

CRC102332 Discharge contaminants and water during construction

This application is an amalgamation of applications CRC061871, CRC061873 and CRC061920 and covers construction phase discharges. Duration 15 years.

Limits

1. The discharge shall be only sediment laden water associated with the construction of the Inlet Canal, Headrace Canal and Water Distribution Network, located within the Scheme Area as shown on Plan CRC102332 which forms part of this consent.
2. Where practicable all discharges of sediment laden water shall be directed onto vegetated land.
3. Where it is not practicable to discharge sediment laden water onto land the discharge into surface water shall be only into the following water bodies:
 - (a) Surface water bodies listed in Schedules B.1 and B.2;
 - (b) The Rakaia River; and
 - (c) The Waimakariri River.
4. ~~Discharges of sediment laden water shall flow across vegetated land prior to discharging into a surface water body.~~
5. This consent is subject to the general conditions listed in Schedule 1: General Conditions, and Schedule 2: Administrative Conditions

Pre-construction

6. The consent holder shall ensure that all personnel working on the site are made aware of and have access to the contents of this consent document and all associated erosion and sediment control plans and methodology.
7. The consent holder shall inform Environment Canterbury in writing, Attention: RMA Compliance and Enforcement Manager, at least ten days prior to the commencement of work on each new stage of development.
8. Prior to commencement of works the consent holder or its agent shall arrange and conduct a pre-construction site meeting between the Canterbury Regional Council and all relevant parties, including the primary contractor. At a minimum, the following shall be covered at the meeting:
 - (a) Scheduling and staging of the works;
 - (b) Responsibilities of all relevant parties;
 - (c) Contact details for all relevant parties;
 - (d) Expectations regarding communication between all relevant parties;
 - (e) Procedures for implementing any amendments;
 - (f) Site inspection; and
 - (g) Confirmation that all relevant parties have copies of the contents of this consent document and all associated erosion and sediment control plans and methodology.

Erosion and Sediment Control Plans (ESCP)

9. The consent holder shall prepare an Erosion and Sediment Control Plan (ESCP) which shall outline the measures which will be taken to ensure compliance with Condition (24). This ESCP shall include but not be limited to:

- a. A map showing the location of all works;
- b. Details of any work staging;
- c. An outline of the erosion and sediment control measures to be used including measures to treat water using chemicals;
- d. Detailed plans showing the location of sediment control measures, onsite catchment boundaries, and sources of runoff for each work stage or sub-stage;
- e. A programme of works, which includes but is not limited to, a proposed timeframe for the works;
- f. A programme for the inspection and maintenance of the sediment control measures.

10. The ESCP shall be prepared in accordance with the Environment Canterbury, 2007 "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No. CRC R06/23.

~~11. Erosion and sediment control measures during the construction of the site shall consist of but not be limited to the following:~~

~~12. Silt fences;~~

~~13. Diversion channels;~~

~~14. Earth bunds;~~

~~(d) 11. Directing sediment laden water to grassed areas.~~

Certification

12. The ESCP and any amendments to the ESCP shall be certified by a suitably qualified and experienced engineer as being:

- (a) adequate to achieve the performance standards outlined in Condition (24); and
 - (b) consistent with the conditions of this consent;
- prior to any discharge authorised by this consent occurring.

13. The ESCP, along with any certification required under Condition (12), shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, at least ~~one month~~ 10 working days prior to construction commencing.

14. The ESCP may be amended at any time. Any amendments shall be:

- (a)
 - (i) For the purpose of improving the efficacy of the erosion and sediment control measures; or

(ii) For the purposes of reducing the erosion and sediment control measures as appropriate based on completion of works; or

~~(iii)~~ (iii) For the purpose of adding details of a future work stage;

and

- (b) Consistent with the conditions of this resource consent; and
- (c) Submitted in writing to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, prior to any amendment being implemented.

