

## **Application CRC174304**

**By David Hickmott**

**For a discharge permit to discharge stormwater into land**

**Section 42A Officer's Report – Tegan Wadworth**

**Date: 21<sup>st</sup> March 2017**

### **INTRODUCTION**

1. David Hickmott herein referred to as 'the applicant' has applied for a consent to discharge stormwater into land where contaminants may enter groundwater.
2. The proposal is for developed phase stormwater discharge from a building and hardstand areas for the manufacture of plastic products. The construction for the Plastics Manufacture Building has already been completed. There will be additional construction of an office/ablution block, however this does not form part of this consent.
3. The application site is legally described as Lot 2 DP 82284, 254 Easterbrook Road, Fernside, Waimakariri District and is four hectares in size.
4. Mr Andrew Brough of Courtney Environmental Consultants Ltd (the consultant) has prepared and submitted the application on behalf of the applicant (C17C/20929-3).
5. A s92 letter was sent to the applicant on the 20<sup>th</sup> February 2017 with the response returned on 14<sup>th</sup> March 2017 and processing continued, the s92 response can be seen in HPRM folder C17C/45471.
6. I note that there have been complaints in regards to this site about offensive odours coming from the plastics manufacture, however this does not form part of this consent.
7. A site visit was undertaken during the processing of this consent application. On the 20<sup>th</sup> February 2017 Myself, Jessica Steel Consent Planner and Marco Cataloni Resource Management Officer visited the site. The site was tidy and well-kept with no compliance issues raised by Mr Cataloni, a small amount of plastic powder and plastic off cut was observed around the east concrete pad however this would be addressed by the Spill Management Plan.

### **DESCRIPTION OF THE PROPOSED ACTIVITY**

8. The applicant proposes to discharge developed phase stormwater to land via swales and irrigation. Refer to Section 3.0 of the AEE, (Page 5), which accompanied this application for a more detailed description.
9. The discharge will be related to ongoing utilisation of the property as the business site for manufacturing of plastic products and will include runoff from:
  - a. Hardstand areas (concrete pads and gravel); and
  - b. Roofing.
10. The Total area of the site is 4000 square metres, the areas from which discharge will occur include:

- a. Roof area approximately 1250 metres squared;
  - b. Hardstand area 985 metres squared; and
  - c. Other hardstand areas approximately 665 metres squared.
11. There are two substances used on site to be noted, plastic powder and mono coat plastic liquid. The plastic powder is not soluble in water and the Hazard Report by Vision Plastics NZ Limited submitted with the application states that the water solubility is negligible. The plastic powder is put into moulds with the mono-coat liquid used to prevent the plastic binding to the moulds.
  12. Stormwater from the roof will be captured and detained in a 30,000 litre plastic tank. Captured water will then be irrigated onto the pasture on the property over approximately 8,460 square metres at a rate of 2.2 to 2.4 millimetres per hour depending on the operating pressure.
  13. Stormwater from hardstand areas will be discharged to land via grass infiltration swales, 200 millimetres deep, adjacent to the gravel driveway, hardstand areas and compacted gravel car parking. The applicant has not proposed to install sumps on site. See Plan CRC174304B attached in Appendix One for the layout of the stormwater treatment systems and discharge areas.
  14. The swales, apart from the swale along the western hardstand area, are designed to treat the first flush of up to 15 millimetres from the hardstand areas and have the capacity to contain and dispose of a 10% AEP rainfall event.
  15. Stormwater treatment from the western hardstand areas has been revised after the site visit. It was observed that where the swale on the western side of the manufacturing building and proposed hardstand area is located there is the potential for significant ponding. The applicant has revised the design of the western swale to be a conveyance swale leading to a pipe underneath the residential driveway that will discharge over a southern paddock on site
  16. This conveyance swale will be designed to have a hydraulic residence time of at least nine minutes and have the capacity to contain and dispose of a 2% AEP rainfall event prior to discharging over a southern paddock onsite.
  17. The applicant states that no plastic powder will become entrained in the stormwater system and there is considered to be a low level of hydrocarbons from a small car park. The applicant states that the concentration of suspended solids in the discharge prior to treatment in the swales will be 3.12mg/L. Any runoff in excess of the capacity of the infiltration swales will collect on surrounding grassed areas to drain away in less than 48 hours after a 2% AEP rainfall event.
  18. The swales will likely have an infiltration rate of four millimetres per hour.
  19. The applicant will be responsible for maintaining the stormwater systems for the duration of the consent.
  20. The applicant has requested a consent duration of 35 years.

## **LEGAL AND PLANNING MATTERS**

### **The Resource Management Act 1991 (RMA)**

21. Section 15 of the RMA states that:

*“(1) No person may discharge any—*

- (a) *contaminant or water into water; or*
- (b) *contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water; or*
- (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 expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.*

*(2) No person may discharge a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a national environmental standard unless the discharge—*

- (a) is expressly allowed by other regulations; or*
- (b) is expressly allowed by a resource consent; or*
- (c) is an activity allowed by section 20A.*

*(2A) No person may discharge a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a regional rule unless the discharge—*

- (a) is expressly allowed by a national environmental standard or other regulations; or*
- (b) is expressly allowed by a resource consent; or*
- (c) is an activity allowed by section 20A.*

*(3) This section shall not apply to anything to which [section 15A](#) or [section 15B](#) applies.”*

22. The proposed discharge cannot comply with the relevant regional rules and there is no national environmental standard that authorises this discharge, therefore resource consent is required.

