues that had arisen were satisfied that to ensure that natural justice prevailed and in keeping with correct statutory process that a hearing be scheduled. A hearing was scheduled for 9th April 2009
- 5 Prior to the hearing on 9th April 2009 the report provided to RHC plus addendum memoranda was produced pursuant to Section 42A of the Resource Management Act, 1991 ("the Act") by CRC's reporting officer Ms. Catherine Challies This report was distributed to all parties and provides an analysis of the matters requiring consideration. The report recommended that the Commissioners could refuse the

application however should they be minded to grant the application a suite of proposed conditions were attached for the Commissioner's consideration.

- 6 The hearing commenced at 9.30am on Thursday 9th April 2009. The hearing was closed on 10th June 2009
- 7 At the beginning of the hearing Cr. Pat Harrow disclosed he was the owner of rural land with 3 discharge permits attached. There was no objection to him continuing as a commissioner.

THE APPLICATION

8 Detail of the application are:

- (i) Location: The discharge will occur at a site on Mathias Street, Darfield.
- (ii) The legal description for the site is Lot 1 DP 6745 and Pt Lot 5 DP 17485.
- (iii) The proposed subdivision is located at or about map reference NZMS 260 L35:3883-4611
- (iv) The proposed subdivision covers an area of 5.83 hectares.
- (v) The proposed subdivision is located in the "SM Zone" defined in the Proposed Natural Resources Regional Plan (PNRRP) Planning maps as an area where the depth to groundwater exceeds 50 metres.

Type and amount of contaminant discharged:

- (vi) The discharge will be domestic wastewater from 56 dwellings in a proposed 59 lot subdivision. The three remaining lots will include two reserves and a kiosk which will not require wastewater systems.
- (vii) The maximum volume of domestic wastewater discharged per lot will be two cubic metres per day. This volume is consistent with the Australia New Zealand Standards for on-site domestic wastewater management (ASNZS 1547:2000) for dwellings with up to six bedrooms.
- (viii) The total volume of wastewater discharged will be 112 cubic metres per day.

Structures used and Maintenance.

- (ix) Each dwelling will have a separate wastewater treatment and disposal system.
- (x) The raw wastewater will be pumped to a membrane bioreactor treatment system (MBR).

- (xi) After passing through the MBR system, the treated wastewater will be discharged to land via soak holes.
- (xii) Each soak hole will have a minimum depth of three metres

NOTIFICATION

- 9 The application was lodged with CRC on 26th March 2007 and was publicly notified by CRC in the Press on 23rd August 2008 and in the Canterbury Times on the 26th August 2008

Applicant: Stanwood Holdings Limited
 Address: c/- Opus International Consultants Limited P O Box 1482, Christchurch
 Attention: Ms Wood

CRC072888: to discharge domestic wastewater from a proposed 59 lot subdivision on Mathias Street, Darfield, at or about map reference NZMS 260 L35:3883-4611. The discharge may result in contaminants in the wastewater entering groundwater. The total maximum volume discharged from each lot will be two cubic metres per day, with a total volume of 112 cubic metres per day from the subdivision. Wastewater will be treated in a membrane bioreactor treatment system and discharged via a soak hole. Contaminants in the wastewater may include organic material, nitrogen, phosphorus, heavy metals and micro-organisms.

A consent duration of 35 years has been requested

Submissions

- 10 One submission was lodged by K & M A Richards, a neighbour supporting the proposed subdivision.

THE HEARING

- 11 Mr Gerard Cleary, counsel for the applicant conducted the applicants case. He identified the nature of the application, the history to date, its statutory context effects, relevant planning documents, the Reporting Officers report and a summary. He made the following points.

- The property is zoned residential.
- Selwyn District Council (SDC) had previously in 2004 considered potential cumulative increases in contaminants in groundwater from septic tanks and at that time and were satisfied it not to be an impediment to rezoning.
- Positive effects must be considered.
- The cumulative increase in nitrate nitrogen in groundwater effecting public health must be considered.
- Relevant planning document concerns can be addressed by conditions.
- The depth of groundwater in conjunction with high quality of treatment will lead to a finding of acceptably low risk.
- The sole well with high MAV reading is 4.2km from Darfield. These readings appeared to occur due to localised phenomena.