General

~~15. During construction, all practicable measures shall be undertaken to minimise discharges of sediment laden runoff off site.~~

~~16. Construction shall be staged such that progressive stabilisation works can be carried out.~~

~~21. Discharges from bulk earthworks greater than 5,000 square metres in area shall be via either decanting earth bund or sediment detention pond designed in accord with Environment Canterbury, 2007 "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No. CRC R06/23, but decanting earth bunds shall have the following exceptions:~~

~~22. the length to width ratio shall be three to one; and~~

~~(b) 17. the device shall have a floating decant instead of a snorkel upstand.~~

~~18. No cut vegetation, debris, or any other excavated material, shall be placed in a position such that it may move into a surface water body.~~

~~19. All exposed surfaces shall be stabilised once earthworks are complete. or if the exposed area is not to be earthworked for a period of 14 days or more. Stabilised: means an area inherently resistant to erosion such as rock (excluding sedimentary rocks), or rendered resistant to erosion by the application of aggregate, geotextile, vegetation or mulch. Where vegetation is to be used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once 80 percent vegetation cover has been established.~~

~~20. Erosion and sediment control measures implemented under the ESCP shall be constructed and maintained in accordance with the Environment Canterbury, "Erosion and Sediment Control Guidelines for the Canterbury Region" Report No. CRCR06/23, February 2007 (ESCG).~~

21. If the consent holder abandons work on-site, it shall first take adequate preventative and remedial measures to control sediment discharges, and shall thereafter maintain those measures for so long as necessary to prevent sediment discharges from the site.

Water Treatment Using Chemicals

~~28. Prior to the commissioning of chemical treatment, the consent holder shall provide the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager with a Chemical Treatment Plan (CTP). The CTP shall include, but not be limited, the following information:~~

~~29. Specific design details of the flocculation system;~~

~~30. Monitoring, maintenance (including post-storm) and contingency programme (including a Record Sheet);~~

~~31. Details of optimum dosage (including assumptions);~~

~~32. Results of the initial flocculation trial;~~

~~33. A spill contingency plan;~~

~~(f) 22. Details of the person or bodies who will hold responsibility for long term maintenance of the flocculation treatment system and the organisational structure which will support this structure. Any amendments to the CTP shall be provided to the Manager, in writing, prior to implementation.~~

~~23. Water treatment chemicals shall be applied in accordance with product specifications and the methods described in the Auckland Regional Council, Technical Publication #227 Flocculation Guideline.~~

Performance Standard

24. The discharge associated with this consent shall not cause a change in turbidity of more than 20 percent in the receiving water body beyond the zone of non-compliance. The zone of non-compliance shall be calculated as: ~~length of the zone (in metres) is equal to~~

~~the square root of the width of the flow of the receiving waterway at the point of discharge~~the square root of the lowest river discharge (flow) (measured in cubic metres/second) over a continuous seven day period with Annual Exceedence Probability of 10% (7 day 10 year low flow), multiplied by a factor of 80.

Monitoring

25. ~~The consent holder shall ensure that all erosion and sediment control measures are inspected each working day while any earth remains disturbed or otherwise un stabilised.~~
26. If any storm event results in water discharging from the sediment pond(s) or decanting earth bund(s), the consent holder shall, within two hours (if safe and practicable), undertake water turbidity measurements upstream and downstream of the zone of non-compliance to determine whether there has been a conspicuous increase in turbidity.
- (a) Water turbidity shall be measured using a calibrated turbidity meter.
 - (b) Water turbidity measurements shall be undertaken by a suitably qualified person.
 - (c) A conspicuous increase shall be defined as an increase in turbidity of twenty percent or higher at the downstream monitoring site.
27. In the event that there is a conspicuous increase in water turbidity measured in accordance with Condition (26) the applicant shall:
- (a) Identify the cause of the elevated suspended sediment concentrations; and
 - (b) Identify and undertake mitigation and actions to prevent further exceedances.
28. Written records of all inspections and visual monitoring shall be kept, along with copies of all photographs taken. All records and photographs shall be provided to the Canterbury Regional Council upon request.