## **Regional Plans**

### **Waimakariri River Regional Plan (WRRP)**

23. The activity is located within an area covered by the Waimakariri River Regional Plan (WRRP).
24. The developed phase stormwater discharge to land where it may enter groundwater is an activity listed in Appendix 4 of the WRRP, therefore the rules of the Canterbury Natural Resources Regional Plan (NRRP) must also be considered.
25. Resource consent is required for the stormwater discharge on site as the activity cannot comply with Rule WQL6 1(d) of the Canterbury Natural Resources Regional Plan (NRRP) ‘*The discharge system shall not be located at least one metre above the highest groundwater level that can be reasonably inferred for the site at or about the time the system is constructed*’.

26. Therefore consent is required under rule 6.1 of the WRRP as a **discretionary** activity.

### **Summary**

27. The discharge of stormwater is classified as a **discretionary** activity.
28. There are no other consents considered to be required for this application the applicant states that works onsite for further construction meet the permitted activity rule 5.175 of the Canterbury Land and Water Regional Plan. The applicant also states that construction will take place in the dry therefore resource consent for construction phase stormwater discharge will not be required.

### **ASSESSMENT OF POTENTIALLY AFFECTED PARTIES**

29. The applicant did not carry out any consultation as they did not identify any potentially adversely affected parties.
30. CRC informed the following parties of the proposal:
- a. Tūāhuriri Rūnanga;
  - b. Waimakariri District Council;
  - c. Department of Conservation; and
  - d. Canterbury District health Board.
31. To date no response have been received. I agree that no persons are likely to be adversely affected by this proposal.

### **DESCRIPTION OF THE AFFECTED ENVIRONMENT**

32. The applicant has provided a description of the affected environment in Section 6 of the Application (Page 14). In summary:
- a. The soil underlying the upper surface of the site consists predominantly of longbeach deep and moderate silty loam and poorly drains;
  - b. The infiltration rate beneath the stormwater system is less than 4 millimetres per hour;
  - c. There is an existing groundwater well onsite for domestic use (M35/8586);
  - d. The site sits within the Waimakariri Zone;
  - e. This site is located over a semi-confined/unconfined aquifer;
  - f. The direction of groundwater flow is westnorthwest to eastsoutheast;
  - g. Highest potential groundwater levels are expected to be 0.8 meters below ground level based on bore on site;
  - h. No NES drinking water sites within 1000 metres;
  - i. There are no community drinking water protection zones within the site or immediately surrounding;
  - j. A drain is located on the eastern boundary of the property;
  - k. There are human effluent discharges within one kilometre of the site;
  - l. The site is not listed on the LLUR.

33. I have audited the applicants description and agree with the majority of their assessment however I would like to make the following additional points:
- a. The site is located within the rohe of the Tūāhuriri Rūnanga;
  - b. The site is not located within a silent file, statutory acknowledgement area or Rūnanga sensitive site;
  - c. There are no NZ Archaeological Association sites listed within 500 metres of the site;
  - d. There is a flood hazard assessment #97524 for the neighbouring property 268 Easterbrook Road, which states the site is outside the main ponding areas of the Cust and Cam River catchments, but on the Ashley River floodplain however the risk is low;
  - e. There are two small streams which run on the northern and southern boundaries of the property within 250 metres of the Cam River;
  - f. There are 53 active consented wells listed within 1000 metres of the site;
  - g. The closest downgradient active well is M35/8842 which is used for domestic supply;
  - h. There are 19 issued human effluent discharges and one issued residential stormwater discharge within one kilometre of the site;
  - i. There are three wells within 1000 metres which have groundwater level readings which indicate that the highest groundwater levels are recorded at 0.48 metres below ground level.

#### **ASSESSMENT OF ACTUAL AND POTENTIAL EFFECTS**

34. Refer to Section 7 of the Application, (Page 16), which accompanied this application for the assessment of effects that may arise from this proposal.
35. I agree with the applicant's assessment and their conclusions. Discussion is provided below where I consider further discussion is required in regards to the following potential effects:
- a. Potential adverse effects on groundwater quality and groundwater users;
  - b. Potential adverse effects on surface water quality;
  - c. Potential adverse effects of slow entry of stormwater into land (ponding);
  - d. Potential adverse effects of stormwater on groundwater quantity; and
  - e. Potential adverse effects on cultural values.

#### **Potential adverse effects of the discharge of stormwater on groundwater quality and groundwater users**

36. The proposed discharge of stormwater has the potential to adversely affect groundwater quality and users as a result of the infiltration of stormwater and contaminants through the soil.
37. This proposal is for developed phase stormwater from roof and hardstand areas. These areas will be treated separately as the key contaminants of concern are different. These are discussed below:

### Roof stormwater

38. Roof water will be piped and then collected in a 30,000 litre plastic tank and then spray irrigated onto the pasture on the property. The roof water will be irrigated based on float switch or other pump control mechanism. This will be at the rate of 2.2 to 2.4 millimetres per hour, depending on the operating pressure, over approximately 8460 m<sup>2</sup> of pasture.
39. Roof stormwater is considered to be relatively 'clean' (Waterways, Wetlands and Drainage Guide - Stormwater Treatment Systems, Section 6.5.1, *On-site Roof Water Soakage Systems*) and is therefore unlikely to have adverse effects on groundwater quality. I note that the roof material is constructed of colour steel and is therefore unlikely to leach contaminants of concern.
40. The roof stormwater will be retained and discharged to land only within the site so it is unlikely to impact neighbouring properties.