- The application meets Part 2 matters.
- The form of discharge proposed is the best available option in the absence of a reticulated scheme

Mrs Lynn Torgerson

12 Mrs Torgerson, an Environmental Engineer with over 20 years experience including expertise in groundwater behaviour and modelling provided evidence in support of the application. She made the following points.

- The discharge of domestic waste water will increase the amount of nitrate nitrogen leaching to groundwater resulting in a small residual increase but that increase will be less than 2mg/l
- The extent of the estimated plume of affected groundwater will not create any adverse effects on the existing water supply wells in the area.
- The domestic waste water is to be managed separately on each lot using a waste water treatment system that treats the water to a high quality before discharging to ground
- Wells in the area are typically between 59 and 112m deep and with only 2 wells within 2km of the proposed development.
- A study of existing groundwater quality data shows nitrate nitrogen concentration levels carried from 1.5mg/l to 6.3mg/l up gradient of site and 2.4 mg/l to 7.6mg/l down gradient across all wells and all measuring dates.
- Well L35/0009 had a nitrate nitrogen concentration of 11.2 mg/l in December 2006 but concentrations surrounding well L35/0009 are likely to be a localised phenomena
- The Darfield community water supply is sourced from areas up gradient of the site. The Kirwee community water supply well is located 7km down gradient. Modelling results confirm that supply will not experience any direct or measurable effect from this site.
- The closest confirmed drinking water supply well (L35/0598 is 2.5km down gradient from the site. This well is 120m deep. It is unlikely this well would be affected from discharge from this site and not expected to be adversely affected.
- MBR treatment systems are able to treat waste water to a very high level.
- While the nitrate loading from the proposed subdivision is higher than a range provided from some agriculture activities, the modelling has indicated that the nitrate nitrogen from the proposed discharge will disperse within a short distance

Mr Jim Brooker

13 Mr Brooker is a Director of Stanwood Holdings Limited. He confirmed he was anxious for the subdivision to proceed and was in discussions with SDC regarding a new source of domestic drinking water for Darfield up gradient of the town. He spoke of his personal views of well L35/0009.

Mr Tony Barrett

- 14 Mr Barrett of Oasis Clearwater Environmental Systems gave an overview of the MBR system. He considered the system to be the "Rolls Royce" of waste water disposal systems, expensive to purchase and best as an individual on site system rather than a single subdivision sewerage plant.

SECTION 42A REPORT

- 15 **Ms Catherine Challies**, the Section 42A Reporting Officer clearly identified the main effects of the activity which require our consideration in her original report presented to RHC on 27 November and she re affirmed those concerns.
- Adverse effects of nitrates on ground water quality
 - Adverse effects of pathogens on ground water quality
 - Cumulative adverse effects on ground water quality
 - Adverse effects of the discharge on surface water quality
 - Adverse effects of the discharge by across ground pathogens transfer
 - Adverse effects of odour
- 16 She tabled an addendum to her report being a memorandum dated 20 March 2009. This provided the panel with confirmation that the recommendations in her original report remained and she attached information that was provided to RHC on 26 November 2008 relating to nitrate nitrogen levels in nearby wells and details of discussions with SDC in respect to the long term plan for sewerage management in Darfield.
- 17 Ms Challies commented on aspects of the evidence given. She requested that in light of the new evidence now presented that she have the opportunity to look over the further information and comment.
- 18 A further addendum report was received on 1st May 2009 and addressed issues raised in evidence at the hearing

Right of Reply for the Applicant

- 19 Mr Cleary exercised his verbal right of reply, reserving the right to make a written right of reply after receiving the further information from Ms Challies. He made the following points:
- Well L35/0009 should be considered in isolation. Commissioners should also consider the test results from wells L35/0843 and L35/0781
 - A private centralised sewerage system was not part of the application and the applicant was not wishing to pursue.
 - The commissioners must ask "Is there a significant adverse effect".
- 20 Mr Cleary exercised his further right of reply in writing which was received on 2nd June 2009. He commented on additional information provided by the Reporting Officer and attached supplementary information for Lynn Torgerson in response to Ms Challies report. He made the following points.
- The MBR system is the best possible option and soak holes are a permitted activity at this site.
 - MBR system will achieve results of less than 1 mg/l most of the time
 - Common for experts to use different modelling techniques
 - Well L 35/0282 does not exist and well L 35/0009 does not reflect the effects from existing subdivision from Darfield.