Spills

29. There shall be no refuelling of vehicles and machinery within 50 metres of any surface water body.
30. The consent holder shall take all practicable measures to avoid spills of fuel or any other hazardous substance within the site.
- (a) In the event of a spill of fuel or any other hazardous substance, the consent holder shall clean up the spill as soon as practicable, inspect and clean the stormwater system and take measures to prevent a recurrence.
 - (b) The consent holder shall inform the Canterbury Regional Council within 24 hours of a spill event, and shall provide the following information:
 - (i) The date, time, location and estimated volume of the spill;
 - (ii) The cause of the spill;
 - (iii) The type of hazardous substance(s) 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.

Decommissioning

31. ~~Erosion and sediment control measures shall not be decommissioned until the site is stabilised.~~

~~32. Decommissioning shall be only undertaken when dry weather is forecast for a period suitable to allow decommissioning to be carried out without rainfall occurring.~~

~~45. The following decommissioning measures shall be undertaken in the following order:~~

~~46. All disturbed areas shall be stabilised and/or re-vegetated as soon as practicable following completion of the works;~~

~~47. Any visible debris, litter, sediment and hydrocarbons shall be removed from all sediment control measures; and~~

~~(c) 33. Erosion and sediment control measures in accordance with the ESCP shall be removed.~~

Administration

34. The Canterbury Regional Council may, once per year, on any of the last five days of April or October, serve notice of its intention to review the conditions of this consent for the purposes of:

- (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
- (b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
- (c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

35. The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 8 years from granting of consent.

CRC102334 Discharge stormwater which may contain contaminants onto or into land and into water

This application is an amalgamation of CRC061922, CRC061945, CRC061924 and CRC061983. Duration 35 years.

Limits

- (1) The discharge shall be only stormwater from all structures and impervious areas associated with the Central Plains Water Enhancement Scheme (the scheme), including but not limited to:
 - (a) Temporary and permanent access tracks;
 - (b) The roofs of temporary and permanent buildings;
 - (c) Fuel storage areas; and
 - (d) Permanent and temporary hardstand areas.

located within the Scheme Area as shown on Plan CRC102334.

- (2) The discharge shall be either:
 - (a) onto or into land; or
 - (b) into surface water
- (3) All fuel shall be stored within a sealed bund with a capacity of at least 110 percent of the volume of fuel stored.

Stormwater system

(4) A stormwater management plan, encompassing stormwater treatment and disposal mechanisms for the scheme, shall be prepared by a suitably qualified and experienced professional as being:

(a) adequate to achieve the performance standards as outlined in condition 14 of this consent; and

(b) consistent with the conditions of this consent;

prior to any discharge authorised by this consent occurring.

(4)(5) Preference shall be given to the following forms of stormwater treatment where appropriate and practicable: All stormwater discharges shall be treated as follows:

- (a) Discharge of Sstormwater from access tracks ~~shall be discharged~~ across vegetated land.
- (b) Discharge of Sstormwater from temporary buildings ~~shall discharge~~ directly onto land via adjacent vegetated areas.
- (c) Discharge of Rroof stormwater from permanent buildings ~~shall discharge~~ into land via soak pits via a sealed system that excludes all other stormwater.

- (d) Discharge of ~~Any~~ stormwater from temporary hardstand ~~areas shall be discharged~~ across vegetated land.
- (e) Discharge of ~~S~~ stormwater from permanent hardstand areas ~~shall discharge~~ into land via vegetated infiltration basins.
- (f) Stormwater collected from within fuel storage bunds shall be trucked from the site and disposed of at a facility authorised to receive such materials.