### Hardstand stormwater

41. The handstand areas, gravel driveway and carpark will be graded allowing stormwater to flow into infiltration swales adjacent to these areas.
42. The infiltration swales are designed to treat the first flush from the hardstand areas of up to 15 millimetres. This equates to approximately 25 cubic metres of runoff that will be treated.
43. Any runoff in excess of the capacity of the infiltration swales will collect and pond on surrounding grassed areas to drain away after the 2% AEP rainfall event. There will be no discharge off site as there is sufficient land for water to pond over, and ponding will not occur for longer than 48 hours after a 2% AEP rainfall event.
44. The applicant states the potential contaminants arising from the stormwater runoff from hardstands areas include: sediment runoff resulting from vehicles, hydrocarbons from vehicles, possible risk of fuel spills, spill of plastic powder and mono-coat liquid used to prevent plastic binding to moulds.
45. The applicant considers that there will not be any adverse effects on groundwater quality from the hardstand stormwater. The reasons for this are as follows:
  - a. The scale of the business is small. Vehicle movement will consist of staff use, delivery of raw materials, and dispatch of the finished moulds (this area is located under a canopy);
  - b. The levels of contaminants are considered to meet drinking water standards;
  - c. The applicant states that the efficiency of the stormwater treatment device will be 100%. Furthermore if 100% removal is not achieved residual concentration will still meet drinking water standards;
  - d. All potential contaminants can be contained. If plastic powder is spilt there will be the condition of sweeping it up to prevent it entering the stormwater system;
  - e. There will be a low level of vehicle movement and therefore build-up of contaminants will be over a long period of time, because of this the applicant considers that soil testing is not required;
  - f. The site will have a spill management plan;

- g. The applicant states that the stormwater system will be able to contain all potential contaminants and there will be no discharge off site as there is sufficient land for water to pond over. Therefore it is not likely that surrounding groundwater users will be affected.

*Hardstand stormwater treatment*

- 46. I would like to note the following points in regards to swale contaminant treatment:
  - a. Auckland Regional Council Technical Publication #10 (TP10) provides that swales utilise infiltration by which suitable soils can be a major contaminant removal and volume reduction mechanism (section 9.2 TP10);
  - b. Section 9.2.2 TP10 states from a motorway monitoring project showed that swales achieved consistent removal on average of 63-72% for copper and average of 80% removal for zinc;
  - c. Swales can be used for basic treatments for contaminated stormwater runoff from roadways, driveways, car parks and highly impervious areas (9.3 TP10);
  - d. TP10 9.5.2 states that compacted soils is a factor that decreases performance of swales for water quality treatment. I note that the bore-log for the onsite well (M35/8586) shows brown clay at 0.50 metres below ground level. However due to the capacity of the swales and hydraulic residence time the swales will still provide adequate treatment of stormwater.
- 47. I note that from the site visit it was observed that where the swale on the western side of the manufacturing building and proposed hardstand area there is the potential for significant ponding. The applicant has revised the design of the western swale to be a conveyance swale leading to a pipe that will discharge over a southern paddock on site.
- 48. The applicant states that it is not possible to install sumps in the carpark and provide a discharge to the swale system as it is only 200 millimetres deep and groundwater is 800 millimetres below ground level. I do not consider sumps necessary for this proposal given the small scale and consider that with appropriate maintenance the swales will still operate effectively without the need for sumps on site.
- 49. Technical advice received from Mr Stephen Gardner Environment Canterbury Contaminated Site Officer (II) states (C17C/29689):

*'If all the plastic moulding is taking place indoors inside a sealed warehouse I don't see any need for any specific conditions. Any spills etc should be contained within the building and not be discharged to ground. I don't consider the storage of plastic powder outside to be a HAIL activity.'*
- 50. Regarding the mono-coat liquid no risks are identified in the up to date hazard report submitted in response to the section 92 request for further information. The report by Chem-Trend states that there are no ingredients present which are classified as hazardous to health or the environment. There will be a condition stating that the liquid will not be allowed to become entrained in the stormwater system.
- 51. I note that as observed on the site visit the bags containing the plastic powder were well sealed. Sealed bags were stored inside on shelving and outside on

pellets. The applicant has provided a Spill Management Plan to manage any spills and clean-up of the plastic powder and the hazard report states water solubility as negligible. I also note that the delivery of the powder occurs on the western side of the building and the pellets are forklifted into the building. The finished plastic products are loaded out on the northern side underneath a canopy furthermore reducing the potential for runoff into the stormwater system.

52. I note that from the site visit it was observed that some plastic powder and small plastic offcuts were on the gravel by the eastern hardstand area on site. It was discussed that edging could be built around the hardstand area to prevent the plastic debris from entering the stormwater system. The applicant instead provided a Spill Management Plan for clean-up processes.
53. The plastic powder and mono-coat liquid will not be allowed to become entrained in the stormwater system and there will be a condition stating that it shall not be permitted for the plastic powder or mono-coat liquid to enter the stormwater system.
54. In summary the swales will provide good removal of contaminants, treat stormwater runoff to a high level and there will be good filtration of contaminants from stormwater, furthermore plastic products will not be allowed to become entrained in stormwater as the applicant is required to clean up any spills. Therefore, groundwater quality is unlikely to be adversely affected.

#### *Potential effects on groundwater users*

55. There are three wells within 1000 metres which have groundwater level readings which indicated that the highest groundwater levels are recorded as 0.48 metres below ground level. The swales will be 0.2 metres below ground level, therefore it is unlikely that there will be direct discharge to groundwater.
56. I note that during high levels of rainfall groundwater may rise in to the base of the swales. If groundwater does rise into the swales, when the water flows through the swales again the contaminants will be filtered. Should there be any significant ponding in the area I note that the entire area around the application site would encounter issues not just this site.
57. I agree there will be sufficient separation to groundwater users. The site is not located within a community drinking water protection zone and the closest down gradient bore used for domestic supply is approximately 138 metres from the closest discharge point. Well M35/8842 has a depth of 19.90 metres, given the depth it is unlikely to be affected due to filtration of contaminants. Given the filtration through the swales and pasture, I therefore consider effects on groundwater users are likely to be less than minor.

