

IN THE MATTER OF

The Resource Management Act 1991

AND

IN THE MATTER OF

An application by Coutts Island Holdings Limited for Land Use Consent CRC142335 to use land for vegetation disturbance and earthworks within the riparian margin, and Discharge Permit CRC142337 to discharge contaminants and stormwater onto and into land, in circumstances where it may enter into water

BETWEEN

COUTTS ISLAND HOLDINGS LIMITED

Applicant

AND

CANTERBURY REGIONAL COUNCIL

Respondent

REPORT AND DECISION OF HEARINGS COMMISSIONERS

Sharon McGarry and Gina Solomon

9th April 2015

Heard on the 10th March 2015 in Conference Room 4 of the Commodore Airport Hotel,
449 Memorial Avenue, Christchurch.

Representations and Appearances

Applicant:

Mr A. Schulte, Counsel (Cavell Leitch)

Mr L. Keeper, Director (Coutts Island Holding Limited)

Mr M. Sinclair, Chartered Professional Engineer (Eliot Sinclair & Partners Limited)

Mr G. Knoyle, Senior Environmental Scientist (Pattle Delamore Partners Limited)

Ms L. Torgerson, Environmental Engineer (Pattle Delamore Partners Limited)

Submitters:

Dr B. Margetts, Waterway Ecologist for Christchurch City Council

Section 42A reporting officers:

Mr K. Bligh, Senior Planner (Golder Associates (NZ) Limited)

Dr D. Gray, Senior Ecology Scientist (Canterbury Regional Council)

Dr L. Scott, Groundwater Quality Scientist (Canterbury Regional Council)

Mr R. Purdon, Principal Resource Management Advisor Monitoring and Compliance (Canterbury Regional Council)

It is the decision of the Canterbury Regional Council, pursuant to sections 104, 104B, 104D, 105 and 108, and subject to Part 2 of the Resource Management Act 1991, to grant Coutts Island Holdings Limited Land Use Consent CRC142335 to use land for vegetation disturbance and earthworks within the riparian margin, and Discharge Permit CRC142337 to discharge contaminants and stormwater onto and into land, in circumstance where it may enter into water.

BACKGROUND AND PROCEDURAL MATTERS

1. This is the report and decision of independent Hearings Commissioners Sharon McGarry (Chair) and Gina Solomon. We were appointed by the Canterbury Regional Council (**ECan**) to hear and decide an application by Coutts Island Holding Limited ('the applicant') pursuant to the Resource Management Act 1991 (**RMA** or 'the Act') for Land Use Consent CRC142335 to use land for vegetation disturbance and earthworks within the riparian margin, and Discharge Permit CRC142337 to discharge contaminants and stormwater onto and into land, in circumstances where it may enter into water.
2. The applicant is seeking retrospective resource consents to authorise activities associated with the unauthorised construction of a farm track on the applicant's property at 589 Coutts Island Road, Christchurch. The farm track was constructed using contaminated demolition waste from three earthquake damaged commercial buildings in Christchurch. Deposition of the waste material at the site began in June 2011 and continued into 2012.
3. On 15th May 2012, ECan served an abatement notice ordering the applicant to cease discharging and depositing demolition material at the site. A second abatement notice was also served at the same time, ordering the applicant to remove the demolition material from the site to an authorised waste disposal site.
4. The applicant, Canterbury Greenwaste Processors Limited (the company that transported the demolition material) and Mr Kingsley Kepple (the company's Director) were subsequently prosecuted by ECan for the unauthorised activities. All three parties convicted in the District Court by Judge P R Kellar for offences under section 15(1)(b) and section 15(1)(d) of the RMA on 12 April 2013 (Court references: CRI 2012-009-009820, CRI 2012-009-009819 and CRI 2012-009-009818)
5. The applicant appealed the second abatement notice, and a temporary stay on the abatement notice was issued by the Environment Court to allow the lodging of an application for resource consent to remediate the effects on the environment.
6. The application for resource consent was accepted for processing on 2nd October 2013. Two previous applications dated 11th December 2012 and 17th April 2013 were returned due to inadequate assessments of environmental effects under section 88 of the Act.
7. The application was publically notified on 3rd November 2013. Four submissions in opposition to the application were received.
8. The hearing to decide the application commenced at 9am on Tuesday 10th March 2015 and was adjourned at 4.35pm. We undertook a site visit on the same day.
9. Following the hearing adjournment, the applicant provided a revised set of proffered consent conditions on 17th March 2015. This material was circulated to the parties and further comment was received from the reporting officer. A written right of reply by the

applicant and an estimate of the cost of implementing the sought resource consents was received on 30th March 2015, and the hearing was closed on 2nd April 2015.

10. Prior to the hearing, a report was produced pursuant to section 42A of the Act by ECan's reporting officer, Mr Kevin Bligh. This 's42A report' included a technical review of the application by Mr Gregory Beck, Principal Contaminated Sites Advisor for Canterbury Regional Council, Dr Duncan Gray, Senior Ecology Scientist for Canterbury Regional Council and Dr Lisa Scott, Groundwater Quality Scientist for Canterbury Regional Council.
11. The s42A report provided an analysis of the matters requiring consideration and made no recommendation as to whether the consents sought should be granted or refused. Appended to the report were a number of consent conditions for consideration, and a copy of the Christchurch City Council's *'Report/Decision on Resource Consent Application RMA92026491 for retrospective consent for the deposition of fill material on a farm track derived from the demolition of three Christchurch buildings and contaminated demolition material'*.
12. An application for retrospective land use consent for the deposition of demolition material to Christchurch City Council (RMA92026491) was granted on a non-notified basis, on 9th February 2015.

THE APPLICATION

13. This application was made in response to the issue of abatement notices in relation to the unlawful deposition of demolition material onto an existing farm track at 589 Coutts Island Road, Christchurch. Approximately 3,500-5,000 cubic metres (m³) or 9,000 tonnes of contaminated demolition waste was transported to the site and used to form a 1.1 kilometre (km) long and 10 metre (m) wide farm track.
14. The material was deposited into and adjacent to the Waimakariri River South Branch (also known as North Boundary Stream), which is a spring fed stream that is a tributary of the Ōtūkaikino River. In places, waste material was dumped into the stream and the applicant has subsequently undertaken further unauthorised works in riparian margin in attempts to remove the waste from the stream bed and its banks.
15. The resource consents sought relate to the existing and ongoing leaching of contaminants into land and into water (both groundwater and surface water), works in the riparian margin, construction of a limestone cap, and discharge from the built phase of the completed track. The application seeks to leave the demolition waste *in situ*.
16. The demolition material comprises crushed concrete and brick, sand and gravel, broken timber, electrical wiring, plastic, glass, metal strips, steel reinforcing, gib board, carpet and fibre material. Some of the coarser material has been removed by the applicant and the demolition material has been compacted by a roller and river sourced gravel has been placed on the surface.

17. The track is used exclusively for farm vehicles and stock movement. A centre point irrigator traverses the farm track and stream at several points.
18. The application included a document titled 'Assessment of Effects on the Environment from the Proposed Limestone Capping of Demolition Waste Material at 589 Coutts Island Road, Christchurch' dated October 2013 by Pattle Delamore Partners Ltd (**PDP**). The application stated that the main objective of managing the demolition material is to minimise the infiltration of rainfall to control the quantity of leachate produced, the potential for contact with humans and other ecological receptors, and erosion from wind and water. Documents titled 'Proposed Remedial Actions and AEE' and 'Capping Construction Details/Erosion & Sediment Control Plan (ESCP)' dated September 2013 by Eliot Sinclair, and 'Asbestos Management Plan During and Post Construction of the Limestone Cap over Demolition Material at 589 Coutts Island Road, Christchurch' dated July 2013 by PDP were included with the application to achieve these management objectives.
19. The application also included a cultural impact statement by Ms Clare Williams, Chairperson for Ngāi Tuāhūriri (dated 19 April 2013) which was completed for the District Court prosecution.
20. The process for capping of the farm track, and associated work, is described in the application as follows:
 - (a) Lay gravel over the demolition waste to form a smooth surface;
 - (b) Lay 150 millimetres (**mm**) of crushed limestone, which will be compacted to form a cap over the demolition waste, to prevent stormwater infiltration and erosion;
 - (c) Lay 80 mm of gravel on top of the limestone cap to protect the cap from rutting and damage;
 - (d) Clear vegetation from the riparian margin and plant native species over an area of 4,290 square metres (m²) to form a buffer strip between the track and the stream;
 - (e) Install five groundwater monitoring bores – one upstream, one downstream and three between the farm track and the stream;
 - (f) Monitor groundwater quality using the monitoring bores, quarterly for the first twelve months, and then twice yearly for the next four years;
 - (g) Monitor surface water quality only if the trigger limits for groundwater quality have been exceeded; and
 - (h) Undertake visual inspections of the farm track and capping material routinely, and after large storm events.
21. The application noted that should the groundwater or surface water trigger limits be exceeded, the applicant proposes to undertake an assessment of the potential adverse effects on groundwater and surface water, associated with the exceedance. It is anticipated that the initial track preparation work and the capping of the track with crushed limestone will take between two and four weeks.

NOTIFICATION AND SUBMISSIONS

22. The application was publicly notified pursuant to section 95A of the Act in The Press on 3rd November 2013 and seven parties were directly notified. Four submissions in opposition

to the application were received from the Te Ngāi Tuāhūriri Rūnanga and Te Rūnanga o Ngāi Tahu (**TRONT**), Christchurch City Council (**CCC**), Mr Nathan Moher, and Mr Russell and Mrs Jeanette Inwood.

23. The key issues raised in submissions were as follows:
- a) Adverse effects on cultural values;
 - b) The application does not sufficiently address the adverse effects of the proposal;
 - c) Limited sampling has been undertaken to assess potential adverse effects;
 - d) The mitigation measures proposed do not provide certainty that the effects will be mitigated. Effectiveness of mitigation measures;
 - e) The risk to human health from airborne asbestos emissions has been assessed as 'low' but this has not been measured by undertaking monitoring at the site boundary or surrounding areas;
 - f) Potential contamination of groundwater in shallow bores down-gradient of the site used for domestic supply and stock water;
 - g) Potential adverse impacts on in-stream water quality and ecology;
 - h) Adequacy of the monitoring programme, including the proposed course of action if contaminant trigger levels are exceeded; and
 - i) Adequacy of the consideration of alternatives.

THE HEARING

Applicant's case

24. **Mr Andrew Schulte** conducted the applicant's case presenting legal submissions and calling four witnesses. In summary, he made the following key points:
- a) This application process is influenced by the prohibitive costs of removing the waste to landfill (at Kate Valley), which is estimated to be between \$2-6 million;
 - b) The purpose of the application is to provide an effective, appropriate and lasting solution to issues related to the contaminated demolition remaining *in situ*;
 - c) There are no reports of actual adverse effects and the evidence supports that the mitigation (cap) will ensure no adverse effects from leaching occur;
 - d) The applicant accepts the use of the demolition waste on the farm track was misconceived and he (and Canterbury Greenwaste Ltd) has been punished by the Environment Court for doing so with a conviction and a \$60,000 fine;
 - e) The evidence will show that the solution proposed is a robust method of ensuring adverse effects are avoided or minimise, and monitoring will significantly reduce the risk of contamination of surface or groundwater;
 - f) The proposed riparian planting programme should enhance the riparian environment and provide additional safeguards against further adverse effects;
 - g) Potential cultural impacts are acknowledged and are addressed by effective capping and maintenance, monitoring, an aquatic ecological management plan, reduced consent duration and supplying TRONT and Te Ngāi Tuāhūriri Rūnanga with monitoring information;
 - h) Although it is not ideal, the RMA allows for retrospective consent to be sought and matters of enforcement action and punishment are irrelevant;
 - i) It is accepted that the 'existing environment' does not include the unconsented activity and that the CCC Land Use Consent cannot be relied on without the necessary

