

23rd March 2010

## MEMORANDUM

**FROM :** HELEN CALEY

**TO :** COMMISSIONERS  
CC

**SUBJECT:** CENTRAL PLAINS WATER – CONSENTS FOR DISCHARGE OF STORMWATER  
AND DISCHARGE OF SEDIMENT LADEN WATER DURING CONSTRUCTION  
PHASE.

Ms Helen Shaw has provided comment on the draft conditions proposed by Environment Canterbury for the consents for the discharge of sediment laden water during the construction phase, and the discharge of stormwater from structures and impervious areas associated with the scheme. Ms Shaw has suggested changes to a number of the conditions proposed by Environment Canterbury.

### **CRC102332 AND CRC102333 – DISCHARGES OF SEDIMENT LADEN WATER DURING CONSTRUCTION**

The applicant disagrees with the inclusion of conditions which refer to specific actions or processes that must be carried out. The applicant's preferred approach is to state that erosion and sediment control be carried out in accordance with Environment Canterbury's Erosion and Sediment Control Guidelines, with performance standards and monitoring requirements to provide an aim for the erosion and sediment control plans.

I agree with the applicant that with a scheme of this size flexibility is required in the development and implementation of erosion and sediment control plans. In recognition of this Environment Canterbury has not required an erosion and sediment control plan be submitted up front, which is standard practice with large and high risk sites. A condition has also been included which allows the erosion and sediment control plan to be changed if necessary (Condition 14).

Given the scale of the scheme, the fact that construction will be ongoing for a long period of time, and the potential for discharge into waterways (some of which may have high ecological or amenity values) it is extremely important that the conditions that are in place are stringent enough to minimise the effects on the environment.

I have addressed the applicant's comments below, using the numbering of the conditions as recommended by Environment Canterbury.

Many of the conditions proposed, such as 15, 17, 18, 19, 21, 25, 30, 32 and 33 set out overarching concepts for the works rather than details of treatment measures, and are best practice measures drawn from best practise guidelines such as Environment Canterbury's Erosion and Sediment Control Guideline. These conditions set a bottom line for the actions that should be carried out to protect the environment, particular surface water bodies, from the adverse effects of the discharge.

- Condition 4 – The applicant has requested that this condition be removed. Discharging sediment laden water over grassed areas where practicable is best practice and will reduce the amount of sediment discharged into surface waterways. However I recognise that it may not always be possible to do this. Therefore I recommend that the condition be re-worded as follows:

(4) Where practicable discharges of sediment laden water shall flow across vegetated land prior to discharging into a surface water body.

- Condition 11 – I agree that this condition may be removed.
- Condition 12 – If detail is not to be included in the conditions of the consent I suggest that the requirement for the plan to be certified by a suitably qualified person be changed to the following:

(5)

(a) The ESCP and any amendments to the ESCP shall be certified by a suitably qualified and experienced engineer considered by the Canterbury Regional Council to have suitable experience in the design of erosion and sediment control measures as being:

- (i) adequate to achieve the performance standards outlined in Condition (25); and
- (ii) consistent with the conditions of this consent;

(b) At least 15 working days prior to submitting certification, the consent holder shall submit the relevant biographical information on the proposed chartered professional engineer (CPEng) to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.

(6) Within 10 working days of receipt of the information, the Canterbury Regional Council shall inform the consent holder if the person is considered to be unsuitable because of (i) qualifications, (ii) level of experience, and/or (iii) conflicts of interest, and provide reasons and justifications in writing.

(7) If the Canterbury Regional Council considers that the person is unsuitable the consent holder shall either satisfy the Council that the person is suitable or shall propose another chartered professional engineer (CPEng).

(8) Works shall not proceed until the Canterbury Regional Council confirms that the person is suitable. However, if no response is provided by the Canterbury Regional Council within 10 working days of receipt of the biographical information, the person shall be deemed to be suitably experienced.

This will provide certainty for Environment Canterbury that the plan has been certified by an appropriate person.

- Condition 13 – The applicant has requested that they be allowed to submit erosion and sediment control plans within 10 working days of the start date of the works, rather than one month. The applicant has suggested that 10 days may be more appropriate for small sites, but that one month would be appropriate for reviewing the overall guideline document. I agree that ten days may be appropriate for smaller sites, however given the scale of this project I do not consider it to be practicable for Environment Canterbury to receive the plans within the shorter timeframe. I note that erosion and sediment control plans have not been requested for each stage of the scheme, so the plan submitted will most likely be the overarching plan for the entire scheme.