#### Summary

58. Given the above I consider that the potential adverse effects of the discharge on groundwater quality are likely to be no more than minor and effects on users are likely to be less than minor. In summary this is because:
  - a. The roof stormwater will likely have low level of contaminants and irrigation over pasture on the property will be contained onsite;
  - b. Swales will provide treatment of contaminants from hardstand areas and there will be no direct discharge to groundwater;
  - c. The plastic powder and liquid are not hazardous or soluble in water; and

- d. Any spills of the plastic powder or mono-coat liquid will not become entrained in the stormwater system and will be cleaned up prior to a rainfall event. There will also be a spill management plan.

#### **Potential adverse effects on surface water quality**

59. The applicant states that there is a drain located on the eastern boundary of the property. It is not proposed that the roof stormwater or the hardstand stormwater will be discharged into the drain.
60. The distance between the hardstand areas and the drain is approximately 205 metres. The distance from the eastern boundary of the pasture area which will be irrigated with the roof water and the drain is approximately 107 metres. This provides good separation between the discharge and surface water. There will be a condition stating that the applicant will not be permitted to discharge to surface water.
61. I note that there will be effective treatment of hardstand stormwater as it will be discharged to swales which will allow for contaminants to be treated.
62. Overall, given the separation distance to the drain, the effective treatment by swales and no direct discharge to surface water, I consider that the potential adverse effects on surface water quality are likely to be less than minor.

#### **Potential adverse effects of slow entry of stormwater into land (ponding)**

63. The applicant states that the infiltration swales will have the capacity to hold and dispose of a 10% AEP rainfall event.
64. The applicant states that any runoff in excess of the capacity of the infiltration swales will collect on surrounding soil to drain away up to and including a 2% AEP rainfall event. All stormwater will be contained on the applicant's site and will not be allowed to run off to neighbouring properties. There will be a condition stating run-off shall not enter neighbouring properties.
65. The soil drainage category for the site is poorly drained. The infiltration rate beneath the stormwater system is reported as four millimetres per hour. The applicant states that ponding will not occur for more than 48 hours after the 2% AEP rainfall event. This will form a condition of consent.
66. The applicant states that the proposed application rate of roof water of 2.2 to 2.4 millimetres per hour is appropriate for the poorly drained nature of the soil and should not result in runoff from the irrigated areas. Some ponding is likely in winter but should drain away within 48 hours.
67. In summary, I consider the adverse effects of the slow entry of stormwater into land are likely to be no more than minor as ponding will be contained on site and will not likely pond for more than 48 hours.

#### **Potential adverse effects of stormwater on groundwater quantity**

68. The applicant states that the soils beneath the stormwater system have low permeability so any stormwater discharge will filter slowly to groundwater minimising any short term groundwater mounding. The very slow permeability of the soils also means that the discharge will not materially affect flows.
69. The applicant also states that the drain on the eastern boundary was cut to drain the land so will keep local groundwater down.

70. The operations on this site will be of small scale, also the resulting runoff from the discharge will be small. The discharge to land will be achieved evenly via irrigation over the pasture and also swales. Therefore I consider the adverse effects on groundwater quantity will likely be no more than minor.

### **Potential adverse effects on cultural values**

71. The applicant states that the proposal is not located within, adjacent to, or likely to affect a Statutory Acknowledgement Area, nor is the proposal located within a silent file area.
72. The applicant states that the discharge site lies within the Papatipu Rūnanga o Ngāi Tūāhuriri Rūnanga and that the discharge to ground of treated stormwater is not contrary to the Iwi Management Plans.
73. I note that advice was sought from Mahaanui Kurataiao Limited via the Tangata Whenua Advisory Services (TWAS) who provided comments and recommendations in regard to the Mahaanui Iwi Management Plan. Please refer to the TWAS advice for a more detailed description (C17C/34570). In summary the advice received is as follows:
- a. *Policy 8.1 – To require that discharge to land activities in the takiwā are appropriate for the soil type and capacity of the land, avoids over-saturation and run off, and are accompanied by regular testing and monitoring* – The proposal includes run-off in excess capacity of swales which will collect on the surrounding soil to drain. Therefore the proposal is inconsistent with the policy as there will be water ponding over land after rainfall events. Also no soil testing is proposed on site to test contaminants.
  - b. *Policy 6.1 – To require on-site solutions to stormwater management in all new urban, commercial, industrial and rural developments based on a multi-tiered approach to stormwater management* – Proposal is partly inconsistent with this policy. Further native plants are recommended to be included to improve the ability to filter the water.
  - c. *Policy WM6.11 – Consented discharge to land activities must be subject to appropriate consent conditions to protect ground and surface water* – The soils have low permeability so any stormwater discharge will pass slowly to groundwater. No native plant species have been included in the proposal to help filter the stormwater discharge.
  - d. *Policy WM6.8 – To continue to oppose the discharge of contaminants to water, and to land where contaminants may enter water* – The discharge has the potential to enter groundwater through the swale. The potential risks of contaminants in the discharge is considered to be low.
74. I note, in relation to *Policy 8.1*, that the applicant has provided further information regarding ponding since the TWAS advice was received. The applicant states that the roof water discharge of 2.2 to 2.4 millimetres per hour over the pasture on the property is appropriate for the poorly drained soil and should not result in runoff from the irrigated areas and any ponding should be less than 48 hours. The applicant also states that ponding in the swales and runoff in excess of the swales will also pond for around 48 hours.
75. In relation to *Policy 6.11* I note that although no native plant species have been included in the proposal the grassed swales will provide adequate treatment of the stormwater discharge. To require native planting is outside of our discretion for this proposal.

76. Overall, I consider that the discharge of developed phase stormwater is likely to have no more than minor adverse effects on cultural values as the stormwater will be contained on site, there will be adequate treatment and ponding is not likely to occur for more than 48 hours and will only be occurring within the applicants own property.

### **Actual and potential positive effects**

77. The applicant did not state any positive effects, I note that there is the potential for:
- a. Positive economic benefits for the wider community through provision of employment.

### **COMPLIANCE HISTORY**

78. There is currently no consent for the site to assess compliance, and no recorded history of the applicant has been found.