- Potential effects of this discharge do not amount to a high probability of an adverse effect on ground water quality so as to affect drinking water supplies in the area.
- The Reporting Officer is drawing a correlation between the presence of elevated nitrate nitrogen levels at one well and possibility of an adverse cumulative effect. The evidence burden is on the party who made the allegation.
- If there were serious concerns of health effect on drinking water supplies, Community and Public Health (CPH) would surely have submitted on these issues.
- The increase in nitrate nitrogen will not cause adverse effects sufficient to warrant decline of this consent.

CONSIDERATION OF THE APPLICATION

Evaluation

- 21 In making our evaluation of the application we read the application, the AEE report prepared for the applicants by Pattle Delamore Partners Limited, the waste water Technical report by Opus, the submission received, and the Section 42A reports, and carefully considered the evidence set out before us at the hearing.
- 22 This application relates to consent for a discharge permit to discharge wastewater to ground (S.15). We have given appropriate consideration to sections 104, 105, 108, 123, and Part 2 of the Act. We have also given consideration to the Transitional Regional Plan (TRP), the Regional Policy Statement (RPS), and have had regard to the Proposed Natural Resources Regional Plan (pNRRP) – chapters 1 and 4.
- 23 We have set out the evidence presented by the parties appearing at the hearing. We have considered the S42A report recommendations. It is not our intention to repeat in our evaluation all of the points made by parties appearing. Our assessment focuses on the central issue raised, namely that of effects on water quality.

Status of the application

- 24 There is agreement between the parties regarding the status of the application. We accept that the application is for a discretionary activity pursuant to the relevant plans.

STATUTORY CONSIDERATIONS

Actual and Potential Effects on the Environment. (S 104 (1) (a))

- 25 Section 104 of the Act requires that, subject to Part 2, we consider any actual or potential effects, policy statements and plans and any other relevant matters. .

Adverse Effects of Nitrates from discharge on ground water quality

- 26 We accept that elevated nitrate concentrations in ground water are a concern due to high motility in soil and harmful effects if ingested by humans.
- 27 New Zealand drinking water standards (Ministry of Health 2005) from nitrogen is 50 mg/l which is 11.3 g/m³ of nitrate nitrogen. The Darfield area has shown average nitrate nitrogen levels down gradient of the site at levels of 2.4 mg/l to 7.8 mg/l. Depth of ground water in that area has been identified as being located in the "SM zone" which the pNRRP defines as being an area on the Canterbury Plains where the depth of ground water exceeds 50 metres.
- 28 While there is differing views as to the modelling methods used and as to capabilities of the MBR system from testing carried out by Environment Bay of Plenty and by the manufacturer there is general agreement that the system is effective.
- 29 We note the comments that six bedroomed houses may be able to be constructed on the site and that a six bedroomed house may very well accommodate up to 10 persons but statistics clearly show the average occupancy of housing in Darfield to be substantially fewer persons. We consider that the estimated average occupancy of 2.6 people per dwelling is not unreasonable.
- 30 We accept that down gradient of the site there will be an increase in nitrate levels and agree that the addition of this subdivision will increase the lateral extent width of the plume and that the existing discharges from Darfield Township may be elevated over 2 mg/l up to a distance of 325m from the site. The closest down gradient well used for drinking water supply is L35/0282, 1500m from the site.
- 31 We have noted the nitrate nitrogen concentrations found in well L35/0009. This well is some 4.2km from the site. We are not convinced that the source of nitrate nitrogen may emanate as a cumulative result of septic tank systems in Darfield. Other more localised factors are indeed more likely. As there is likely to be further subdivisions in Darfield we would encourage CRC to carry out further investigations in respect of this well to endeavour to ascertain the source of nitrate.

Adverse effects of pathogens from the discharge of ground water quality.

- 32 Pathogens are of concern because of the potential to cause infections in humans. The applicant proposes to treat the waste water in a MBR treatment system. We accept Ms Challies advice that the effects of pathogens on ground water are likely to be less than minor.

Cumulative adverse effects on ground water quality.