- ECan consents. However, the CCC consent has addressed the presence of asbestos particles;
- j) The applicant has adequately fulfilled the obligation to consider alternatives and is not required to complete a full assessment (costs and benefits) of those alternatives, but rather only the effects of the activity applied for;
 - k) In terms of section 107 of the Act, the evidence indicates that the risk of adverse effects to aquatic life in the stream is low, therefore any 'significant adverse effect' is unlikely;
 - l) While there is some disagreement on relevant plan and rule, it is accepted that this is a non-complying activity and that one of the threshold tests (i.e. that the effects of the activity will be minor) is met and consent can be granted, subject to conditions;
 - m) The activity may be inconsistent with some of the provisions of the relevant plans, but given that the assessment of effects concludes these are likely to be minor it is unlikely to be 'contrary' to these provisions; and
 - n) The purpose of the Act can be better met by granting the application subject to conditions.
25. **Mr Leslie Keeper** a Director for Coutts Island Holdings Limited, gave evidence outlining the operation of the farm, formation of the farm track, use of the farm track, details of the application, proposed consent conditions, alternatives, and submissions. He highlighted the conclusions of ECan's Principal Contaminated Sites Advisor, Mr Beck and stated his agreement and conclusion that the material was best left *in situ* and capped. Appended to his evidence were an outline of his dealings with ECan, photographs, correspondence regarding registration of the property on the Listed Land Use Register (LLUR), and correspondence from ECan regarding compliance monitoring for resource consent CRC972160.2.
26. **Mr Marton Sinclair**, a Director and Chartered Professional Engineer for Eliot Sinclair & Partners, presented evidence for the applicant addressing the proposed capping of the demolition waste to prevent leaching of contaminants. He outlined the three layers (150mm binding layer, 150mm limestone capping layer, and 80mm wearing course) and noted laboratory and field testing would ensure the required permeability is achieved. He stated the proposed design would achieve a virtually waterproof cap that sheds runoff and is self-healing when disturbed. He noted the effectiveness of the capping hinges on the waterproofness of the limestone layer and maintenance of the wearing course to address ruts, potholes or ponding.
27. In response to questions, Mr Sinclair was of the view that irrigation of the farm track, as the centre pivot irrigator crosses it, would be beneficial as the limestone was best maintained in a damp condition, preventing cracking from shrinkage. He stated that any problems with the limestone layer would be evident with potholes forming on the track surface. He considered it would be a major disturbance to pull the contaminated material further back from the stream and that it would not achieve much.
28. **Mr Guy Knoyle**, a Senior Environmental Scientist with PDP, gave evidence for the applicant responding to the s42A report and the technical reviews. He noted that after consideration of a wide range of options it is proposed to manage any potential risks to human health and the receiving environment by maintaining the material onsite and the

implementation of appropriate mitigation measures. He highlighted the conclusions of Mr Beck that the proposed limestone cap will provide an effective barrier to contaminants associated with the demolition material with regard to protection of both the environment and human health, and concurred with his findings.

29. Mr Knoyle noted Dr Scott had concluded that there was only a low risk to any shallow potable supply wells and that this was likely to be limited to within 500 m down-gradient of the farm track. He agreed with Dr Scott's recommendation for groundwater monitoring, but considered this should be limited to wells within 500 m down-gradient (as opposed to 1 km).
30. In response to Dr Gray's concern that there was not sufficient information to provide an adequate assessment of the aquatic environment adjacent to the demolition material, Mr Knoyle recommended a comprehensive sampling programme including macro invertebrate sampling.
31. **Ms Lynn Torgerson**, an Environmental Engineer with PDP, gave evidence for the applicant addressing issues raised in the s42A report, proposed consent conditions, and discussions with the CCC and TRONT. In summary, she made the following main points:
 - a) Changes to proposed consent conditions and monitoring have been made in response to discussions with CCC and TRONT;
 - b) There is general agreement with the conclusions of Mr Bligh, however there is disagreement regarding the applicability of the Natural Resources Regional Plan (**NRRP**) and the proposed Land and Water Regional Plan (**LWRP**);
 - c) Given the hydraulic connection of shallow groundwater to surface waterways and the close proximity of the discharges to the surface waterway (less than 20m), the Waimakariri River Regional Plan (**WRRP**) is the relevant plan under which the discharges should be considered;
 - d) It is also not agreed that the discharge should be considered to be non-complying under WRRP Rule 6.2 as the discharge may (with effective capping) meet the relevant water quality standards;
 - e) The applicant proffers a consent condition incorporating an aquatic ecological monitoring regime (as requested by CCC) and proposes a better more efficient design for riparian planting based on discussions with Dr Trevor Partridge (Botanist with CCC);
 - f) Brief discussion with Ms Tanya Stevens (TRONT) indicated that additional monitoring, response actions, shorter consent duration and provision of copies of monitoring data may provide more confidence in the proposal; and
 - g) It is agreed that a shorter consent duration would enable determination of actual impacts on the basis of monitoring, and the need for further monitoring and/or the further need for consent for the ongoing discharge of leachate.
31. In response to questions, Ms Torgerson considered the receiving environment to be 'highly sensitive' to the discharge of contaminants, but noted that there would be no breach of section 107. In terms of the status of the activity, she stated that the onus was on the applicant to demonstrate compliance with the relevant water quality standards.

Submitters

32. **Dr Belinda Margetts**, a Waterways Ecologist for CCC, gave evidence addressing the issues raised in the original submission in opposition to the application. She noted disappointment that the issues had not been addressed in the s42A report, but considered these had now been addressed through discussion with the applicant and additional consent conditions. In particular, she noted additional conditions relating planting and fencing, aquatic ecology monitoring, and response actions if 'significant' adverse effects are identified. She stated the CCC was in a position to support the application based on the additional conditions and a 10 year consent duration, and requested the opportunity to comment on revised conditions of consent.
33. A statement from Ms Tanya Stevens on behalf of TRONT was read out at the hearing. Ms Stevens noted continued opposition to the application. However, in the event that consent may be granted, she stated support for a 10 year consent duration, an adequate bond and provision of monitoring information to TRONT.

Section 42A Report

34. **Mr Kevin Bligh**, a Senior Planner with Golder Associates (NZ) Ltd, tabled his s42A report and spoke to the key issues. In summary, he made the following main points:
- a) There is no change to the statements and conclusions made in the s42A report, as he is satisfied that the effects on the environment are likely to be minor given the mitigation measures proposed, with the exception of effect on cultural values;
 - b) In light of the limited monitoring data available, a 10 year consent duration is appropriate to allow the effectiveness of the mitigation measures to be assessed and appropriate longer term consent conditions considered, as it is envisaged a consent will still be required for the discharge of leachate;
 - c) The imposition of a bond is warranted to ensure funds are available if the company folds or goes broke and ongoing mitigation or remediation works are required to be implemented. This does not have to be a cash bond, but rather a surety or bank guarantee that funds will be available if required;
 - d) The relevant plans are the NRRP and LWRP because the provisions of the WRRP do not cover the discharge of stormwater and contaminants to land in circumstances where it may enter groundwater, and the evidence of Dr Scott concludes it is likely the contaminants will enter groundwater;
 - e) Regardless of which plan applies, overall the discharge of stormwater and contaminants to surface water and to land (including during the construction phase) is a non-complying activity;
 - f) The onus of proof to demonstration that the activity 'shall' comply with the relevant water quality standards is on the applicant and in the absence of this, the evidence of Dr Gray is relied on;
 - g) Most of the suggested changes to conditions are improvements in wording; and
 - h) In terms of section 107 the receiving environment should be considered to be highly sensitive to the discharge.
35. **Dr Duncan Gray**, Senior Ecology Scientist for ECan, responded to questions relating to his technical review of the application. He considered the receiving surface waters to be highly sensitive to the discharge and noted the high aquatic ecology values of the waterway. He highlighted the lack of data to support the application and that there had

been no repetition of sampling. He supported the addition of aquatic ecology monitoring and the threshold trigger levels for community changes.

36. **Dr Lisa Scott**, a Groundwater Quality Scientist for ECan, responded to questions relating to her technical review of the application. She noted that the groundwater pathway to surface water contamination posed the greatest risk to the environment. She considered the limestone would have no effect on contaminant mobilisation and emphasised the long term nature of the contamination. She highlighted that there was little information on the source levels of contaminants (due to limited sampling) and the need for a precautionary approach. She noted she was not concerned about the length of the screen in the well, so long it is adequate to pick up any potential effects and provides for low flow sampling.
37. **Mr Richard Purdon**, a Principal Resource Management Advisor Monitoring and Compliance for ECan, attended the hearing to answer questions regarding enforcement action. He noted concern about the delay in addressing the contamination and the need to remedy or mitigate effects. He considered a bond was very important to ensure the contaminated waste can be removed if the applicant did not comply with the consent or walked away from the site. He advised that bonds were commonly used in situations such as quarries, where significant costs would be required to rehabilitate a site.
38. In response to questions, Mr Bligh considered appropriate conditions could be imposed to address uncertainty. He stated the recommended conditions could be tightened and improved to better manage adverse effects and that it was best to get on and implement the mitigation measures. He said that if cultural values could be set aside, he could recommend that the consents are granted, but that these values needed to be weighed up. He reiterated the importance of an adequate bond and recommended a 10 year consent duration.
39. Following presentation of the s42A report, the hearing was adjourned to allow the applicant to provide a revised set of proffered consent conditions which incorporated the matters discussed at the hearing.
40. A revised set of conditions was provided by the applicant on 17th March 2015. These conditions were circulated to the parties for further comment. Comments were received from Mr Bligh on behalf of ECan and the technical reviewers.

Applicant's Right of Reply

41. Mr Schulte provided a written right of reply on behalf of the applicant on 30th March 2015. In summary, the applicant confirmed the following:
 - (a) Riparian plantings would be established on both sides of the stream (comprising mitigation planting on the north side to filter potential contaminants and compensatory plantings on the south side to assist general stream health) and protected by a covenant to provide long term protection (in addition to consent conditions);
 - (b) No duration is sought for the Land Use Consent and a 10 year duration for the Discharge Permit is accepted;

- (c) It is unlikely a new owner could purchase the property without knowledge of the farm track's history, particularly if the sought Land Use Consent has an unlimited duration;
- (d) A range of possible response mechanisms have been included in the revised conditions, as discussed at the hearing;
- (e) The applicant accepts there is justification in providing environmental compensation;
- (f) The expert evidence supports the contention that granting the application should enable the relevant standards (Rule 6.1 of the WRRP) to be achieved;
- (g) The applicant agrees to all the comments on conditions made by the reporting officer, with the exception of the suggested \$2,000,000 bond; and
- (h) Based on the estimated costs of implementing the consents, the bond should be set at \$250,000. In the unlikely event that ECan was required to undertake works which exceeded this amount, those additional costs can be claimed from the consent holder under section 109(5). The bond needs to be realistic and affordable so the applicant can afford to fund implementation of the consents.

ASSESSMENT

- 42. In assessing the application, we have considered the application documentation and assessment of environmental effects (AEE), the s42A report and technical reviews, all submissions received and the evidence provided during and after the hearing.
- 43. In making our assessment, we are required to consider the actual and potential effects of the application on the existing environment, which includes lawful existing activities, permitted activities and activities authorised by existing resource consents. We record we have considered the existing environment without the demolition material. We have not given any weight to the recently granted CCC resource consent, as it cannot be given effect to without the necessary ECan consents sought by this application.

Status of the Application

- 44. The starting point for our assessment of the application is to determine the status of the activity. While there was ultimately agreement that the overall status was likely to be non-complying, there was disagreement as to the relevant plan and rule.
- 45. Mr Bligh was of the view the NRRP and LWRP were the applicable plans to the discharges because the discharge of stormwater and contaminants was onto land and into groundwater. While he acknowledged the free draining nature of the underlying soils at the site, the shallow groundwater and the proximity to the waterway, he considered the provisions of the WRRP clearly only applied to discharges into surface water.
- 46. Ms Torgerson was of the opinion the WRRP was the applicable plan to the discharge because of the hydraulic connection of shallow groundwater to surface waterways and the close proximity of the discharge to the waterway (less than 20m).
- 47. We note the purpose of the WRRP is to address a number of issues relating to the Waimakariri River, including - *'(b) point and non-point source discharges of contaminants*

to water bodies in the Waimakariri River Catchment'; and that the anticipated environmental results include - '(b) the protection of the instream values of rivers; and (c) the upgrading of water quality, where it is currently low and the maintenance of water quality at its present level where it is currently high'.