- Condition 14 – The applicant has suggested that a new clause be added. As it is currently worded this clause is not certain, because it is unclear what "appropriate" measures would be, or how erosion and sediment control measures could be reduced. I consider that this clause can be covered under decommissioning requirements within the erosion and sediment control plan.
- Condition 16 – I agree that this condition can be removed.
- Condition 17 – The applicant has requested that this condition be removed. The intention of this condition is to ensure that sediment laden water from large areas of open ground is treated adequately. The condition could be re-worded to require that 75% of sediment is removed from discharges from areas greater than 5,000 square metres.
- Condition 20 - I note that, because of the removal of my proposed Condition 20 the conditions as currently proposed by the applicant only require that an erosion and sediment control plan be created, but do not require that works be carried out in accordance with either the erosion and sediment control plan or Environment Canterbury's erosion and sediment control guidelines. Should the applicant's approach to this set of conditions be preferred by the commissioners I recommend that my proposed Condition 20 or a condition with similar wording be placed on the consent.
- Conditions 22 to 24 – The applicant has requested that these conditions be removed. Because there is no guidance regarding the use of flocculation chemicals in the Erosion and Sediment Control Guideline I recommend these conditions be retained.
- Condition 25 – The applicant has requested a change to the way the zone of non-compliance is calculated. Changing to the method the applicant has proposed will be consistent with the other consents for this project, however I agree that the units for the calculation will have to be agreed. I also note that the calculation is based on a 7 day 10 year low flow, and this data may not be available for all waterways involved in the works.
- Conditions 25, 27, 28 – The applicant has suggested that monitoring of some rivers may not be able to be carried out in high flow conditions as it may be too dangerous. I agree that the condition may be modified so that monitoring need not be carried out if it is dangerous, however I do not agree with removing monitoring requirements during high flow. I suggest that the requirement to measure turbidity be changed to a requirement to measure clarity. This can be done using a clarity tube and could be done from a distance without compromising safety.
- Condition 26 – The applicant has requested that this condition be removed. I note that the conditions do not currently require that erosion and sediment control measures be maintained, except as it will affect the achievement of the performance standard.
- Condition 33 – I agree that this condition may be removed.

I agree with the applicant that any changes made to CRC102332 should also be made to CRC102333 as the same conditions are contained in both consents.

**CRC102334 – DISCHARGES OF STORMWATER FROM STRUCTURES AND IMPERVIOUS AREAS ASSOCIATED WITH THE CENTRAL PLAINS WATER SCHEME.**

In their draft conditions the applicant initially proposed specific measures to be used to treat discharge from each kind of surface (eg. roofs, hardstand, tracks), which was my reason for specifying the measures to be used in Condition 3. If the applicant now wishes to have more freedom over which treatment measures are used in different situations a "template" approach could be taken, with the conditions listing a number of treatment measures that could be used to treat stormwater discharged from any site. I recommend this approach over the use of a stormwater management plan as proposed by the applicant. This provides a bottom line for treatment and gives certainty that best practice measures will be used.

I agree with the applicant that there are no Ecan specific best practise guidelines for constructing stormwater systems. Therefore if the "template" approach is taken I recommend that the important design criteria and maintenance requirements for each treatment device be set out in the consent as they are in Conditions 4 to 8, 10, and 11 of my proposed conditions.

- Condition 3 - I note that my Condition 3 as revised by the applicant (Condition 5 as re-numbered by the applicant) is not certain or enforceable.
- Condition 11 – The wording I originally proposed is frequently used by Environment Canterbury and has been agreed upon with IPENZ. I see no reason to change this condition. I also note that because there are no design standards within the conditions as proposed by the applicant there is nothing for Environment Canterbury to certify as-built plans against.
- Condition 13 – As noted above, I agree that the calculation of the zone of non-compliance can be changed but the units need to be agreed upon, and 7 day 10 year low flow data may not be available for all waterways involved in the works.

Ms Shaw's evidence indicates that vegetation is not required in infiltration basins. Environment Canterbury currently recommends vegetation in infiltration basins for treatment purposes, but we would be happy to review any information which indicates this is not necessary.