### **OBJECTIVES AND POLICIES**

#### **National Policy Statement (NPS)**

79. The National Policy Statement for Freshwater Management 2014 (NPS-FM 2014) sets out the objectives and policies for freshwater management under the Resource Management Act 1991.
80. Overall the NPS-FM 2014 aims to safeguard:
- a) *The life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and*
  - b) *The health of people and communities, at least as affected by secondary contact with fresh water;*
- in sustainably managing the use and development of land, and of discharges of contaminants.*
81. Due to treatment, the spill management plan, no direct discharge to surface water bodies and appropriate stormwater treatment via swales, effects on surface water quality, will likely be no more than minor and the proposal is therefore not contrary to the NPS.

#### **National Environmental Standards**

82. I do not consider that the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 will be contravened. The site is not located within a community drinking water protection zone and it is unlikely to affect sources of drinking water given separation to surrounding wells to the nearest down-gradient well is over 138 metres from the approximate site of the nearest discharge of stormwater.

#### **Regional Policy Statement (RPS)**

83. The Canterbury Regional Policy Statement 2013 (CRPS) outlines the resource management issues in the region. The CRPS provides objectives, policies and

methods which aim to achieve integrated management of the natural and physical resources.

#### *Chapter 7 – Fresh Water*

84. *Objective 7.2.1 – Sustainable management of fresh water* – I do not consider that this objective will be contravened by the proposal as the life-supporting capacity ecosystem processes, and indigenous species and their associated freshwater ecosystems and mauri of the fresh water is safe-guarded as far as practicable.
85. *Policy 7.3.1 – Adverse effects of activities on the natural character of fresh water* – The swales will provide adequate treatment of the stormwater runoff from the hardstand areas and the roof water will be irrigated over approximately 8460 m<sup>2</sup> of pasture on the property also providing treatment. Therefore, I do not consider this policy will be in contrived by the proposal.
86. *Policy 7.3.5 – Water Quantity and land users* – All stormwater discharge will be discharged on site, stormwater from hardstand areas will be spread across swales and all the roof water will be irrigated over the pasture on the property.
87. *Policy 7.3.6 – Fresh water quality* – As above the swales and irrigation over pasture will provide adequate treatment of the hardstand runoff and roof water respectively.
88. *Policy 7.3.7 – Water Quality and land users* – As above stormwater runoff from hardstand and roof areas will be adequately treated by swales and irrigation over pasture respectively.

#### *Chapter 15 Soils*

89. *Objective 15.2.1 Maintenance of soil quality* – I do not consider that this objective will be contravened due to the swales likely providing sufficient treatment of stormwater discharge from the hardstand areas.

### **Waimakariri River Regional Plan**

90. The Waimakariri River Regional Plan (WRRP) aims to promote sustainable management of rivers, lakes and hydraulically connected groundwater, and river and lake beds in the Waimakariri River Catchment, maintain and enhance the environment, and achieve integrated management.
91. *Objective 6.1 – Protect water quality – Enable present and future generations to gain cultural, social, recreational, economic, health and other benefits from the rivers, lakes and wetlands in the Waimakariri River Catchment* – Swales will be installed to adequately treat discharge of stormwater from hardstand areas and I note there will be maintenance conditions to ensure effectiveness as part of the consent. Therefore, I do not consider the proposal is in contravention with this objective.
92. *Policy 6.1 – Set and maintain water quality standards for, and control the discharge of contaminants into, surface water bodies in the Waimakariri River Catchment.* The proposal does not include discharge into surface water bodies and runoff from hardstand areas will be treated via swales, therefore water quality is unlikely to be adversely affected.

## **OTHER RELEVANT MATTERS**

### **Previous Council Decisions**

93. There are no council decisions of which I am aware to preclude the granting of this consent.

### **Recommendation for Notification – (Section 95A and 95B)**

94. The assessment of adverse effects undertaken above indicates that adverse effects on the environment will be no more than minor. I also note that public notification is not required by a National Environmental Standard or rule in a plan. I do not consider that special circumstances would require public notification. Given the above, I consider that public notification of this application, pursuant to s95A of the RMA 1991, is not required.
95. I also note that adverse effects on persons will be less than minor, and that there are no affected protected customary rights group or affected customary marine title group. Given this, I consider that limited notification of this application, pursuant to s95B of the RMA 1991, is not required.
96. In conclusion, I recommend that this application be decided on a non-notified basis.

### **Recommendation for Grant or Refuse**

### **Consideration of Application (Section 104(1)(a) –(c))**

97. The assessment of adverse effects undertaken for the purpose of notification determination concluded that adverse effects were no more than minor. I consider that this assessment is also relevant to the assessment required under s104(1)(a).
98. In summary, in accordance with Section 5 of the RMA I consider that any adverse effects will be acceptable and are able to be avoided, remedied or mitigated subject to an appropriate set of conditions.
99. In accordance with section 104(1)(b) of the RMA, I have had regard to all relevant objectives and policies for this application. The relevant objectives and policies are identified above. I consider this application is consistent with the objectives and policies of the relevant planning provisions.
100. In accordance with section 104(1)(c) I have had regard to any other matters relevant to this application including:
- a. Canterbury Water Management Strategy:

The proposal is located within the area managed by the Waimakariri Zone Committee. The committee have generated the Waimakariri Zone Implementation Programme (ZIP) for this zone. Zone Implementation Programmes are non-statutory documents that are being completed by each of the Zone Committees within the Canterbury region. ZIPs contain zone-specific recommendations for water management to achieve the CWMS targets.

The Waimakariri ZIP main focus is on integrated and collaborative water management to address water quality and quantity concerns.

Priority outcomes relevant to this proposal in the Waimakariri ZIP includes:

- i. Optimal water and nutrient management is common practice; and
- ii. There is improved contribution to the Regional Economy from the Zone.