48. The section 1.4 of the WRRP states the regulations apply to the following activities:
*(c) The discharge of contaminants into the Waimakariri River or its tributaries or onto or into land where the discharge **can enter surface waters** (Chapter 6, Rule 6.1 discretionary activity, Rule 6.2 non-complying activity). [Our emphasis]*
49. Rule 6.2 of the WRRP states:
*The discharge of contaminants into surface water bodies in the Waimakariri River Catchment, or onto or into land **within 20 metres of surface water bodies**, or 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 surface water bodies**, that does not comply with the water quality standards and terms set by Rule 6.1, is a Non-Complying activity. This rule does not apply to discharges which are specified as Permitted Activities in the Transitional Regional Plan. [Our emphasis]*
50. Given the hydraulic connection between shallow groundwater and surface water, the free draining nature of the soils, the very close proximity to the waterway (within 1-2m at certain points) and the gradient of the land, we consider it is highly likely that some contaminants will enter surface water. We note the evidence of Dr Scott that groundwater is a pathway to surface water and that the greatest risk of contamination is to surface water.
51. We consider the provisions of the WRRP are aimed at controlling land use and non-point source discharge activities that *may* result in contaminants entering tributaries of the Waimakariri River, such as the activities subject to this application that have the potential to adversely affect instream values and reduce water quality. We therefore agree with Ms Torgerson that the applicable plan for the status of the activity is the WRRP. However, we agree with Mr Bligh in that the objectives and policies of the NRRP and LWRP relating to groundwater are relevant to our assessment.
52. Mr Schulte submitted the applicant's expert evidence supports the contention that the granting of the application should enable the relevant standards (Rule 6.1 of the WRRP) to be achieved. While we accept this is the intention of the mitigation purposed, we do not consider the applicant has demonstrated that the discharge *shall* comply with the water quality standards for Class OTU-GROYNES for the receiving waters. There has been very limited sampling of water and sediment in the receiving surface waters and no sampling of groundwater undertaken.
53. In light of the lack of actual data to verify actual and potential effects, the discharges should be considered as non-complying activities under Rule 6.2 of the WRRP. In consideration of the inter-related nature of the consents sought, we conclude it is appropriate that the overall status of the application is a **non-complying activity**.

Statutory Considerations

54. In terms of our responsibilities for giving consideration to the application, we are required to have regard to the matters listed in sections 104, 104B, 104D, 105 and 107 of the Act.
55. In terms of section 104(1), and subject to Part 2 of the Act, which contains the Act's purpose and principles, we must to have regard to-
- (a) *Any actual and potential effects on the environment of allowing the activity;*
 - (b) *Any relevant provisions of a national environmental standard, other regulations, a national policy statement, a New Zealand coastal policy statement, a regional policy statement or a proposed regional policy statement, a plan or proposed plan; and*
 - (c) *Any other matters the consent authority considers relevant and reasonably necessary to determine the application.*
55. In terms of section 104B, we may grant or refuse the application, and if granted we may impose conditions under section 108.
56. In terms of section 104D(1) for a non-complying activity, we may only grant consent under section 104B, if either-
- (a) The adverse effects of the activity on the environment will be minor; or
 - (b) The application is for an activity that will not be contrary to the objectives and policies of the relevant plans.
57. In terms of section 105, when considering section 15 (discharge) matters, we must, in addition to section 104(1), have regard to-
- (a) *The nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (b) *The applicant's reason for the proposed choice; and*
 - (c) *Any possible alternative methods of discharge, including discharge to any other receiving environment.*
58. In terms of section 107(1), we are prevented from granting consent allowing any discharge into a receiving environment which would, after reasonable mixing, give rise to all or any of the following effects-
- (c) *The production of any conspicuous oil or grease films, scums or foams, or 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.*

Actual and potential effects on the environment

59. The s42A report included an accurate description of the affected environment, which we adopt. We particularly note the site is located over the unconfined aquifer and is within the Christchurch Groundwater Protection Zone, under both the NRRP and LWRP. We also note the Waimakariri River South Branch is a high value, spring fed stream with very high aquatic macro invertebrate and fish values, and significant cultural values for tangata whenua relating to mahinga kai, wāhi tapu and kaitiakitanga. For these reason, we

consider the receiving environment to be highly sensitive to the land use and discharge activities.

60. The following actual and potential effects on the environment were assessed in the s42A report:
- (a) Adverse effects on groundwater quality;
 - (b) Adverse effects on groundwater quantity;
 - (c) Adverse effects on surface water quality;
 - (d) Adverse effects on soil quality;
 - (e) Adverse effects on vegetation;
 - (f) Adverse effects on human health associated with working with contaminated soils;
 - (g) Adverse effects from flooding and erosion;
 - (h) Adverse effects on air quality;
 - (i) Adverse effects on recreational and amenity values;
 - (j) Adverse effects on Tangata Whenua values;
 - (k) Adverse effects of passive leaching on human health;
 - (l) Adverse effects of the uncapped track on the environment;
 - (m) Adverse effects of the capped farm track on surface water and groundwater;
 - (n) Adverse effects of the construction on the environment; and
 - (o) Long term and cumulative effects.
61. We record we have considered all of these actual and potential effects. However, on the basis of the evidence presented, our assessment focuses on groundwater quality, surface water quality and ecology, soil contamination and cultural values; and long term and cumulative effects in relation to each of these matters.
62. We accept that leaving the demolition waste *in situ* and capping it will minimise the risk of any further release of asbestos fibres into the wider environment and therefore accept any adverse effects on air quality are mitigated by the application, as long as the material remains in the soil. We consider the application site benefits from the fact that it is quite remote from other houses (more than 500 m) and that the material is already quite compacted. We are satisfied the asbestos management plan included with the application addresses risks during construction of the limestone cap and ongoing maintenance to ensure its integrity. The applicant has also agreed to undertake further asbestos sampling of the soils adjacent to the track to confirm there is no risk in the areas where demolition material has been removed and to give confidence to submitters there is not any significant contamination in the wider vicinity of the site.

Groundwater quality

63. The application site is within the Christchurch Groundwater Protection Zone, which is recognised and provided for in statutory plans in recognition of the importance of protecting the City's potable supply of water from inappropriate land use and discharges. The underlying soils are free draining and the absence of a confining layer means groundwater is vulnerable to contamination from leaching. The risk of contaminant mobilisation increases when the demolition waste comes into contact with water. This can occur by percolation of rainfall through the uncapped demolition waste, inundation by groundwater, and flooding of the stream.

64. Groundwater is utilised in the wider area of the application site for irrigation and potable supply. Submitters have concerns that shallow groundwater used for domestic supply and stock water will be contaminated by the presence of the demolition waste.
65. The application stated the closest down-gradient well used for domestic supply (M35/1735; 10m deep) is located approximately 500m to the north-east of the farm track. Two other irrigation wells (M35/17848; 104m deep; and M35/17849; 76m deep) are located approximately 300m to the north of the farm track).
66. The application stated that test pit investigations indicated groundwater is at depths of 0.8m below ground level (**bgl**) in the adjacent paddock and 2.4m bgl below the centre of the farm track. The application stated there was little seasonal variation in groundwater levels (around 20%) and that groundwater was unlikely to come to the surface in the immediate vicinity of the demolition waste. This conclusion was not challenged in the s42A report and is supported by the free draining nature of the soils in the adjacent paddock.
67. The Eliot Sinclair report concluded that *'...as long as the groundwater level is below the surface (i.e. the soil above groundwater remains unsaturated), infiltrating water will not flow under the farm track and will not saturate the demolition material.'* (p.11).
68. The Eliot Sinclair report also addressed inundation by sheet flows during extreme storm events, concluding that *'...sheet flows would be very infrequent and would infiltrate into the soil as indicated in Figure 5 without inundating the demolition material'* (p.13). The report went on to state, *'Sheet flow would only inundate the demolition material when the groundwater table rises to (or above) the ground level i.e. the demolition material would only be completely saturated when the sheet flow is 750mm deep for several days. This is unlikely to occur, even during 50-year events'* (p.13).
69. The Eliot Sinclair report also addressed erosion of the demolition material by the stream. It concluded that the exclusion of stock (by the fencing already undertaken) and the proposed native plantings on the riparian margin would provide adequate long-term stabilisation of the bank and protection from water erosion. In addition it noted that LIDAR elevation data showed any break out of flood flows from the stream would divert into an old riverbed flow path with a secondary flow path to the south, away from the farm track.
70. The evidence of Mr Sinclair supported the view that formation and maintenance of the limestone cap to design specifications would prevent the infiltration of rainfall and reduce leaching. He noted the importance of field testing to ensure the cap is virtually impervious and self-healing. He stated that laboratory testing had shown a permeability of 3.3×10^{-8} m/s can be achieved at a target compaction density of 93% (dry density) and that this could be achieved onsite. He said the limestone cap would be protected by the 80mm wearing course of gravel and that irrigation of the track would assist in preventing cracking from shrinkage.

71. The report by Dr Scott concluded that the current uncapped demolition material posed a risk to the contamination of groundwater and that the capping would be reduce this risk, but would not remove it entirely. She considered that monitoring potential contaminants of concern in groundwater was a reasonable way to assess future effects and to determine whether additional mitigation is required. She noted concern that stormwater could pond on the ground and that ponded water has the potential to mobilise contaminants if it comes into contact with the demolition waste.
72. Dr Scott noted a scarcity of data on groundwater users in the area and suggested the need for the applicant to undertake a field survey of all down-gradient wells within 1 km of the demolition waste. However, she went on to conclude that given the large influx of water moving through the aquifer (providing dilution) and the limited mobility of contaminants (where pH is neutral and dissolved oxygen levels are high), high concentrations of leached metals would not be expected in wells more than 500 m from the site.
73. Overall, Dr Scott concluded that the risk of long term, cumulative effects on groundwater were low. She considered there was a greater risk that contaminated groundwater would enter surface water and therefore recommended the installation of monitoring wells and the sampling of groundwater at three locations between the track and the stream.
74. Mr Beck noted the potential contamination of groundwater from lead from leaching, based on the results of the analysis of contaminant levels in samples of the waste material. He highlighted the absence of groundwater data to verify whether this had occurred and that below average rainfall since the demolition waste was placed had probably limited contaminant leaching.

Evaluation

75. We note that in preparing the application and AEE no sampling of groundwater for any analysis of contamination was undertaken by the applicant and that the assessment of effects was based on contaminant levels in the demolition waste in a limited number of samples. Therefore, in the absence of any actual groundwater sampling data, we have placed significant weight on the evidence of Dr Scott.
76. The applicant has agreed to all the monitoring requirements recommended by Dr Scott, including undertaking a field survey of all the down-gradient drinking water wells within 1 km of the farm track, subject to land owner access. We understand this field survey would include the down-gradient wells of concern to Mr and Mrs Inwood, as well as other wells. The conditions have been drafted in such as a way, that in the event that any contaminant trigger levels in the groundwater monitoring wells (closer to the farm track) are exceeded, the applicant would be required to respond by undertaking further sampling in the shallow wells (less than 20 m deep) included in the 1 km down-gradient field survey area (i.e. including the Inwood's wells). In the event that there was any breach of the drinking water standards in these shallow down-gradient wells, the conditions require a number of response actions by the applicant to determine the source of the contamination and if necessary, the provision of a replacement drinking water supply.

77. Although these groundwater monitoring requirements and response action conditions give us confidence that down-gradient drinking water wells will be monitored and protected, we emphasise the fact that Dr Scott is of the view there is unlikely to be any measurable groundwater contamination more than 500 m down-gradient of the farm track. In this regard, if any adverse effect on groundwater quality were to occur over the long-term, any measureable adverse effect is only likely to occur within the applicant's property boundaries. We therefore view the mitigation measures proposed to avoid and mitigate contaminant leaching to be the primary measures in avoiding adverse effects on groundwater quality. We consider the groundwater monitoring requirements and response actions to be secondary measures and very much a precautionary 'belts and braces' approach.
78. Overall, on the basis of the evidence presented, we are satisfied that the mitigation proposed is likely to avoid and mitigate any significant adverse effects on groundwater quality. In coming to this conclusion, we are conscious that the farm track will need to be managed carefully for many years to ensure the demolition material remains encapsulated and that water infiltration and inundation is avoided to the greatest extent possible. We note Dr Scott's evidence of the long-term nature of the contaminant risk.

Surface water quality and ecology

79. The Waimakariri River South Branch is a very highly valued stream. The large number of taxa present includes aquatic macro invertebrate species indicative of very good water quality and a high number of fish species.
80. The demolition waste poses a risk to the surface water quality and ecology through contaminants entrained in stormwater runoff directly to the stream or leachate percolating through soils into shallow groundwater and then entering the stream.
81. The primary focus of the application is to avoid and mitigate surface water contamination by implementation of the ESCP, planting and maintaining riparian plantings and reducing the risk to groundwater quality. Capping of the demolition waste and controlling stormwater runoff is critical to preventing water contact and the mobilisation of contaminants.
82. The evidence of Eliot Sinclair report addressed rainfall infiltration, groundwater inundation and flooding. In relation to stormwater runoff, Mr Sinclair stated that the farm track is cambered, shedding 1/3 of the runoff towards the stream and 2/3 towards the paddock. He noted the importance of the limestone cap extending over the entire width of the track and over the shoulders to prevent infiltration. He noted the importance of the riparian margin to trap and filter any sediment entrained in stormwater runoff, and to protect and stabilise the stream bank.
83. Dr Gray stated the uncapped demolition waste posed a significant risk to the water quality and ecology of the stream, and downstream waterways which accumulate contaminants, such as the Groynes ponds. He considered that while the limestone cap would significantly reduce the risk to surface water quality, he is concerned that fine limestone

could increase nutrients in the stream and that the riparian strip is too narrow in places to attenuate sediment runoff.