- 33 Darfield does not have a reticulated waste water sewerage system. 2006 census shows Darfield with a population of 1482 and 567 households. The present sewerage system is by individual onsite septic tank systems with disposal of waste water to ground normally by way of boulder hole.
- 34 Since the census was completed three new subdivisions have been approved creating 104 new sites. This development will add a further 56 sites providing a total of 160 new residential sites for development in the past three years.

- 35 The site development will increase the amount of nitrate nitrogen reaching to ground water; however we do not consider that the site development will directly affect the drinking water quality in any down gradient wells used for this purpose.
- 36 Ms Challies has properly expressed her concerns that the cumulative effects may not be acceptable. We advise that there is an evidentiary burden on the party who makes an allegation to present evidence lending support to the allegation. We do not believe her evidence passed that threshold test.

POLICIES AND OBJECTIVES (104(1) (b))

Transitional Regional Plan (TRP)

- 37 The application does not comply with the requirements of the TRP for sewerage tank effluent discharge and is therefore a discretionary activity under the TRP

Regional Policy Statement (RPS)

- 38 The objectives and policies of Cpt 9 RPS are relevant to this application. Ms Challies drew our attention to Objective 3 Policy 9 and Policy 11 which collectively seek to enhance and maintain ground water quality. While the activity may be inconsistent with the above objectives and policies it is not contrary to them.

Proposed Natural Resources Regional Plan (pNRRP – Chapter 4 Water Quality)

- 39 The pNRRP was publicly notified on 3 July 2004. Hearings commenced in September 2006. We acknowledge that the pNRRP is still not operative but it is the most recent and relevant guidance as a planning document containing objectives and policies for water quality. We are able to have regard to the provisions of the pNRRP.
- 40 Ms Challies has identified Objectives WQL2 (b) (i), Policy WQL6 (2) (9) and policy WQL6 (3) (a) (i) as being relevant. We consider that the Oasis Clearwater MBR system is accepted as best practice to effectively treat effluent and performs at a much higher level than the standard septic tank.
- 41 We are of the view that the proposal is not inconsistent with the relevant objectives of the pNRRP as it relates to water.

Other Matters 104(1)(c)

- 42 Ms Challies provided the panel with copies of previous decisions of CRC on discharge of waste water for new subdivisions in Darfield. CRC070135 Buttle 05 Limited was a 57 lot subdivision and was granted. CRC070944 Taifield Developments Limited was a 24 lot subdivision and was granted. The issues considered in those decisions were of a similar nature to this application.
- 43 In the view of the Panel, SDC needs to carefully consider the ongoing development in Darfield, and initiate progress towards a reticulated sewerage system.

- 44 Canterbury Regional Council should further monitor well L35/0009 and endeavour to ascertain the reasons for high levels of nitrate in that well. The panel expressed concerns about the accuracy of the well data base maintained by CRC. Well L35/0282 does not appear to exist. If the panel had been aware of that at an earlier stage in the extended hearing process of this consent application the panel may very well have been more quickly able to reach its final decision. Substantial further information was requested as a result of the belief of the existence of that well.
- 45 When we first considered this application in November 2008 we considered that the granting of this application may very well be "the straw that broke the camel's back". We resolved to refuse the application because of our concerns over nitrate levels and cumulative effects. We had regard to the evidence contained in the S.42A report and other matters placed before us including decision the Taifield. That decision included evidence of CPH. Due to circumstances this application has now come to a formal hearing. We must base our decision on the evidence as presented. While we are aware of the view of CPH we are not at liberty to "cut and paste" the evidence it provided in another hearing into this hearing and give it weight. CPH chose not to submit on this, a publicly notified hearing process. There is innuendo that it does not have the resources or funding to do so. We, as a panel are not at liberty to become an advocate for those unable or unwilling to appear. We must determine the application on the evidence that is before us.

Section 105 (1) Considerations

- 46 We are required to consider the nature of the discharge, the sensitivity of the receiving environment to adverse effects, reasons for the proposed choice and possible alternative methods of discharge.
- 47 The discharge is treated waste water being discharged to land via soak holes. The soils are of a free draining composition. The nearest well is some 2.2km distance from the site. The nearest community drinking water well is 7km from the site. The MBS system has been chosen because of the high quality of treatment prior to discharge. While there are other possible methods of discharge until Selwyn District Council provides a reticulated sewerage system it is at this time the most effective system available. We accept that drip irrigation is an alternative which was considered.
- 48 We accept that any adverse effects can be adequately avoided remedied and or mitigated through conditions.