The proposal provides for treatment of all stormwater on-site and is also providing employment opportunities in the local area.

- b. Mahaanui Iwi Management Plan:

As discussed above under potential adverse effects of cultural values.

### **Determination of applications for discretionary or non-complying activities (Section 104B)**

101. After considering an application for a resource consent for a **discretionary activity**, a consent authority:

- a. *May grant or refuse the application; and*
- b. *If it grants the application, may impose conditions under section 108 of the RMA.*

102. I have considered s104B of the RMA and have outlined in the section titled "Decision" that this application be granted subject to recommended conditions under s108 of the RMA.

### **Matters relevant to certain applications (Section 105(1))**

103. In accordance with section 105, I have had regard to:

- a. the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
- b. the applicant's reasons for the proposed choice; and
- c. any possible alternative methods of discharge including discharge into any other environment. These have been described by the applicant as:
  - i. Discharging roof water to a soak pit was considered, but due to the high groundwater this would be difficult. Irrigation was selected instead.

104. I have had regard to the matters in section 105 of the Resource Management Act 1991 and consider the proposal meets the requirements. The reasons for this are as follows:

- a. Swales will likely provide appropriate treatment of the small scale nature of the discharge; and
- b. Due to high groundwater discharge of roof water via irrigation is more suitable than to a soak pit.

### **Restrictions on grant of certain discharge permits (Section 107(1))**

105. Under Section 107(1) of the RMA a consent authority may not grant a consent for the discharge of a contaminant into water, or onto or into land, if after reasonable mixing the discharge is likely to give rise in the receiving waters, to:

- "(c) The production of conspicuous oil or grease films, scums, foams, floatable or suspended material:*
- (d) Any conspicuous change in the colour or visual clarity:*
- (e) Any emission of objectionable odour:*
- (f) The rendering of fresh water unsuitable for consumption by farm animals:*
- (g) Any significant adverse effects on aquatic life."*

106. I have assessed the proposal against s 107(1) and do not consider the proposal to be in contravention. This reasons for this include:

- a. The roof water is a relatively "clean" discharge;
- b. Hardstand stormwater discharge is unlikely to contain an hazardous substances or emit an objectionable odour; and
- c. Due to the nature of the discharges, stormwater is unlikely to have effects on water quality.

### **Part 2 Matters (Purpose and Principles of the RMA)**

107. Under section 104(1) of the RMA, the consent authority must consider applications "subject to Part 2" of the Resource Management Act 1991 (RMA), specifically sections 5, 6, 7 and 8.

108. The Purpose of the RMA (Section 5) is to:

*"promote the sustainable management of natural and physical resources."*

109. I have considered Part 2 of the RMA. Of importance for this proposal is the sustainable management of water. Due to the nature of the stormwater discharge it is unlikely there will be adverse effects on the environment.

110. Given this, I consider that this activity will achieve the purpose of the RMA.

### **Conditions of resource consent (Section 108)**

111. I recommend including the conditions attached (Appendix One), which have been adopted by the applicant as mitigation measures for their proposal (Records Manager reference C17C/66468).

### **Duration (Section 123)**

112. The applicant has sought a consent duration of 35 years.

113. In considering the requested duration I have had regard to the following matters:

- a) the nature and sensitivity of the affected environment, including
  - i) the degree to which the sensitivity of the affected environment may become more sensitive over time; and

ii) the probability of future adverse effects arising from the consented activity; and

iii) the level of knowledge about the affected environment; and

b) the nature of the activity.

114. I have taken into consideration these matters, and I am satisfied a duration of 35 years is appropriate.

**Decision**

115. Having considered all relevant matters under sections 104 – 104D, s105, and 107 I recommend granting resource consent CRC174304 subject to the conditions attached (Appendix One) and a duration of 35 years.

Signed:  Date: 21<sup>st</sup> March 2017  
Name: \_\_\_\_\_  
Tegan Wadworth  
Consents Planner

**Reviewer's comments:**

Signed:  Date: 21<sup>st</sup> March 2017  
Name: \_\_\_\_\_  
Jessica Steel  
Consents Planner (II)

## APPENDIX ONE: RECOMMENDED CONDITIONS

<b>LIMITS</b>	
1	<p>The activity shall be limited to the discharge of developed phase stormwater from:</p> <ol style="list-style-type: none"> <li>a. Hardstand areas;</li> <li>b. Gravel areas; and</li> <li>c. Roofing.</li> </ol> <p>associated with Advantage Plastics business located at 254 Easterbrook Road, Rangiora, legally described as Lot 2 DP 82284 as shown on CRC174304A, 'Site Location Plan' attached to and forming part of this consent.</p>
2	The discharge of roof stormwater shall not arise from galvanised sheet materials.
3	There shall be no entry of plastic powder or Mono-Coat® 1026W liquid into the stormwater system.
<b>PRIOR TO COMMENCEMENT OF DISCHARGE</b>	
4	The Canterbury Regional Council, Attention: Regional Leader- Monitoring and Compliance shall be notified at least five working days prior to the commencement of the discharge.
<b>STORMWATER TREATMENT</b>	
5	<p>Roof stormwater shall be discharged via the following system:</p> <ol style="list-style-type: none"> <li>a. Roof stormwater shall be collected in a sealed system that excludes all other stormwater and shall be stored in stormwater tanks;</li> <li>b. Stormwater shall then be irrigated onto grassed land within the areas labelled as 'Roof stormwater' shown on Plan CRC174304B, attached to and forming part of this consent;</li> <li>c. Stormwater shall be irrigated at an application rate not exceeding 2.4 millimetres per hour.</li> </ol>
6	<p>Roof Stormwater shall not:</p> <ol style="list-style-type: none"> <li>a. be applied to land where ponding could occur or promote overland runoff;</li> <li>b. runoff onto adjoining properties (including roads) or surface water; and</li> <li>c. be discharged when there is any ponding on the ground surface.</li> </ol>
7	<p>Stormwater from hardstand and gravel areas shall be discharged via the following system:</p> <ol style="list-style-type: none"> <li>a. Stormwater shall be discharged into grassed swales constructed adjacent to the hardstand and gravel areas as shown on Plan CRC174304B attached to and forming part of this consent;</li> <li>b. Discharge from swale 4 shall be discharged via a pipe to the grassed land to the south of the site labelled as 'western hardstand stormwater' as shown on Plan CRC174304B attached to and</li> </ol>