84. Dr Gray noted that leaving the demolition material *in situ* posed a long-term risk to aquatic systems and emphasised the importance of avoiding contact with water and maintenance of the limestone cap. He emphasised the risk of sediment contamination during the construction phase and riparian planting, and recommended that the applicant leave as much of the existing riparian vegetation in place as possible as a buffer zone.
85. Dr Gray considered the water quality and sediment sampling undertaken by the applicant was inadequate to conclude there was no actual adverse effect on the stream.
86. In the event consent is granted, Dr Gray stressed the need for rigorous track maintenance conditions, monitoring of aquatic macro invertebrates and a 10 year duration to enable reassessment of the situation, in light of the monitoring results.
87. Mr Beck was of the view the applicant's soil, sediment and surface water monitoring suggested there has been no significant migration of surface contaminants from the road to the adjacent water course since the material was deposited.
88. Dr Margetts highlighted the importance of aquatic ecology monitoring in the receiving waters to ensure there was no 'significant' change. She confirmed the positive impact of the riparian planting, not only as a buffer from contaminants, but on overall stream health by providing shading and enhanced aquatic habitat. In considering the applicant's compensatory offer to plant both side of the stream, she stated this would be of double benefit to the health of the stream and its ecology. She also confirmed the aquatic ecology monitoring would be of value to the CCC's wider ecological monitoring programme of the City's waterways.

Evaluation

89. To a certain extent, given the hydraulic connection of groundwater and surface water at the site, we consider the protection of groundwater quality to be hand in hand with the protection of surface water quality and ecology. We are mindful of the high ecological value of the stream and the need to protect the existing high water quality.
90. We agree with the view of Dr Gray that there is simply not enough data to support the view that the demolition waste is having 'no actual adverse effect' on water quality or ecology in the stream, particularly without the benefit of baseline data. We consider that without well designed, robust aquatic ecology monitoring, it is not possible to demonstrate subtle (but potentially significant) changes in species abundance, diversity and composition.
91. During our site visit the stream was running very clear and we noted the bed was pebbly and relatively free of sediment accumulation. While water quality (clarity) appeared to be good, we did note the presence of weeds, the general lack of riparian plants (except grass) and the somewhat poor amenity of the stream. We also noted pieces of demolition waste

were still evident along the riparian margins and consider more effort could be made by the applicant to remove this during planting.

92. Given the existing condition of the riparian margins, we consider the riparian planting of both sides of the stream will be of significant long term benefit to protecting water quality and enhancing stream habitat. With the certainty that the riparian plantings will be protected in perpetuity by way of a covenant, we have given this mitigation (and compensation) significant weight in our assessment.
93. Overall, on the basis of the evidence presented, we are satisfied that the proposed mitigation is likely to avoid and mitigate any significant adverse effects of the activity on surface water quality. The establishment and maintenance of riparian plantings on the north side of the stream will mitigate any potential adverse effects from contamination and provide for long-term stabilisation and protection of the stream bank. The riparian plantings on the south side of the stream will provide long-term benefits for stream health.

Soil Contamination

94. The application included the results of monitoring undertaken by PDP to investigate contamination levels in the demolition material. Sampling of the demolition material showed the presence of asbestos fibres (in 8 sample out of 20) and heavy metals (cadmium, chromium, lead, mercury, zinc and copper).
95. Mr Beck considered the primary potential effects of the demolition waste relate to the leaching of contaminants and the presence of asbestos. He noted that *'since asbestos is not mobile in soil or groundwater and does not leach, it does not pose a significant short or long term ecological risk to the environment and it is unlikely that any appreciable amount of asbestos has migrated from the waste material into the surrounding environment'* (p.3). He stated that given the remote location of the site the risk to human health from airborne asbestos was likely to be minimal, but that while it remained uncapped it still posed some level of risk.
96. Mr Beck considered the proposed capping the demolition material with limestone was an acceptable method for isolating the asbestos material and limiting the infiltration of rainwater that could lead to the mobilisation of contaminants. He noted that excavation of the material and its removal from the site would temporarily significantly increase the risks of asbestos fibres becoming airborne. Overall, he considered the application to be *'...a reasonable and cost-effective form of mitigation that will provide an acceptable degree of protection to both the environment and human health from contaminants, including asbestos, present in the waste material deposited on the site.'*

Evaluation

97. There is no debate that the application site is contaminated. Soil sampling confirms this. We accept that the mitigation proposed represents the 'best practicable option' given the presence of asbestos and heavy metals, and the disturbance that would occur if it was excavated and removed. We therefore agree with Mr Beck that the effective encapsulation of the waste material and ensuring its contact with water is minimised to

the greatest extent possible, represents a balance between protecting human health and the environment.

Cultural Values

98. The application considered adverse effects on tangata whenua values and considered the Mahaanui Iwi Management Plan 2013 (**MIMP**). It noted that the MIMP documents the significance of the Ōtūkaikino catchment to Ngāi Tuāhūriri.
99. The application stated that three key events were aimed at addressing iwi concerns. First, demolition material had been pulled back and removed from the bed of the stream; second, the capping works would minimise contamination of water and additional water quality monitoring had been proposed; and third, the applicant was prosecuted for the offence.
100. The application considered the activities (including the proposed mitigation measures) against relevant policies of the MIMP and concluded that *'this assessment of potential effects to Ngāi Tahu and Tuāhūriri values indicates that the physical effects arising from the activities are minor when undertaken in accordance with the mitigation measures, proposed water quality monitoring and proposed consent conditions. However it is up to the iwi representatives to consider how the overall activity might affect their relationship with the land and water.'*
101. The submission on behalf of Te Ngāi Tuāhūriri Rūnanga and Te Rūnanga o Ngāi Tahu (**TRONT**) sets out the importance of the Te Rūnanga o Ngāi Tahu Act 1996 (the TRONT Act) and the Ngāi Tahu Claims Settlement Act 1998 (the Settlement Act) in giving recognition to the status of Papatipu Rūnanga as kaitiaki and manawhenua of the natural resources within their takiwā boundaries. It stated that the Ōtūkaikino River is a tribal taonga within the takiwā of Te Ngāi Tuāhūriri Rūnanga.
102. The TRONT submission stated that the Settlement Act recognises Ngāi Tahu as the tangata whenua of, and as holding rangatiratanga within takiwā of Ngāi Tahu Whānui. It noted the submission should be accorded the status and weight due to the tribal collective it represents, which is over 50,000 registered members.
103. The TRONT submission referred to the cultural impact statement by Ms Williams and outlined concerns regarding adverse effects of the proposal on cultural values. It stated Ngāi Tahu has a holistic approach to the environment which is broader than 'western scientific' water quality numbers and that these would be explained in detail at the hearing. Specific concern was stated regarding adverse effects on water quality, the effectiveness of the proposed mitigation measures, the adequacy of the monitoring programme (including response actions) and the consideration of alternatives.
104. The cultural impact statement by Ms Williams on behalf of Ngāi Tuāhūriri outlined the significant adverse impacts of the activities on cultural values and in particular mahinga kai, wāhi tapu and kaitiakitanga. It noted the offensiveness of the activities and the direct affront to Ngāi Tahu cultural values and practices. It outlined the relevance of the MIMP and its statutory significance provided through section 6(e) and (f) of the RMA.

105. Ms Williams noted the importance of policies in the MIMP to eliminate discharges affecting rivers to enable them to be used for mahinga kai and recreation without concerns for human health and stated the application was contrary to these.
106. Mr Bligh outlined the significance of the stream to tangata whenua and the relevance of the MIMP. He noted that the potential ongoing leaching of contaminants from the demolition waste and the potential for contaminants to enter the stream is contrary to many of the policies and objectives of the MIMP, and is an affront to the relationship of the Rūnanga with the natural environment. He also noted that the discharge of contaminants to the stream may affect the iwi's effective exercise of kaitiakitanga. He considered that the proposed monitoring could not be considered to be mitigation.

Evaluation

107. In considering adverse effects on cultural values, we have not had the benefit of hearing more detailed submissions from TRONT or Te Ngāi Tuāhūriri Rūnanga, nor have we been able to gauge their views on the additional aquatic ecology monitoring, response actions, iwi reporting and engagement requirements, or compensatory riparian plantings. We must therefore take their submission on face value and draw our own conclusions on the basis of the evidence before us.
108. While we accept the evidence supports the conclusion that the mitigation proposed is likely to ensure any adverse effects on water quality and ecology are not likely to be significant, we acknowledge that the constituent parts of environment do not entirely represent the environment as a whole. We are conscious of the need to take a holistic view when considering tangata whenua values and their connections to the environment.
109. We consider the application will have significant adverse effects on cultural values that are more than minor. The sheer presence of the demolition waste undermines tangata whenua's ability to exercise kaitiakitanga and impact on wāhi tapu values. In our view, these adverse effects have not been reduced by the prosecution of the applicant, removal of the waste material from the bed of the stream, or the mitigation proposed. These adverse effects can only be managed overtime to ensure water quality is not reduced and mahinga kai areas are not lost.
110. Given the poor state of the stream margins and banks, we consider the compensatory riparian plantings to be a significant component in going some way towards redressing the cultural offense the applicant has caused. The planting and protection of both riparian margins, combined with the mitigation measures, will enhance the habitat values of the stream over the long term so it can continue to support a diversity of aquatic species.
111. We are satisfied the revised conditions address matters raised by TRONT and Te Ngāi Tuāhūriri Rūnanga by improving groundwater monitoring, requiring aquatic ecology monitoring in the stream, prescribing response actions, and requiring the applicant to inform and engage with iwi.

Conclusion – Section 104D(1)(a) Threshold Test

112. On the basis of the above evaluations on the potential and actual adverse effect on the environment, we conclude that with the imposition of appropriate consent conditions, there is not likely to be any significant adverse effects on groundwater quality, surface water quality and ecology, and soil contamination. However, we do not consider there is enough evidence or certainty to conclude effects will be minor given the long term nature of the contamination and the highly sensitive nature of the receiving environment. We are of the view the long term success of the mitigation can only be proven overtime and with adequate environmental monitoring.
113. In terms of adverse effect on cultural values, we conclude these are more than minor.
114. We therefore consider the application does not pass the threshold test of section 104D(1)(a), as overall we find the adverse effects of the activities on the environment are more than minor.

Relevant Planning Provisions

115. An analysis of the relevant provisions of the National Policy Statement (**NPS**), the Canterbury Regional Policy Statement (**CRPS**), NRRP, LWRP, and WRRP was provided in the s42A report and on behalf of the applicant by Ms Torgerson.
116. Mr Bligh was generally of the view that the application would not be contrary to the relevant objective and policies provided uncertainty regarding the ongoing integrity of the limestone cap can be addressed over the long term. We note that all his individual conclusions relating to each relevant section of each planning document turn on his confidence in the applicant's ability to continue to effectively mitigate adverse effects over the long term.
117. In response to our questions, Mr Bligh considered that a revised set of conditions could be drafted to address the uncertainty noted in the s42A report and tighten the mitigation measures. Having heard the evidence, he noted he was now satisfied that any potential adverse effects could be managed overtime and that it was probably a better environmental outcome to just get on with the mitigation.
118. Ms Torgerson was of the view that overall, given the mitigation measures proposed, the application was at not contrary to the objectives and policies of the relevant plans. She noted that while the activities may be inconsistent with some of the provisions, overall it was not contrary to them.

Evaluation

119. If this application was not for retrospective consent, it would be difficult to find support in the relevant planning provisions for this type of activity in this particular highly sensitive receiving environment. In a nutshell, the disposal of contaminated waste involves the management of risk and part of managing that risk is in selecting an appropriate receiving environment that would not be particularly sensitive to contamination. As many of the experts have stated, risk cannot be entirely eliminated, it can only be reduced.
120. We do not consider that the drafters of the relevant planning provisions could have anticipated the retrospective application of the objectives and policies to such activities

such as this involving the disposal of contaminated waste, on the scale we have experienced in Canterbury. Nor could the provisions have anticipated the time it would take to address such matters and the human health risks involved remediation. Nevertheless, we have focused on the overriding objectives of the relevant plans and the key policies regarding the protection of environmental quality and the life supporting capacity of the environment.

Conclusion – Section 104D(1)(b) Threshold Test

121. On the basis of the expert evidence presented, we accept that with the mitigation proposed, and with ongoing due diligence, maintenance and monitoring, the adverse effects of the application are likely to be mitigated to a level where it is not contrary to the objectives and policies of the relevant plans.
122. We therefore find that the application passes section 104D(1)(b) of the Act and consent *may* therefore be granted under section 104B.

Other Matters

123. We have had regard to the CCC's Report/Decision regarding Land Use Consent RMA92026491. We have read the District Court's decision regarding the prosecution for offences under section 15 of the RMA relating to these activities.