~~(5) Each soak pit shall:~~

~~(6) Be designed in accordance with the New Zealand Building Code method E1/VM1;~~

~~(7) Have at least one metre separation between the base and the highest seasonal groundwater level at the soak pit location; and~~

~~(c)(6) Have the base sunk into free-draining gravels.~~

~~(6)(7) Any land which receives a discharge of stormwater shall be uniformly vegetated with grass or groundcover vegetation.~~

~~(10) All infiltration basins or other stormwater retention/disposal devices shall:~~

~~(11) Be~~ designed and constructed to have sufficient capacity to contain and infiltrate stormwater runoff from all events up to and including a 20 percent Annual Exceedance Probability (20% AEP) event of any duration;

~~(b) Be lined with a layer of sandy loam at least 150 millimetres thick;~~

~~(c) Be uniformly vegetated with grass; and~~

~~(d)(8) Have at least one metre separation distance between the base and the highest seasonal groundwater level at the site.~~

~~(8)(9) Stormwater shall not pond in the stormwater system for longer than three days after the cessation of any storm event.~~

~~(9)(10) The discharge shall not cause scour, erosion and/or instability to the bed or banks of any surface waterway.~~

~~(10)(11) Within 20 working days of the installation of any infiltration basin, a as-built plans ~~certificate signed by a Chartered Professional Engineer (CPEng) with stormwater system construction experience~~ shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, to certify that the stormwater system complies with Conditions (6) and (7) of this consent. ~~This CPEng shall also sign a statement confirming that they are competent to certify the engineering work~~~~

Inspections and Maintenance

~~(11)(12) An inspection of the stormwater system shall be carried out at least once every six months.~~

- (a) Any visible hydrocarbons, and debris or litter shall be removed within ten working days of the inspection.
- (b) Any accumulated sediment in the stormwater system shall be removed within ten working days of the inspection.

- (c) Any scour or erosion shall be repaired within [five/ten] working days of the inspection.

~~(12)~~(13) ~~The infiltration basins and a~~ Any vegetated land that receives stormwater discharge and uses vegetation as a stormwater treatment mechanism shall be:

- (a) Maintained so that vegetation or grass is in a healthy and uniform state.
(b) Replanted where erosion or die-off has resulted in bare or patchy soil cover.

~~(13)~~(14) A management plan detailing the design, operation and maintenance of the stormwater system shall be developed for the site or stage of works within the scheme to which the stormwater system relates. The management plan shall be submitted to Canterbury Regional Council prior to the use of the system and a copy shall also be held by the consent holder, along with a copy of this consent.

Performance Standards

~~(14)~~(15) The consent holder shall ensure that the discharges to surface water do not, at any time, result in:

- (a) The production of oil or grease films;
(b) The production of floatable or suspended materials; or
(c) A significant increase in the turbidity beyond the zone of non-compliance. A significant increase shall be defined as a change greater than 20 percent as measured using a calibrated turbidity meter. The zone of non-compliance shall be calculated as: the square root of the lowest river discharge (flow) (measured in cubic metres/second) over a continuous seven day period with Annual Exceedence Probability of 10% (7 day 10 year low flow), multiplied by a factor of 80. ~~length of the zone of non-compliance (in metres) is equal to the square root of the width of the flow of the receiving waterway at the point of discharge (measured in metres).~~

Spills

~~(15)~~(16) The consent holder shall take all practicable measures to avoid spills of fuel or any other hazardous substances within the site.

- (a) In the event of a spill of fuel or any other hazardous substances, the consent holder shall clean up the spill as soon as practicable, inspect and clean the stormwater system and take measures to prevent a recurrence;
(b) The consent holder shall inform the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager, within 24 hours of a spill event and shall provide the following information:
(i) The date, time, location and estimated volume of the spill;
(ii) The cause of the spill;
(iii) The type of hazardous substance(s) 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.

Administration

| ~~(16)~~(17) This consent is subject to the general conditions listed in Schedule 1: General Conditions, and Schedule 2: Administrative Conditions.

| ~~(17)~~(18) The Canterbury Regional Council may, once per year, on any of the last five days of April or October, serve notice of its intention to review the conditions of this consent for the purposes of:

- (a) Dealing with any adverse effect on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage; or
- (b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
- (c) Requiring the consent holder to carry out monitoring and reporting instead of, or in addition to, that required by the consent.

| ~~(18)~~(19) The lapsing date for the purposes of section 125 of the Resource Management Act 1991 shall be 8 years from granting of consent.