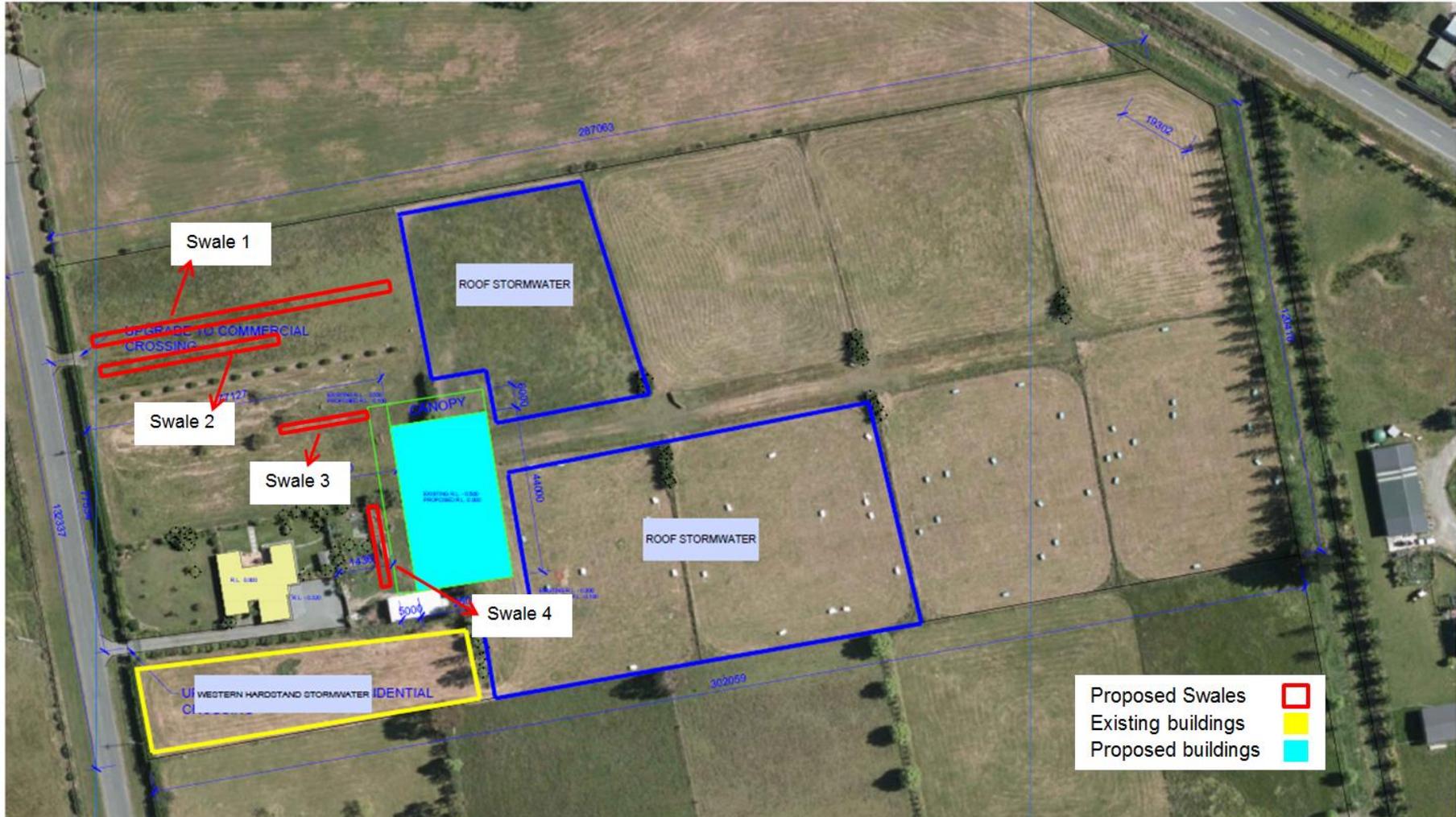
	<p>forming part of this consent;</p> <p>c. Flows in excess of the capacity of the swales shall be discharged into the surrounding grassed land on site.</p>
8	<p>The swales shall be designed and constructed:</p> <p>a. In accordance with :</p> <p>i. Christchurch City Council's Waterways, Wetlands and Drainage Guidelines; or</p> <p>ii. Auckland Regional Council's Technical Publication 10; or</p> <p>iii. The Waimakariri Engineering Code of Practice;</p> <p>b. In regards to swales 1 to 3 as shown on Plan CRC174304B, to:</p> <p>i. Contain and infiltrate the runoff from the first 15 millimetre flush of any rainfall event and;</p> <p>ii. Have the capacity to contain and dispose of a 10 percent Annual Exceedance Probability (AEP), two hour design storm prior to discharging to surrounding grassed land;</p> <p>c. In regards to swale 4 as shown on Plan CRC174304B to:</p> <p>i. Have a hydraulic residence time of at least nine minutes for the design storm event;</p> <p>ii. Have the capacity to contain and dispose of two percent AEP, 10 minute design storm prior to discharging to surrounding grassed land;</p> <p>d. To be uniformly vegetated with a mix of landscape plants and/or grass/water tolerant vegetation.</p>
9	<p>Stormwater shall not pond on the land surface for longer than 48 hours after the cessation of any storm event.</p>
10	<p>The stormwater system shall be designed, constructed and maintained to ensure that stormwater runoff generated from the roof, hardstand and gravel areas up to and including a two percent annual exceedance probability rainfall event shall not enter neighbouring properties.</p>
11	<p>Stormwater shall not be discharged directly into groundwater.</p>
12	<p>The discharge shall not result in any overflow or runoff into any surface water body or onto any neighbouring site.</p>
13	<p>Discharge from swale 4 via a pipe in accordance with condition (7(b)) shall not cause erosion at the point of discharge; the discharge point shall be fitted with appropriate erosion protection to minimise erosion and scour.</p>
	<p><b>SPILLS</b></p>
14	<p>Plastic powder (VPLAS ranges of polyethylene powders, all grades) if spilt shall be immediately swept up to prevent entry into the stormwater system. In the event of a spill the Spill Management Plan attached in Appendix Two shall be adhered to.</p>
15	<p>The Spill Management Plan referred to in condition (14) may be amended at any time. Any amendments shall be:</p> <p>a. Only for the purpose of improving the efficacy of any spill management procedures and shall not result in reduced discharge quality;</p> <p>b. Be consistent with the conditions of this resource consent; and</p> <p>c. Submitted in writing to the Canterbury Regional Council, Attention: Regional Leader- Monitoring and Compliance, prior to any</p>