PART II MATTERS

Purpose of the RMA (S.5)

- 49 Ms Challies considered that the proposal may be inconsistent with the purpose of the Act, which is to promote the "sustainable management of natural and physical resources" and includes meeting the reasonably foreseeable needs of future generations. She also considered it may not be consistent with section 5(2)(c) which has regard to avoiding, remedying or mitigating any adverse effects of activities on the environment. We have given this consideration but do not concur. We consider the application to be consistent with the principles of the sustainable management of natural and physical resources, as defined in section 5 noting particularly that:

- The proposed activities will allow the future residents of the subdivision to provide for their social and economic needs and their health and safety
- The proposed activities will not compromise the reasonable needs of future generations, nor will they have adverse effects on the life supporting capacity of water or ecosystems.
- The potential adverse effects of the proposed activities can be mitigated in part through the conditions imposed on the consents granted.

Matters of National Importance (S.6)

50 In recognising and providing for the matters of national importance in Section 6 we do not consider that any of these matters are particularly relevant to this application.

Other Matters (S.7)

51 In having particular regard to Section 7 matters section 7.(b) the efficient use and development of natural and physical resources and S.7(f) maintenance and enhancement of the quality of the environment are relevant to our considerations. The site is zoned residential and it is envisaged that residential development will occur. We are of the view any adverse effects need to be remedied and mitigated. This can be achieved through conditions.

Principals of the Treaty of Waitangi (S.8)

52 S8 of the RMA 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 Taumutu Runanga. On 28 March 2007 Environment Canterbury advised Te Taumutu Runanga of this application. On 20 June 2007 Te Taumutu Runanga advised they would not oppose the application. They did not submit on the application. There is no evidence that the granting of the application is inconsistent with the principles of the Treaty of Waitangi.

DURATION OF CONSENT (S.123)

53 The applicant has sought a duration of 35 years. We have carefully considered the matters contained in Chapter 1 pNRRP as a guide to the duration. We see no reason why the duration of this consent should not be for 35 years. We accept that Darfield does not have a reticulated domestic waste water system, however if the cumulative effects of continued subdivision are such that there is any serious concerns of health effects resulting from urban expansion then the SDC will be influenced to install a reticulated wastewater treatment system. Conditions imposed in this consent require lot owners to connect to a sewerage pipeline network where that network is installed in close proximity to the site.

CONDITIONS (S.108)

54 We have considered the conditions that have been submitted and believe those conditions to be appropriate. As previously stated individual lot owners will be

required to connect to a reticulated sewerage system within six (6) months of a connection being provided.

Summary

55 In considering the environmental effects of granting Discharge Permit CRC072888, it is our overall judgement on balance that the purpose and principles of the Act can be achieved. We are of the view that the potential for further adverse effects above those already existing is minimal. We are of the opinion that any adverse effects of the discharge of wastewater to land can be adequately avoided remedied and mitigated by the imposing of consent conditions.

Decision

56 On behalf of the Canterbury Regional Council, pursuant to sections 104, 105, and 108, Resource Management Act 1991, we have determined as follows:
Resource Consent Application CRC072888 by Stanwood Holdings Limited to discharge domestic waste water from a proposed 59 Lot subdivision on Mathias Road, Darfield, Canterbury be granted
The Resource Consent shall be for the duration of 35 years subject to consent conditions (see Annexure)

Right of Appeal (S.120)

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

Dated at Christchurch this 22nd Day Of June 2009



Cr. A G Neill
Chair

Annexure

CRC072888 – Stanwood Holdings Limited - Conditions

56 consents need to be issued for this application. Condition 4 will vary for each consent to identify the different lots. The lots are numbered 1-56 as shown on Plan CRC072888B.