Sections 105 and 107

124. There was a high level of agreement between the parties that the receiving environment is highly sensitive to the discharge of contaminants. The importance of the groundwater protection zone and the high value of the stream both culturally and ecologically are central to our overall consideration of the application.
125. The applicant considered alternative receiving environments such as removal of the demolition waste and transportation to Kate Valley. This was dismissed on the basis of cost and the difficulties with managing asbestos dust. Alternative capping material such as asphalt was considered, but this was dismissed on the basis of cost and the fact that it would not be self-healing.
126. We are satisfied the applicant has fulfilled its duty to consider alternative methods and receiving environments under section 105.
127. In terms of section 107 matters, we are satisfied that the mitigation measures proposed are likely to avoid any significant adverse effects on aquatic life and drinking water supplies. We consider the proffered conditions requiring groundwater quality monitoring and aquatic ecology monitoring in the stream will ensure that any adverse effects that may occur overtime are detected and measured, and if required remedied and mitigated.
128. In this regard, we have had particular regard to the required response actions in the 'unlikely' event that any significant adverse effects are recorded, such as the provision of alternative drinking water supplies for down-gradient wells and the removal of contaminated sediments from the stream. For the record, we note that removal of the

demolition waste entirely may still be required if the proposed mitigation proves inadequate in mitigating significant adverse effects over the long term.

129. We are satisfied that implementation of the ESCP will avoid and mitigate any adverse effects on surface water quality during the construction works. We note that in our view, the long grass in the riparian margin should remain until the capping works are completed and stabilised; and that planting of the riparian margin should be undertaken progressively with minimal disturbance and vegetation removal.
130. Overall, we satisfied that the proposal is unlikely to result in any of the effects in the receiving waters set out in section 107(1)(c)-(g) of the RMA, and that consent *can* be granted.

Part 2 of the Act

131. All the considerations we have described are subject to Part 2 of the Act. In accordance with Part 2, we consider that subject to the imposition of appropriate consent conditions, the proposal is unlikely to be contrary with the purpose of the Act and the principles of the sustainable management of natural and physical resources, as defined in section 5.
132. We are satisfied that section 6 (a), (c), (e) and (f) matters of national importance have been recognised and provided for in determining appropriate conditions of consent. Given the existing environment, we consider the riparian plantings will significantly enhance the natural character of the stream margins and the habitat of indigenous aquatic fauna over the 1.1 km section of the stream. It is anticipated that protection of water quality and aquatic life will enable tangata whenua to continue their relationship with the Ōtukaikino River, harvesting mahinga kai that is safe to consume and protecting wāhi tapu sites.
133. We have had particular regard to section 7 (a), (aa), (c), (d), (f), (h) and (i). Conditions requiring the applicant to inform and engage with iwi regarding monitoring results will help iwi to exercise kaitiakitanga going forward. The mitigation measure proposed will ensure intrinsic values and the quality of the existing environment is maintained. The riparian planting of both sides of the stream will enhance the existing amenity of the stream. We have considered the effects of climate change and the potential for more extreme rain events in the future and this directs us to a precautionary approach.
134. In achieving the purpose of the Act, we have taken into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). We have considered TRONT's submission in relation to Rangātiratanga and have accorded their submission significant weight in making this determination.

Overall Conclusion

135. This decision has been very difficult and we both feel very disappointed that the activity occurred, particularly in such as sensitive location. However, we accept it has occurred and that the applicant has been appropriately punished for his part in the unlawful activities. We record we have not approached our assessment from a punitive perspective, but acknowledge the realities of the situation and the pragmatic nature of the mitigation measures proposed.

136. In an ideal situation, we would be of a mind to refuse consent and the demolition waste would be removed entirely, removing all environmental risk. However, we accept the removal of the demolition waste would result in significant physical disturbance of the contaminated material and the riparian margin. The activity would directly affect the entire 1.1 km section of the stream and could potentially result in outgoing land runoff through changed drainage flows in the adjacent paddock. Given the proximity to the stream, it is difficult to see how the excavation works could be effectively managed to avoid contamination of the stream with sediment.
137. We are particularly concerned that the excavations would release asbestos fibres into air and the wider environment, risking the health and safety of surrounding neighbours and workers at the site. We note the evidence of Mr Beck that while dust minimisation procedures could be employed during excavation and transportation, the risk of airborne asbestos could only be lowered and not eliminated.
138. On the basis of the above assessment of effects on the environment, we are satisfied that the proposed mitigation measures are appropriate and necessary to reduce the risks of significant adverse effects on water quality, and ultimately on human health and aquatic life.
139. In coming to our decision, we have not given much weight to the applicant's estimate of the cost of removing the demolition waste. In summary, our decision for the demolition waste to remain *in situ* is primarily based on the following factors:
- (a) The presence of asbestos and fact that disturbance would result in the release of airborne particles to the wider environment. We accept asbestos is not a risk to water quality and is best 'locked up' within the formed track;
 - (b) The demolition material has been onsite for nearly four years. The material been compacted and covered, and the riparian margin has been stabilised with vegetation;
 - (c) The stream would be adversely affected by further excavations and earthworks; and
 - (d) Water quality, and cultural and ecological values in the stream can be maintained and enhanced by the establishment and protection of riparian planting on both sides of the stream.
140. Given these unique circumstances, the mitigation measure proposed and the compensatory element of the riparian planting of the south side of the stream, we are of the view that the purpose and principles of the Act can be best achieved by granting the resource consents, subject to conditions.

Conditions

141. There was a high level of agreement at the hearing between the reporting officer and the applicant regarding appropriate consent conditions. The applicant's revised conditions were drafted with input from CCC and the reporting officer. The applicant accepted all the comments made by the reporting officer following circulation to the parties, except for

the quantum of the bond. In general, we find the recommended conditions are reasonable, practical and appropriate to avoid, remedy and mitigate adverse environmental effects.

142. We have made a few minor wording changes where appropriate, but in general have imposed the conditions as proffered by the applicant.
143. In addition, we have included a requirement to complete the mitigation riparian planting within 12 months of beginning the planting and the compensatory riparian planting within 24 months of the commencement of the consent (CRC14335, Condition (9) and CRC142337, Condition (9)).
144. We have included a requirement to undertake the asbestos monitoring required by CRC142335, Condition (29) within 20 working days of the commencement of the consent.
145. In light of the evidence presented and agreement by all parties that the demolition material should be capped as soon as possible, we have changed CRC142335, Condition (13) to require the capping and contouring to be completed within 6 months of the commencement of consent. We have also included a requirement that the permeability of the limestone cap be tested in the field to ensure it meets design specifications.
146. In determining the appropriate bond quantum we requested that the applicant provide us with an estimate of the cost to implement the consents over a 10 year period. These costs included preparation of management plans, engineering certification, aquatic ecology monitoring, riparian planting, track capping works, groundwater well installation, groundwater monitoring, soil sampling, and potable well provision (if mitigation required). We note these costs are indicative only and that some costs would only be required as a response action. However, the costs illustrate that the cost to implement the consents are likely to be the range of \$600,000 - \$850,000, depending on the success of the mitigation measures.
147. In reaching our decision that the demolition waste can remain *in situ*, we have placed significant weight on the expert evidence that any significant adverse environmental effects can be avoid and mitigated with appropriate management. We have been reassured that the impositions of monitoring conditions will ensure any adverse effects will be measured overtime, and if necessary, that further response actions will be required to further mitigate adverse effects. While we have noted that there is a risk to the applicant that the removal of the contaminated waste may be proven to be necessary in the future to ensure protection the environment, we have accepted it is extremely unlikely given the information we have at this point in time. In 10 years' time, ECan will have the benefit of the monitoring data to assess the actual environment effects, and to inform its decision whether the demolition material should continue to remain *in situ* and under what consent conditions. At this time, it would also be appropriate to reconsider the bond quantum.

148. On the basis of the funds necessary to fully implement the consents, we consider the appropriate bond is \$800,000. This figure gives some level of certainty to submitters that funds are available to implement the consents and if necessary undertake further mitigation measures such as alternate drinking water supply or sediment removal from the stream.

Consent Duration

149. Given that the farm track will remain contaminated for as long as the demolition waste remains *in situ*, we consider the appropriate duration for the Land Use Consent is unlimited. We are conscious that this will ensure that any future landowner will be aware of the contaminated nature of the site and the need for ongoing maintenance of the farm track to comply with the conditions of the consent.
150. On the basis of the evidence presented and the uncertainty regarding actual environmental effects, we consider the appropriate duration for the Discharge Permit is 10 years. We note Mr Bligh's comment that it is likely a Discharge Permit will still be required after 10 years, given the long term potential for leachate and consider this is a sufficient period to collect actual monitoring data that will inform future decision makers in determining appropriate future actions to ensure long term protection of the environment.

Decision

151. **It is the decision of the Canterbury Regional Council, pursuant to sections 104, 104B, 104D, 105, 107 and 108, and subject to Part 2 of the Resource Management Act 1991, to grant Coutts Island Holding Limited Land Use Consent CRC142335 to use land for vegetation disturbance and earthworks within the riparian margin, and Discharge Permit CRC142337 to discharge contaminants and stormwater onto and into land in circumstances where it may enter water, subject to the conditions set out in Annexure 1.**

Dated at Christchurch this 9th day of April 2015



Sharon McGarry
Hearings Commissioner (Chair)



Gina Solomon
Hearings Commissioner

Annexure 1

Land Use Consent CRC142335

General

1. The consent shall be limited to activities on land located to the west of Christchurch City, at 589 Coutts Island Road, Coutts Island (land parcel Pt Lot 1 DP 10459) at or about map reference (NZ Topo50 BX24 655 897) and shown as a red outline on attached Plan CRC142335A, which forms part of this consent.
2. The land use activities authorised by this consent are limited to the following works associated with a farm track as shown on Plan CRC142335A:
 - a. The disturbance of the margins (10 metres from the banks) of the Waimakariri River South Branch, for the placement of demolition material and limestone capping material (and the requisite crushed gravel layers) on a farm track;
 - b. The disturbance of vegetation and planting of vegetation in the riparian planting areas ;
 - c. Any maintenance activities within the margins (10 metres from the banks) of the Waimakariri River South Branch necessary to ensure the integrity of the limestone capping material (and the requisite crushed gravel layers) over the farm track; and
 - d. Any maintenance activities necessary within the margins (10 metres from the banks) of the Waimakariri River South Branch to ensure the vegetated areas used to manage the stormwater generated from the farm track is performing in accordance with conditions of Discharge Permit CRC142337.
3. The consent holder must supply a copy of this consent to all persons undertaking activities listed in Condition (2).
4. The use of the farm track shall be limited to stock movements, light farm vehicles, and heavy construction and maintenance plant necessary for maintenance works to the farm track.

Management Plans

Site Management Plan

5. The consent holder shall prepare and maintain a Site Management Plan (SMP). No more than 20 working days after the commencement of this consent, the consent holder must submit a copy of the SMP to the Canterbury Regional Council: RMA Compliance and Enforcement Manager for review and certification. All activities authorised by this consent must be carried out in accordance with the SMP.

Unless Canterbury Regional Council provides notice in writing that it is unable to certify the SMP, then the SMP may be deemed to be certified within 20 working days of it having been provided to Canterbury Regional Council.

For the purposes of this condition, "Certification" means that the SMP contains all information specified in Condition (6).

6. The SMP shall include, but not be limited to the following:
 - a. An erosion and sediment control plan which reviews, and updates if necessary, the Eliot Sinclair report titled 'Capping Construction Details/Erosion and Sediment Control Plan (ESCP) dated 16 September 2013 ;

- b. A site drainage plan;
- c. Capping design including grading and compaction requirements;
- d. Details of capping procedure including procedures for working with the existing demolition material;
- e. An implementation schedule detailing the anticipated timing of stages associated with the capping works: including but not limited to:
 - i. Site preparation works, such as spraying or sorting;
 - ii. Any equipment or plant mobilisation necessary for carrying out capping works; and
 - iii. Capping stages, and any field verification requirements.
- f. Measures to reduce dust generation during capping works;
- g. Measures to minimise any contaminants entering the vegetative infiltrative areas from the completed farm track and during the construction activity (surface covering of the farm track);
- h. Details of procedures to be followed for post construction site restoration;
- i. Inspection procedures and details of routine maintenance work that must be undertaken by the consent holder during the operational life of the capping; and
- j. Spill response procedures (as required by Conditions (21) to (22)); and
- k. Identifying the persons responsible for carrying out all actions in relation to meeting the requirements of Conditions (5) and (6).