	amendment being implemented.
16	In the event of a spill of Mono-Coat® 1026W liquid, this shall be cleaned up immediately to prevent entry into the stormwater system in accordance with condition (3) and (17).
17	<p>All practicable measures shall be taken to avoid spills of fuel or any other hazardous substances within the site.</p> <ol style="list-style-type: none"> <li>a. In the event of a spill of fuel or any other hazardous substance, the spill shall be cleaned up as soon as practicable, the stormwater system shall be inspected and cleaned and measures taken to prevent a recurrence;</li> <li>b. The Canterbury Regional Council, Attention: Regional Leader-Monitoring and Compliance, shall be informed within 24 hours of any spill event exceeding five litres and the following information provided: <ol style="list-style-type: none"> <li>a. The date, time, location and estimated volume of the spill;</li> <li>b. The cause of the spill;</li> <li>c. The type of hazardous substance(s) spilled;</li> <li>d. Clean up procedures undertaken;</li> <li>e. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;</li> <li>f. An assessment of any potential effects of the spill; and</li> <li>g. Measures to be undertaken to prevent a recurrence.</li> </ol> </li> <li>c. The consent holder shall ensure a spill kit, that is capable of absorbing the quantity of oil and petroleum products that may be spilt on site at any one time, remains on site at all times.</li> </ol>
<b>CERTIFICATION</b>	
18	Within three months of the exercise of this consent, A certificate signed by the person responsible for designing the stormwater system or a suitably qualified person shall be submitted to the Canterbury Regional Council, Attention: Regional Leader - Monitoring and Compliance, to certify that the system is constructed and installed in accordance with conditions (5) to (13) of this consent.
<b>INSPECTION AND MAINTANANCE</b>	
19	<p>Maintenance of the stormwater system shall include, but not be limited to:</p> <ol style="list-style-type: none"> <li>a. Inspecting the grassed swales at least once every four months;</li> <li>b. Removing any visual hydrocarbons, debris or litter within five working days of the inspection;</li> <li>c. Removing any accumulated sediment in the swale that is a total of five percent of the area of the swale. The removal of sediment shall occur within five working days of the inspection;</li> <li>d. Grass within the swale is to be maintained in a healthy and uniform state with the exception of seasonal browning off in the summer and autumn;</li> <li>e. Grass shall be replanted where erosion or die-off has resulted in bare or patchy soil cover; and</li> <li>f. Repairing any erosion or scour within five days of the inspection.</li> </ol>
<b>RECORDS AND REPORTING</b>	
20	The consent holder shall keep records of all inspections and maintenance undertaken in accordance with conditions (18). These records shall include,

	<p>but not be limited to:</p> <ul style="list-style-type: none"> <li>a. Date and details of inspections of the stormwater system; and</li> <li>b. Date and details of any maintenance work, repairs and upgrades to the stormwater system, including removal of material and its disposal.</li> </ul> <p>These records shall be made available to the Canterbury Regional Council on request.</p>
	<b>ADMINISTRATION</b>
21	<p>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:</p> <ul style="list-style-type: none"> <li>a. Dealing with any adverse effect on the environment which may arise from the exercise of this consent; or</li> <li>b. Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent</li> </ul>
22	The lapsing date for the purposes of Section 125 of the Resource Management Act 1991 shall be 31 March 2022



**PLAN CRC174304B, ROOF WATER, SWALES AND WESTERN HARDSTAND STORMWATER DISCHARGE AREA**



## APPENDIX TWO: SPILL MANAGEMENT PLAN

The logo for Advantageplastics, featuring the word "Advantage" in a bold, dark red font and "plastics" in a lighter, grey font with a slight shadow effect.

28/02/2017

### SPILL MANAGEMENT PLAN

- 1) All loading and unloading of Plastic Powder to be done only on concrete areas.
- 2) All storage of Plastic Powder to be stored on concrete area on the east side, beside building or stored inside factory.
- 3) Opening and usage of powder to be only undertaken inside the factory beside Ovens.
- 4) Any spillage of Plastic Powder is to be cleaned up immediately and be placed in waste bins provided. Lids **MUST** be on these bins at all times.

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- 5) All Cutting and Trimming of Plastic Products to be done inside the factory.
- 6) Excess offcuts of plastic is to be stored in wooden crates provided on concrete area on the east side of the building.
- 7) All empty plastic bags are to be stored in wooden crates with lids provided on the concrete area on the East side of the building.