When X = 1	Y = L35:3879-4626	When X = 29	Y = L35:3890-4611
When X = 2	Y = L35:3887-4624	When X = 30	Y = L35:3892-4611
When X = 3	Y = L35:3884-4624	When X = 31	Y = L35:3893-4614
When X = 4	Y = L35:3881-4627	When X = 32	Y = L35:3896-4612
When X = 5	Y = L35:3884-4627	When X = 33	Y = L35:3896-4610
When X = 6	Y = L35:3887-4627	When X = 34	Y = L35:3896-4604
When X = 7	Y = L35:3889-4626	When X = 35	Y = L35:3894-4605
When X = 8	Y = L35:3886-4623	When X = 36	Y = L35:3892-4604
When X = 9	Y = L35:3889-4623	When X = 37	Y = L35:3890-4605
When X = 10	Y = L35:3891-4623	When X = 38	Y = L35:3888-4605
When X = 11	Y = L35:3893-4623	When X = 39	Y = L35:3886-4606
When X = 12	Y = L35:3893-4626	When X = 40	Y = L35:3884-4606
When X = 13	Y = L35:3896-4625	When X = 41	Y = L35:3882-4606
When X = 14	Y = L35:3896-4623	When X = 42	Y = L35:3880-4606
When X = 15	Y = L35:3897-4618	When X = 43	Y = L35:3878-4606
When X = 16	Y = L35:3897-4616	When X = 44	Y = L35:3879-4607
When X = 17	Y = L35:3796-4614	When X = 45	Y = L35:3877-4609
When X = 18	Y = L35:3893-4617	When X = 46	Y = L35:3878-4611
When X = 19	Y = L35:3891-4617	When X = 47	Y = L35:3880-4612
When X = 20	Y = L35:3889-4617	When X = 48	Y = L35:3877-4613
When X = 21	Y = L35:3889-4618	When X = 49	Y = L35:3877-4615
When X = 22	Y = L35:3886-4616	When X = 50	Y = L35:3881-4615
When X = 23	Y = L35:3886-4614	When X = 51	Y = L35:3880-4616
When X = 24	Y = L35:3885-4613	When X = 52	Y = L35:3881-4618
When X = 25	Y = L35:3885-4611	When X = 53	Y = L35:3882-4620
When X = 26	Y = L35:3888-4611	When X = 54	Y = L35:3878-4621
When X = 27	Y = L35:3888-4614	When X = 55	Y = L35:3878-4619
When X = 28	Y = L35:3890-4614	When X = 56	Y = L35:3877-4617

1. The contaminants discharged shall be only domestic wastewater from a single dwelling with a maximum of six bedrooms.
2. The wastewater treatment system shall not include chlorine disinfection.
3. The volume of wastewater discharged shall not exceed two cubic metres per day.
4. (a) The dwelling shall be located on Lot X Mathias Street Darfield as shown on Plan CRC072888A and Plan CRC072888B, which form part of this consent.

(b) The wastewater shall be only discharged into land at or about map reference NZMS 260 Y, via a soak hole.

5. (a) The wastewater shall be treated in a membrane bioreactor treatment system, or an alternative wastewater treatment system which provides the same or better quality treatment.
(b) The wastewater treatment system shall have a proprietary outlet filter installed.
6. After exiting the wastewater treatment system, the wastewater shall be discharged via a soak hole.
7. (a) The wastewater treatment system and soak hole installed shall be certified by a person suitably qualified and experienced in the design and operation of such wastewater treatment systems and soak holes, as complying with conditions (4)(b), (5) and (6).
(b) A copy of the certificate shall be forwarded to the Canterbury Regional Council, attention: RMA Compliance and Enforcement Manager, following the installation of the wastewater treatment system and soak hole.
8. The discharge shall not result in any wastewater being visible at the land surface.
9. (a) There shall be no discharge within 20 metres of any surface water body.
(b) There shall be no discharge to surface water as a consequence of the exercise of this consent.
10. The discharge shall not cause an odour, which is offensive or objectionable, beyond the boundary of the property on which this consent is exercised.
11. The discharge shall not occur within the following distances from bores that existed or were authorised before 26 March 2007:
 - (a) 1,000 metres up-gradient (in relation to the direction of groundwater flow) and 200 metres in any other direction of any bore from which more than 20 cubic metres per day of water is taken for community supply purposes; and
 - (b) 200 metres up-gradient (in relation to the direction of groundwater flow) and 50 metres in any other direction of any bore from which less than 20 cubic metres per day of water is taken for community supply purposes; and
 - (c) 50 metres up-gradient (in relation to the direction of groundwater flow) and 30 metres in any other direction of any bore not used for community supply purposes.