Riparian Planting Plan

- 7. The consent holder shall prepare and maintain a Riparian Planting Plan (RPP). No more than 20 working days after the commencement of this consent, the consent holder must submit a copy of the RPP to the Canterbury Regional Council: RMA Compliance and Enforcement Manager for review and certification. All riparian planting and maintenance activities authorised by this consent must be carried out in accordance with the RPP.

Unless Canterbury Regional Council provides notice in writing that it is unable to certify the RPP, then the RPP may be deemed to be certified within 20 working days of it having been provided to Canterbury Regional Council.

For the purposes of this condition, "Certification" means that the SMP contains all information specified in Condition (8).

- 8. The RPP shall include, but not be limited to the following:
 - a. Details of the type, size and density of plantings proposed between the farm track and the Waimakariri River South Branch for the mitigation works (north side of river) **and** details of the type, size and density of the compensatory riparian plantings on the south side of the Waimakariri River South Branch margin;
 - b. An implementation schedule detailing the anticipated timing of staged planting for the mitigation riparian plantings on the farm track side of the river (north side) and the staged planting for the compensatory riparian plantings on the south side of the river;

- c. Identification of land areas associated with the mitigation and compensatory riparian plantings for incorporation into a restrictive covenant as required by Condition (34);
 - d. Procedures for pest and weed control;
 - e. Land and vegetation maintenance procedures to prevent damage to the riparian area such as fencing; and
 - f. Grazing management practices to limit damage to establishing vegetation and reduce soil erosion.
9. The mitigation riparian planting required by this consent shall commence within the first planting season (April to September) following the commencement of this consent and be completed within 12 months from beginning the planting. The compensatory riparian plantings shall be completed within 24 months of commencement of consent.

Asbestos Management Plan

10. All works shall be undertaken in accordance with the management plan titled '*Asbestos Management Plan During and Post-Construction of the Limestone Cap over Demolition Material at 589 Coutts Island Road, Christchurch*' dated 17 July 2013.

Amendments or Revisions to Plans

11. Any amendments or revisions to the SMP required by Condition (5), the RPP required by Condition (7), or the Asbestos Management Plan identified in Condition (10) must be submitted to Canterbury Regional Council no less than 10 working days prior to implementing the amendments or revisions. These amendments or revisions could include, but are not limited to any changes as a result of more extensive ground works necessary to carry out the capping or to maintain the capping.

Operational/Construction

12. The consent holder must arrange and conduct a pre-construction site meeting and invite, with a minimum of 10 working days' notice, the Canterbury Regional Council, any contractor undertaking the proposed works, and any other party representing the consent holder prior to any work authorised by this consent commencing on site.
13. Within six months of the commencement of this consent, the surface of the farm track shall be:
- a. capped with material to minimise the infiltration of surface water in accordance with the Eliot Sinclair report entitled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013 and any subsequent revisions to this procedure submitted in accordance with the SMP set out in Condition (6) above; and
 - b. contoured to facilitate surface runoff and to prevent ponding of surface water on the farm track in accordance with the Eliot Sinclair report entitled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013 and any subsequent revisions to this procedure submitted in accordance with the SMP set out in Condition (6) above.
14. Surface covering material over the demolition materials over the farm track shall be limited to low-permeability crushed limestone, or suitable low permeability equivalent (and the requisite crushed gravel layers) to ensure surface water runoff from outside the farm track area is prevented from entering the farm track in accordance the Eliot Sinclair report entitled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013 or any subsequent revisions submitted to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager. Field testing shall be undertaken to demonstrate the low permeability capping material

meets the design standards in the Eliot Sinclair report entitled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013.

15. The consent holder (or designated agent) shall supervise the delivery of any covering materials used for the site capping works at all times and undertake the following:
 - a. A record of all material delivered to the site shall be kept;
 - b. The record is to include:
 - i. the name of the person and company that delivered the material to the site;
 - ii. the date of deposition;
 - iii. the source of material;
 - iv. a description of material; and
 - v. the volume of the material deposited;
 - c. The record shall be provided to the Canterbury Regional Council on request.
16. No demolition material may be stockpiled outside of the immediate area of the farm track.
17. In the event that off-site disposal of any demolition material is necessary, the following is required:
 - a. Offsite disposal of any existing demolition material must be disposed of at a licensed facility authorised to receive such material;
 - b. Any disturbance and/or removal work must be supervised by a person who holds a Certificate of Competency (COC) for asbestos work;
 - c. The disposal of any existing demolition material to a suitable disposal facility must be documented by way of waste manifests and/or weighbridge receipts; and
 - d. Documentation as specified in Condition (17)(c) (i.e. waste manifests and/or weigh bridge receipts) must be submitted to the Canterbury Regional Council within 20 working days of the removal of material.
18. All practicable measures shall be undertaken to prevent the discharge of sediment into surface water arising from the works, including, but not limited to the following measures:
 - a. The measures in the Erosion and Sediment Control Plan referred to in Condition (5) must be installed prior to the commencement of works.
 - b. No earthworks shall occur in flowing water;
 - c. Machinery shall not enter or work in flowing water ; and
 - d. All erosion and sediment control measures shall be constructed and maintained in general accordance with the principles contained in Environment Canterbury's 'Erosion and Sediment Control Guideline' (2007) and the measures specified in the SMP as required by Condition (5) of this consent.
19. Cut vegetation, debris, or other materials, shall not be placed in any surface water body or in a position such that it may enter any surface water body.
20. The consent holder shall arrange a post construction site meeting and invite, with a minimum of five working days' notice, the Canterbury Regional Council, any contractor undertaking the proposed works, and any other party representing the consent holder after the capping works have been completed.

Spills

21. The consent holder shall take all practicable measures to avoid spills of fuel or any other contaminant within the site. These measures shall include, but not be limited to:
 - a. A written spill response plan developed and incorporated into the SMP as required by Condition (5) of this consent.
 - b. No storage of fuel or refueling of vehicles and machinery within 20 metres of the bed of a river.
 - c. The consent holder providing a copy of the written spill response plan to any person undertaking activities authorised by this consent.
 - d. Cleaning up any spill of fuel or any other contaminant as soon as practicable in accordance with the written spill response plan, with any affected areas of the farm track and/or the vegetated infiltrative areas inspected and cleaned, and appropriate measures taken to prevent a recurrence.
22. Within 24 hours of a spill event, Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed and provided the following information:
 - i. The date, time, location and estimated volume of the spill;
 - ii. The cause of the spill;
 - iii. The type of contaminants spilled;
 - iv. Clean up procedures undertaken;
 - v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
 - vi. An assessment of any potential effects of the spill; and
 - vii. Measures to be undertaken to prevent a recurrence.

Rehabilitation

23. The consent holder shall ensure that:
 - a. All disturbed areas off the farm track are stabilised and re-vegetated following completion of the capping works;
 - b. All spoil or other excess materials arising from the land use works are removed from site on completion of the works; and
 - c. Any spoil or other excess materials is removed from the site and disposed of at a facility authorised to receive such material. Written records of disposal are to be maintained and provided to the Canterbury Regional Council upon request in accordance with Condition (17)(c).

Inspections and Maintenance

24. Inspections and maintenance shall be undertaken on vegetated areas on a routine basis, and after large storm events, and shall include, but not be limited to, the following:
 - a. Grass or vegetation shall be maintained in a healthy state;
 - b. Grass or vegetation replanted where erosion or die-off has resulted in bare or patchy soil cover;
 - c. Any visible hydrocarbons and debris or litter removed immediately following an inspection;

- d. Any accumulated sediment in vegetated areas removed within five working days of the inspection; and
 - e. Any scour or erosion repaired within five working days of the inspection.
25. Visual inspection of the limestone capping shall occur on a monthly basis, and after storm events, and shall include assessment, including, but not limited to the following:
- a. Integrity of the capping;
 - b. Ponding on the surface capping; and
 - c. Any visible hydrocarbons, debris or litter on the farm track shall be removed within five working days of the inspection.
26. Should water ponding, the formation of ruts or pitting, or cracking be observed in the track surface, repairs shall be made within five working days. Written documentation of inspections and repairs shall be kept and provided to the Canterbury Regional Council upon request.
27. The consent holder shall prepare and submit a written report to the Canterbury Regional Council by 30 April each year, providing information on inspections of farm track capping integrity and any repairs made to the capping.

Monitoring and Reporting

28. No less than 30 working days after the completion of the capping works, certification by a suitable person that the capping has been installed in accordance with the standards in Condition (13) and (14). A copy of this certification must be sent to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.
29. Within 20 working days of the commencement of the consent, asbestos sampling of a representative section of farm track will be carried out to characterise the extent of asbestos fines in accordance with the following:
- a. Two samples will be collected from the surface soils where demolition material has been previously removed between the farm track and the stream;
 - b. An assessment of land immediately adjacent to the track should be undertaken prior to the completion of capping to confirm that asbestos derived from the waste is not present above accepted risk - based guidelines. This assessment should be sufficient to delineate the presence of asbestos and soils, including if necessary on adjacent third party property;
 - c. Samples will be analysed at an IANZ laboratory for quantitative asbestos and compared with Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (Western Australia Department of Health 2009); and
 - d. A copy of the sampling results will be submitted to the Canterbury Regional Council within 20 working days of carrying out the sampling work.

Bond

30. The consent holder must, within 3 months of the commencement of this consent, enter into a bond with a registered trading bank of New Zealand, to be provided as surety to the satisfaction of the Canterbury Regional Council. The purpose of the bond is to secure performance with the conditions of this consent.
31. The bond is to be for the sum of \$800,000 and is to be in the form of a bank bond.
32. The term of the bond is to continue for a period of ten years after the expiry of the consent, unless the bond is replaced by an equivalent bond.

33. If the consent is transferred in part or whole to another party or person, the bond is to continue until any outstanding work at the date of transfer is completed to ensure compliance with the relevant conditions of this consent, unless the Canterbury Regional Council is satisfied that adequate provisions have been made to transfer the liability to the new consent holder.

Advice Note: The bond required by Conditions (31) to (33) above will apply to both Land Use Consent CRC142335 and Discharge Permit CRC142337. Under Discharge Permit CRC142337, the corresponding bond conditions are Conditions (34) to (37). For clarification, it is not intended that a separate bond be entered into for each consent, but that the one bond covers both resource consents.

Covenant Condition

34. Following the completion of the mitigation and compensatory riparian plantings required as part of Conditions (7) and (8) of this consent, the consent holder shall register a restrictive covenant, in favour of Canterbury Regional Council, over the areas designated as part of Condition (8) of this consent. The covenant shall provide specifically as follows:

'The covenantor, and any successors in title, shall not fell, remove, destroy or damage any vegetation except to the extent necessary to

- a. Remove and manage invasive pests: or*
- b. Maintain, repair and monitor works associated with the capping and the use of the farm track, associated farm track drainage or consent monitoring requirements; or*
- c. Maintain existing fences, farm infrastructure and pivot irrigation crossings.'*

Administration

35. In the event of any disturbance of Kōiwi Tangata (human bones) or taonga (treasured artefacts), the consent holder must immediately:

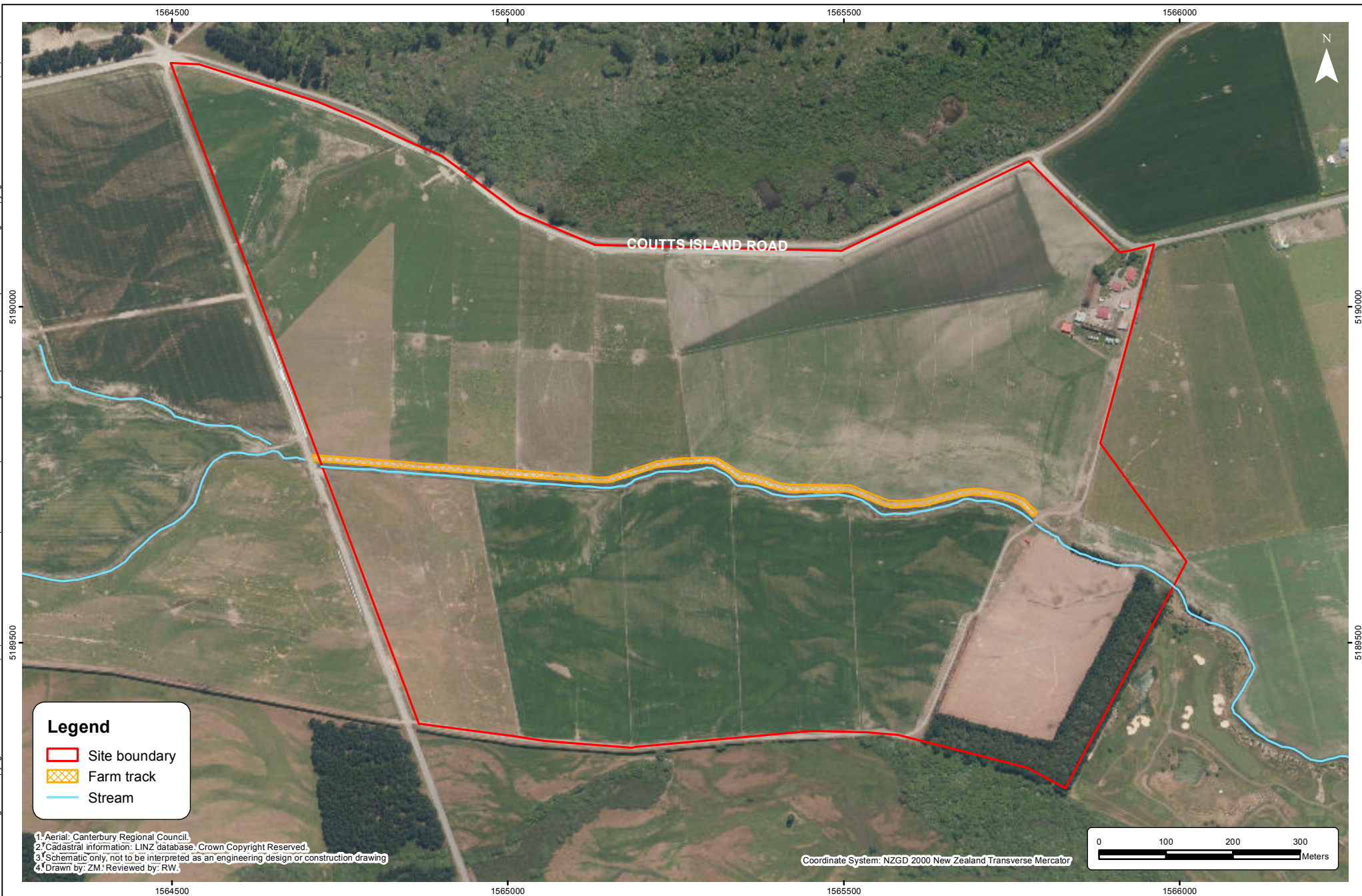
- a. Advise the Canterbury Regional Council of the disturbance;
- b. Advise the Upoko Rūnanga of Tuāhūriri, or their representative, and the New Zealand Historic Places Trust, of the disturbance; and
- c. Cease earthmoving operations in the affected area until an area has been marked off around the site, and Kaumatua and archaeologists have given approval for the earthmoving to recommence.

Advice Note: This condition is in addition to any agreements that are in place between the consent holder and the Upoko Rūnanga (Cultural Site Accidental Discovery Protocol) or the New Zealand Historic Places Trust.

36. The Canterbury Regional Council may on the last working day of May or November each year, serve notice of its intention to review the conditions of this consent for the purposes of:

- a. Dealing with any adverse effect on the environment which may arise from the exercise of 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; or
- c. Complying with the requirements of a relevant rule in an operative regional plan.

37. The lapsing date for the purposes of section 125 of the Resource Management Act 1991 is to be five years from the date of commencement of the consent.



Discharge Permit CRC142337

General

1. The discharge shall be limited to stormwater runoff and passive leaching generated from the farm track, including surface covering, located to the west of Christchurch City, at 589 Coutts Island Road, Coutts Island (land parcel Pt Lot 1 DP 10459) at or about map reference (NZ Topo50 BX24 655 897) and shown as a red outline on attached Plan CRC142337A, which forms part of this consent.
2. The discharges authorised by this resource consent shall be limited to:
 - a. stormwater generated from the limestone-capped farm track;
 - b. sediment-laden stormwater generated during the construction phase; and
 - c. discharge of leachate generated from the demolition material underlying the farm track.
3. The discharge from the farm track shall be from a total area no greater than 12,000 m², as identified on Plan CRC142337A.
4. The use of the farm track is to be limited to stock movements, light farm vehicles, and heavy construction and maintenance plant necessary for maintenance works to the farm track.

Management Plans

Site Management Plan

5. The consent holder shall prepare and maintain a Site Management Plan (SMP). No more than 20 working days from the commencement of this consent, the consent holder shall submit a copy of the SMP to the Canterbury Regional Council: RMA Compliance and Enforcement Manager for review and certification. All activities authorised by this consent shall be carried out in accordance with the SMP.

Unless Canterbury Regional Council provides notice in writing that it is unable to certify the SMP, then the SMP may be deemed to be certified within 20 working days of it having been provided to Canterbury Regional Council.

For the purposes of this condition, "Certification" means that the SMP contains all information specified in Condition 6. Any amendments or revisions to the SMP required by Condition (6) must be submitted to Canterbury Regional Council for review and certification no less than 10 working days prior to implementing the amendments or revisions. These amendments or revisions could include, but are not limited to any changes as a result of more extensive ground works necessary to carry out the capping or to maintain the capping.

6. The SMP shall include, but not be limited to the following:

- a. An erosion and sediment control plan which reviews, and updates if necessary, the Eliot Sinclair report titled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013;
- b. A site drainage plan;
- c. Capping design including grading and compaction requirements;
- d. Details of capping procedure including procedures for working with the existing demolition material;
- e. An implementation schedule detailing the anticipated timing of stages associated with the capping works: including but not limited to:
 - i. Site preparation works, such as spraying or sorting;
 - ii. Any equipment or plant mobilisation necessary for carrying out capping works; and
 - iii. Capping stages, and any field verification requirements;
- f. Measures to reduce dust generation during capping works;
- g. Measures to minimise any contaminants entering the vegetative infiltrative areas from the completed farm track and during the construction activity (surface covering of the farm track);
- h. Details of procedures to be followed for post construction site restoration;
- i. Inspection procedures and details of routine maintenance work that shall be undertaken by the consent holder during the operational life of the capping; and
- j. Spill response procedures (as required by Conditions (20) to (21));
- k. Identifying the persons responsible for carrying out all actions in relation to meeting the requirements of Conditions (5) and (6).

Riparian Planting Plan

- 7. The consent holder shall prepare and maintain a Riparian Planting Plan (RPP). No more than 20 working days after the commencement of this consent, the consent holder shall submit a copy of the RPP to the Canterbury Regional Council: RMA Compliance and Enforcement Manager for review and certification. All riparian planting and maintenance activities authorised by this consent shall be carried out in accordance with the RPP.

Unless the Canterbury Regional Council provides notice in writing that it is unable to certify the RPP, then the RPP may be deemed to be certified within 20 working days of it having been provided to Canterbury Regional Council.

For the purposes of this condition, "Certification" means that the RPP contains all information specified in Condition (8).

Any amendments or revisions to the RPP required by Condition (8) must be submitted to Canterbury Regional Council for review and certification no less than 10 working days prior to implementing the amendments or revisions. These amendments or revisions could include, but are not limited to any

changes as a result of more extensive ground works necessary to carry out the capping or to maintain the capping.

8. The RPP shall include, but not be limited to the following:
 - a. Details of the type, size and density of plantings proposed between the farm track and the Waimakariri River South Branch for the mitigation works (north side of river) **and** details of the type, size and density of the compensatory riparian plantings on the south side of the Waimakariri River South Branch margin;
 - b. An implementation schedule detailing the anticipated timing of staged planting for the mitigation riparian plantings on the farm track side of the river (north side), and the staged planting for the compensatory riparian plantings on the south side of the river;
 - c. Identification of land areas associated with the mitigation and compensatory riparian plantings for incorporation into a restrictive covenant in accordance with Land Use Consent CRC142335;
 - d. Procedures for pest and weed control;
 - e. Land and vegetation maintenance procedures to prevent damage to the riparian area such as fencing; and
 - f. Grazing management practices to limit damage to establishing vegetation and reduce soil erosion.
9. The mitigation riparian planting required by this consent shall commence within the first planting season (April to September) following the commencement of this consent and be completed within 12 months of beginning the planting. The compensatory riparian plantings shall be completed within 24 months of the commencement of consent.

Stormwater Disposal

10. Stormwater from the farm track shall be directed via sheet flow into vegetated areas in accordance with the Eliot Sinclair Report '*Proposed Remedial Actions and Assessment of Effects on the Environment*' dated 17 September 2013. These vegetated infiltrative areas shall not allow for infiltration into the base materials forming the farm track. The vegetated areas shall:
 - a. Not be subject to compaction; and
 - b. Be maintained with grass and/or groundcover plants.
11. A certificate signed by the person responsible for designing the vegetated infiltrative areas, or by a Chartered Professional Engineer (CPEng), shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 20 working days of construction being completed, and certifying that vegetated infiltrative areas have been constructed and installed in accordance with Condition (10) of this consent.

Construction

12. The consent holder shall ensure surface water runoff from outside the area of the farm track is prevented from entering the farm track in accordance the Eliot Sinclair report entitled '*Capping Construction Details/Erosion and Sediment Control Plan (ESCP)*' dated 16 September 2013 or any subsequent revisions submitted to Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.

13. During site works, including the placement of the surface covering over the farm track, all practicable measures shall be undertaken to minimise:
 - a. Exposed surfaces;
 - b. Discharges of sediment-laden stormwater beyond the boundary of the site; and
 - c. Sediment being transported beyond the site boundaries.
14. All practicable measures shall be undertaken to prevent the discharge of sediment to surface water arising from the works, including, but not limited to the following measures:
 - a. The measures in the Erosion and Sediment Control Plan referred to in Condition 6 shall be installed prior to the commencement of works.
 - b. No earthworks are to occur in flowing water;
 - c. Machinery is not to enter or work in flowing water; and
 - d. All erosion and sediment control measures are to be constructed and maintained in general accordance with the principles contained in Environment Canterbury's "*Erosion and Sediment Control Guideline*" (2007) and the measures specified in the SMP as required by Condition (5).

Inspections and Maintenance – Farm Track and Vegetated Areas

15. Inspections and maintenance shall be undertaken on vegetated areas on a routine basis, and after large storm events, and shall include, but not be limited to, the following:
 - a. Grass or vegetation shall be maintained in a healthy state;
 - b. Grass or vegetation replanted where erosion or die-off has resulted in bare or patchy soil cover;
 - c. Any visible hydrocarbons and debris or litter removed immediately following an inspection;
 - d. Any accumulated sediment in vegetated areas removed within 5 working days of the inspection; and
 - e. Any scour or erosion repaired within 5 working days of the inspection.
16. Visual inspection of the limestone capping shall occur on a monthly basis, and after storm events, and shall include assessment including but not limited to the following:
 - a. Integrity of the capping;
 - b. Ponding on the surface capping; and
 - c. Any visible hydrocarbons, debris or litter on the farm track shall be removed within 5 working days of the inspection.
17. Should water ponding, the formation of ruts or pitting, or cracking be observed in the track surface, repairs shall be made within five working days. Written documentation of inspections and repairs shall be kept and provided to the Canterbury Regional Council upon request.
18. Surface covering material over the demolition materials over the farm track shall be limited to low-permeability crushed limestone, or suitable low permeability equivalent (and the requisite crushed gravel layers).

19. The consent holder shall prepare and submit a written report to the Canterbury Regional Council by 30 April each year, providing information on inspections of farm track capping integrity and any repairs made to the capping.

Spills

20. The Consent Holder shall take all practicable measures to avoid spills of fuel or any other contaminant within the site. These measures shall include, but not be limited to:
- a. A written spill response plan shall be developed and incorporated into the SMP as required by Condition (5) of this consent.
 - b. No storage of fuel or refueling of vehicles and machinery within 20 metres of the bed of a river.
 - c. The consent holder shall ensure that a copy of written spill response plan is provided to any person undertaking activities authorised by this consent.
 - d. Cleaning up any spill of fuel or any other contaminant as soon as practicable in accordance with the written spill response plan, with any affected areas of the farm track and/or the vegetated infiltrative areas inspected and cleaned, and appropriate measures taken to prevent a recurrence.
21. Within 24 hours of a spill event, Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, shall be informed and provided the following information:
- i. The date, time, location and estimated volume of the spill;
 - ii. The cause of the spill;
 - iii. The type of contaminants spilled;
 - iv. Clean up procedures undertaken;
 - v. Details of the steps taken to control and remediate the effects of the spill on the receiving environment;
 - vi. An assessment of any potential effects of the spill; and
 - vii. Measures to be undertaken to prevent a recurrence.

Field Survey

22. The consent holder shall undertake a field survey of all down-gradient drinking water domestic wells located on the southern side of Coutts Island Road within one kilometre of the farm track, subject to gaining permission from the well owner to enter the property. The consent holder shall provide the results of this survey to the Canterbury Regional Council within six months of commencement of this consent.