Sampling conditions

12. (a) A representative sample of treated wastewater (hereafter referred to as the sample) shall be collected from the pump chamber of the wastewater treatment system.
(b) The sample shall be collected at least once every two months within the first six months of operation of the treatment system and on a 12 monthly basis thereafter.
(c) Samples shall be analysed to determine concentrations of the following water quality parameters: total suspended solids (mg/L), nitrate-nitrogen (mg/L) and faecal coliforms (cfu/100mL).
(d) The results of analyses of all samples shall be compared to the following trigger values:

(i) Suspended solids	(ii) 25 mg/L
(iii) Nitrate-nitrogen	(iv) 25 mg/L
(v) Faecal Coliforms	(vi) 100 cfu/100mL

13. (a) In the event that the results of the testing in accordance with condition (12)(c) exceed the trigger values set out in condition (12)(d), a further sample shall be collected and analysed within three days of receiving the results of analyses of the sample taken in accordance with condition (12)(c).
- (b) In the event that the results of analyses of the sample taken in accordance with condition (13)(a) exceed the trigger values shown in condition (12)(d), the consent holder shall immediately inspect, service, repair and/or modify the treatment system, as required, to reduce the concentration of water quality parameters in the discharge to less than the trigger values set out in condition (12)(d).
- (c) A further sample shall be collected and analysed within seven days of receiving the results of the sample taken in accordance with condition (13)(a).
- (d) In the event that the results of analyses of the sample taken in accordance with (13)(c) exceed the trigger values shown in condition (12)(d), the consent holder shall immediately cease the discharge of wastewater from the treatment system to land;
- (e) The discharge of wastewater from the treatment system to land shall not recommence until after the results of analyses of a further sample do not exceed the trigger values shown in condition (12)(d).
- (f) Within ten working days of receipt of the results of analyses of a sample taken for the purpose of condition (13)(e) the consent holder shall provide to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, a report indicating the results of analyses of samples taken in accordance with condition (13) and detailing all measures taken to reduce water quality parameters in the discharge to less than the trigger values set out in condition (12)(d).
14. (a) All sampling required under this consent shall be undertaken by a suitably qualified or experienced person using the most appropriate scientifically recognised and current methods.
- (b) All samples required under this consent shall be analysed using the most scientifically recognised and current method by a laboratory that is certified for that method, by a nationally recognised accreditation authority such as International Accreditation New Zealand.

- (c) The results of all analyses shall be provided to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 10 working days of completion.
15. (a) The wastewater treatment system and soak hole shall be serviced at least two times per year by a person suitably qualified and experienced in the maintenance of such systems.
- (b) The servicing shall include, but shall not be limited to:
- (i) flushing the membrane and cleaning if necessary;
 - (ii) inspecting the filters and cleaning if necessary;
 - (iii) checking that the pump is working and replacing pump as required;
 - (iv) checking the electrical equipment is working and replacing as necessary; and
 - (v) checking the alarm system is working and replacing as necessary;
- (c) Following every service a written report shall be prepared and kept by the consent holder. In addition, the consent holder shall also keep written records of all repairs made to any part of the wastewater treatment and soak hole.
- (d) The consent holder shall forward a copy of the written reports and records of repairs to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, on request.
16. The exercise of this consent shall not occur while there is a connection available to a sewerage pipeline network except that for the first six months after a connection becomes available the exercise of the consent may occur. For the purpose of this condition, "available" means:
- (a) a sewerage pipeline network system passes along any one or more of the following stretches of road shown on plan CRC072888C which forms part of this consent
- iii Mathias Street between Horndon Street and West Coast Road; or
 - iii Horndon Street between Mathias Street and 123 Horndon Street; or
 - iii West Coast Road between Mathias Street and 125B Horndon Street; and
- (b) the network operator will accept the discharge.
17. The Canterbury Regional Council may, once per year, on any of the last five working days of May or November 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 the 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.
18. The lapsing date for the purposes of section 125 shall be 31 December 2013.

Appendix 1 – Site location