Groundwater Monitoring

23. The consent holder shall carry out the following groundwater monitoring and sampling programme:
- a. The consent holder shall install a total of five monitoring wells, as shown in Plan CRC142337B within 6 months of the commencement of this consent. The location, and screening, of the monitoring wells shall be as follows:
 - i. One monitoring well shall be located as labelled "Up-Gradient Monitoring Well" in Plan CRC142337B;

- ii. One monitoring well shall be located as labelled “Down-Gradient Monitoring Well” in Plan CRC142337B;
- iii. Three monitoring wells shall be located equidistant along the southern side of the capped farm track as labelled “Monitoring Wells to be Installed within this Area” in Plan CRC142337B. The three monitoring wells shall be installed between the edge of the capped farm track and the stream bank; and
- iv. All five wells shall be screened between approximately 0.3 metres and 2 metres below ground level.

Advice Note: Land use consent from the Canterbury Regional Council to install monitoring wells will be required before the wells can be installed.

- b. Groundwater sampling from the wells established in accordance with Condition (23)(a) shall be carried out on the following occasions:
 - i. Quarterly for the first twelve months; and
 - ii. Thereafter, for the following four years, at least once between the months of:
 - June to August, inclusive; and
 - December to February, inclusive; and
 - iii. After the first five years of sampling carried out in accordance with Conditions 23(b)(i) and (ii), at least once every year during June to August for the remainder of the consent.
- c. In collecting the groundwater samples in accordance with Condition 23(b), the consent holder shall ensure that:
 - i. A representative sample of groundwater is taken using the low flow sampling technique (after ensuring the field parameters (pH, electrical conductivity and temperature) have stabilised) from all five wells referred to in Condition 23(a). The low flow sampling shall be carried out in accordance with Canterbury Regional Council Procedure EMG-G011-1 (dated 29-11-2013), attached to this consent;
 - ii. The samples are collected by a suitably qualified and experienced person in accordance with sampling standard AS/NZS 5667.11:1998; and
 - iii. Well water levels are recorded (relative to well cap levels surveyed to within +/- 5 millimetres) immediately before purging each well for sampling;
- d. The groundwater samples collected from the five monitoring wells shall be submitted within 48 hours to a laboratory accredited for that method of analysis by International Accreditation New Zealand (IANZ) and analysed for the following parameters:
 - i. Dissolved Arsenic;
 - ii. Dissolved Cadmium;
 - iii. Dissolved Chromium;

- iv. Dissolved Copper;
- v. Dissolved Lead;
- vi. Dissolved Mercury;
- vii. Dissolved Nickel;
- viii. Dissolved Tin;
- ix. Dissolved Zinc;
- x. Dissolved Manganese;
- xi. Dissolved Iron;
- xii. Dissolved Boron;
- xiii. pH;
- xiv. Total Hardness;
- xv. Conductivity; and
- xvi. Total Alkalinity.

Note: pH shall be measured in the field and the samples collected for metals shall be filtered at the time of collection into laboratory-supplied containers containing trace metal grade acid preservative.

24. Within 10 working days of receiving the groundwater sampling results collected in accordance with Condition 23(d), the consent holder shall:
- a. review the results from the five monitoring wells and compare the results to the following trigger levels:

Table 1: Groundwater Trigger Levels (in milligrams per litre unless otherwise stated)

Analyte	Trigger Level	
Dissolved Arsenic	0.01	
Dissolved Cadmium	0.004	
Dissolved Chromium	0.05	
Dissolved Copper	2	
Dissolved Lead	0.01	
Dissolved Mercury	0.007	
Dissolved Nickel	0.08	
Dissolved Tin	-	
Dissolved Zinc	1.5	
Dissolved Manganese	0.4	

Analyte	Trigger Level	
Dissolved Iron	0.2	
Dissolved Boron	1.4	
pH	6.0 - 8.5 pH units	
Hardness	200 as mg/L as CaCO ₃	
Conductivity	-	
Total Alkalinity	-	

- b. Should any of the concentrations in the sampled groundwater be higher (lower for pH) than the Trigger Level identified in Condition (24)(a), in any one or more of the three monitoring wells located adjacent to the farm track and the down-gradient well **and** be more than a “significant change” from the concentrations in the up-gradient well **and** subject to confirming the results with the analytical laboratory, the consent holder shall within 48 hours of receiving the confirmed laboratory results:
- i. Notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager;
 - ii. In consultation with CRC, agree upon and undertake all practicable measures to determine whether the exceedance(s) are attributable to discharges from the demolition material placed within the farm track or they are arising from up-gradient sources, existing on-site sources, natural or seasonal variations and / or laboratory limitations;
 - iii. Undertake an assessment of the potential adverse effects on groundwater quality associated with the exceedance(s);
 - iv. Sample any shallow drinking water well (i.e. installed to less than 20 metres below ground level) identified in accordance with Condition (22), for the parameters listed in Condition 24(a) above, subject to gaining permission from the well owner to enter the property. Any samples collected from these wells shall be analysed to determine compliance with the maximum acceptable values or guideline values in the Drinking Water Standards 2005 (revised 2008), by a laboratory accredited for that method of analysis by International Accreditation New Zealand (IANZ); and
 - v. The results of any assessment undertaken in accordance with this condition, and any recommended mitigation measures (including timeframes for implementation), are to be provided to the Canterbury Regional Council within two months of receiving the verified laboratory results.

Note: For the purposes of the conditions, a “significant change” shall mean a change of more than 15 percent for trigger levels that have a value greater than 3, or 100 percent for trigger values that have a value of less than or equal to 3. Furthermore the application of the “significant change” assessment would only be triggered:

– in the event where analyte concentrations in the monitoring wells adjacent to the track and at the down-gradient monitoring well exceed 50% of the respective trigger value; and

- where higher concentrations (lower for pH) are measured in the monitoring wells adjacent to the track and at the down-gradient monitoring well compared with the up-gradient well.

25. The consent holder shall provide an annual report to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager documenting the monitoring that has been undertaken and the results obtained in accordance with Conditions (23) and (24).

Iwi Reporting and Consultation for Groundwater Monitoring

26. The consent holder shall provide Te Rūnanga o Ngāi Tahu and Tuāhūriri Runanga:
- a. A copy of the annual report proposed in accordance with Condition (25) and the results of any other compliance monitoring;
 - b. Opportunities to discuss the monitoring and results contained within the annual report provided, and to convey any concerns arising from the monitoring and results contained within the annual report; and
 - c. Opportunities to be involved in any potential actions proposed or required as a result of the conclusions drawn from the monitoring data and results contained within the annual report.

Mitigation Measures

27. If contaminant concentrations at any drinking water supply well sampled in accordance with Condition (24)(b)(iv) are determined to have breached the maximum acceptable values or guideline values in the New Zealand Drinking Water Standards 2005 (revised 2008), the consent holder shall implement the following measures:
- a. Notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager and the owners and users of all domestic supply wells located on the southern side of Coutts Island Road within 1 kilometre of the farm track, in accordance with Condition (22);
 - b. Undertake an assessment to determine whether the elevated concentration is likely to be due to the farm track or some other explanation such as up-gradient sources, nearby activities other, natural or seasonal variations, or laboratory limitations;
 - c. If the assessment indicates that the farm track is the most likely cause of the exceedance the following measures shall apply:
 - i. Notify the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager and the owners and users of all domestic supply wells within 1 kilometre of the of the farm track; and
 - ii. In agreement with Canterbury Regional Council, implement measures to reduce the contamination to an acceptable level. These measures shall include, but not be limited to:
 - Removal of any problematic waste material; and/or
 - Provision of a treatment system to remove the contaminant; and/or
 - Provision of a replacement water supply, which may include a temporary water supply until the breach of the Drinking Water Standards is rectified, or a permanent replacement supply such as drilling a deeper well, to achieve a water source of sufficient quantity and quality to replace the previously used supply wells.

Aquatic Ecology Monitoring Programme

28. The consent holder shall prepare and carry out an Aquatic Ecology Monitoring Programme (AEMP). No less than 20 working days after the commencement of this consent, the consent holder must submit a copy of the AEMP to the Canterbury Regional Council: RMA Compliance and Enforcement Manager for review and certification.

Unless the Canterbury Regional Council provides notice in writing that it is unable to certify the AEMP, the AEMP may be deemed to be approved within 20 working days of it having been provided to Canterbury Regional Council.

For the purposes of this condition, "Certification" means that the AEMP contains all information specified in Condition (29).

29. The AEMP shall include, but not be limited to the following:
- a. Development of sampling site selection, including multiple upstream and downstream control points. Sites are to be selected with consideration of maintaining stream morphology comparability between sites;
 - b. Development of a site monitoring plan;
 - c. Ecological sampling of macro invertebrates will be undertaken in accordance with protocol C3 from Stark et al (2001) with the sampling undertaken during spring and late summer/autumn;
 - d. Assessment of in-stream and riparian / bankside habitat condition will be undertaken and closely follow national protocols (e.g. Biggs and Kilroy, 2000; Clapcott et al, 2011 and Harding et al, 2009) with sampling occurring at the same time as the macro invertebrate sampling. The characteristics collected include but not limited to:
 - Sedimentation (aerial cover and average depth);
 - Substrate composition and compactness;
 - Periphyton composition and diversity;
 - In-stream characteristics (e.g. water depth, reach habitat, flow obstructions); and
 - Riparian and bankside features;
 - e. Standard in-field physical water quality parameters are to be collected at each site, during each site visit. These include but are not limited to:
 - dissolved oxygen (% saturation and mg/L);
 - conductivity ($\mu\text{S}/\text{cm}$);
 - clarity;
 - pH; and
 - temperature ($^{\circ}\text{C}$);
 - f. Sampling shall be undertaken at each of the sites selected as part of the site monitoring plan in Condition (29)(a);
 - g. Macro invertebrate samples are to be sorted and identified by a suitably qualified taxonomist, in accordance with protocol P3 from Stark et al (2001);
 - h. Macro invertebrate and habitat results are to be investigated with appropriate data analysis undertaken by a suitably qualified ecologist (e.g. multivariate statistical analysis);
 - i. Trigger thresholds are to be developed, in consultation with the Canterbury Regional Council, and the results of the sampling are to be assessed against these thresholds. Community composition is to be considered in the threshold analysis using ordination and multivariate analysis; and
 - j. Development of a response action to evaluation of monitoring data. This may include but not be limited to removal of the farm track, removal of the instream-sediment and/or further remediation and enhancement of the wider stream habitat.

30. If the trigger thresholds developed as part of the AEMP in Condition (29)(i) are exceeded, then the consent holder shall implement the appropriate response action as defined in the AEMP.
31. The consent holder shall provide an annual report to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, documenting the monitoring that has been undertaken and the results obtained in accordance with Conditions (28) and (29).
32. The consent holder shall provide Te Rūnanga o Ngāi Tahu and Tuāhūriri Rūnanga:
 - a. A copy of the annual report proposed in accordance with Condition (31) and the results of any other compliance monitoring;
 - b. Opportunities to discuss the monitoring and results contained within the annual report provided, and to convey any concerns arising from the monitoring and results contained within the annual report; and
 - c. Opportunities to be involved in any potential actions proposed or required as a result of the conclusions drawn from the monitoring data and results contained within the annual report.

Bond

33. The consent holder must, within 3 months of the commencement of this consent, enter into a bond with a registered trading bank of New Zealand, to be provided as surety to the satisfaction of the Canterbury Regional Council. The purpose of the bond is to secure performance with the conditions of this consent.
34. The bond is to be for the sum of \$800,000 and is to be in the form of a bank bond.
35. The term of the bond is to continue for a period of ten years after the expiry of the consent, unless the bond is replaced by an equivalent bond.
36. If the consent is transferred in part or whole to another party or person, the bond is to continue until any outstanding work at the date of transfer is completed to ensure compliance with the relevant conditions of this consent, unless the Canterbury Regional Council is satisfied that adequate provisions have been made to transfer the liability to the new consent holder.

Advice Note: The bond required by Conditions (33) to (36) above will apply to both Land Use Consent CRC142335 and Discharge Permit CRC142337. Under Land Use Consent CRC142335, the corresponding Conditions are (31) to (34). For clarification, it is not intended that a separate bond be entered into for each consent, but that the one bond covers both resource consents.

Administrative

37. The Canterbury Regional Council may on the last working day of May or November each year, serve notice of its intention to review the conditions of this consent for the purposes of:
 - a. Dealing with any adverse effect on the environment which may arise from the exercise of 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; or
 - c. Complying with the requirements of a relevant rule in an operative regional plan; or

- d. Any exceedance of the trigger values for surface and ground water specified out in this consent
38. The lapsing date for the purposes of section 125 of the Resource Management Act 1991 is to be five years from the date commencement of the consent.



TITLE | CRC142337A

FEBRUARY 2015

PROJECT | 1278104893

