

IN THE MATTER OF the Resource Management Act
1991

AND

IN THE MATTER OF applications by Central Plains Water
Trust to:

Canterbury Regional Council for
resource consents to take and use
water from the Waimakariri and
Rakaia Rivers and for all associated
consents required for the
construction and operation of the
Central Plains Water Enhancement
Scheme

Selwyn District Council for resource
consents to construct and operate
the Central Plains Water
Enhancement Scheme

AND

IN THE MATTER OF a notice of requirement by Central
Plains Water Limited to:

Selwyn District Council for the
designation of land for works
associated with the construction and
operation of the Central Plains
Water Enhancement Scheme

**RESPONSE OF ANDREW WHALEY
TO S42A OFFICER'S REPORT
22 February 2008**

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Qualifications and experience

1. My full name is Andrew Mark Whaley, and the basis on which I am preparing this brief is set out in my previous evidence for this hearing.

Scope of Evidence

2. The following is my response to section 42A Officer's Report. This response is limited to the sections of the Officers' report that relate to traffic impact assessment as produced by Nigel Williams of ViaStrada Ltd. The content of the report is consistent in most respects to that of the CPW traffic assessments and as such will not be discussed in detail. However the proposed conditions in the section 42A Officer's Report are either not applicable or require amendment to be practical, and as such I will respond to the report by discussing the specific conditions.

SDC S42A OFFICER REPORT

For ease of reference, the conditions below are as per the section 42A Officer's Report. The bold text denotes an amended or replaced condition.

3. *Condition T1 (Permanent Works) No canal cleanings shall be deposited on legal road or in a position where such material may be carried onto legal road by vehicle tyres, stormwater flows, wind or any other mechanism.*

Condition is acceptable.

4. *Condition T2 (Construction) All on and off-road vehicles and self-mobile above-ground plant involved with the construction works shall be maintained to ensure that they meet the Land Transport (Road User) Rule 7.5 (Emission of smoke and vapour from motor vehicles) at all times.*

The RMA does not cover vehicle emissions which are adequately covered by other legislation. The condition is therefore not appropriate.

5. *Condition T3 (Construction). The applicant shall prepare a vehicle maintenance plan which shall be submitted to the Council prior to works commencing. This plan shall outline the maintenance strategy to be followed by operators in relation to all heavy commercial vehicles used on and off road over the duration of the project. This plan is to ensure that the engines and associated emissions control equipment of all such vehicles are maintained in the best possible state of that will minimise fuel use and emissions throughout the project. The applicant shall maintain a register of all such*

maintenance efforts, and this shall be available if requested by the consent authority at any time.

Again, the RMA does not cover the management of vehicle emissions and the condition is therefore not appropriate.

6. *Condition T4(Construction) Where emission control equipment is fitted to the engine of any vehicle or self-mobile plant by the manufacturer the engine shall be configured to use this equipment in the manner set up when the vehicle was certified for entry into New Zealand.*

Again, the RMA does not cover vehicle emissions and the condition is therefore not appropriate.

7. *Condition T5 (Construction) The applicant shall operate the newest vehicles, built to the highest emission standards in areas where there are people nearby and especially around public facilities such as schools and hospitals or where the emissions may otherwise affect nearby residences.*

The application of this condition is not practical and is an unnecessary way to achieve the desired outcome. Additionally, the RMA does not cover vehicle emissions and it is therefore not appropriate.

8. *Condition T6 (Construction) Traffic management measures shall consider the issue of residential amenity arising from the passage of traffic through any living zone (particularly in the vicinity of commercial areas, schools, hospitals, and accommodation for the elderly) and where practicable construction traffic shall be directed to take alternative roads where the impact on amenity will be less.*

Condition is acceptable.

9. *Condition T7 (Permanent works) On State Highways and District roads Road Condition Surveys shall be carried out of all road sections that lie within 250m of any waterway. These shall record the 'before' condition of the road prior to the waterways being first flooded. The specific matters to be included in these surveys will be determined by the representative Road Controlling Authorities.*

Amend condition to read:

Condition T7 (Permanent works) On State Highways and District roads, Road Condition Surveys shall be carried out of all road sections where the Road Controlling Authority has assessed that there is a reasonable possibility of the road being affected by the proximity of scheme waterways. These shall record the 'before' condition of the road prior to the scheme waterways being first filled with water. The specific matters to be included in these surveys will be determined by the representative road controlling authorities but will be limited to aspects potentially affected by the scheme.

It would not be appropriate for a 'before' survey to include items not affected by the scheme that would be routinely inspected under a 'traditional' condition survey. E.g. road marking or sign cleanliness.

10. *Condition T8 (Permanent Works) Each year at any time between the 1st of September and 31st October the Road Controlling Authority may request that the consent holder carries out a further Road Condition Survey of no more than 20% of the network covered by the 'before' survey. Where any defects are found to be attributable to water effects arising from the operation of the scheme then the consent holder shall make good the defects and take all reasonable measures to ensure that further damage does not arise.*

Amend condition to read:

Condition T8 (Permanent Works) Where any defects in the road sections surveyed as required by condition T7, are found to be attributable to water effects arising from the operation of the scheme, then the consent holder shall make good the defects and take all reasonable measures to ensure that further damage does not arise.

The Road Controlling Authorities already, and will continue to do so, routinely inspect all roads potentially affected by the scheme. It would be a needless duplication of effort to require an arbitrary inspection by the consent holder. Where a defect or potential defect is identified as potentially being as a result of the scheme it is appropriate for the applicant to then undertake additional investigations and if appropriate, actions.

11. *CONDITION T9 (Construction). On District roads the consent-holder and a representative of the Council shall carry out Road Condition Surveys in the vicinity of all on-road worksites and also near off-road worksites where on-road traffic management is required or access to the site is to be from a road. These surveys shall be completed at each worksite before any work commences, and the 'after' survey will be completed prior to commencement of the maintenance period. A copy of the record of the 'before' survey is to be lodged with the relevant road controlling authority prior to work commencing, and a copy of the 'after' survey with a description of any deficiencies observed and remedial action proposed shall be lodged with the road controlling authority within one month of substantial completion at individual worksites.*

Amend condition to read:

CONDITION T9 (Construction). On District roads the consent-holder and a representative of the Council shall carry out Road Condition Surveys in the vicinity of all on-road worksites and also near off-road worksites where on-road traffic management is required or access to the site is to be from a road. These surveys shall be completed at each worksite before any work commences, and the 'after' survey will be completed prior to commencement of the maintenance period. A copy of the record of the 'before' survey is to be lodged with the relevant road controlling authority prior to work commencing, and a copy of the 'after' survey with a description of any deficiencies observed arising from the works and remedial action proposed shall be lodged with the Road Controlling Authority within one month of substantial completion at individual worksites.

It is important for the 'after' survey to clearly identify deficiencies that arise from the works, as opposed to deficiencies associated with routine maintenance activities undertaken by the Road Controlling Authority.

12. *CONDITION T10 (Permanent Works). All existing property accesses from legal roads onto property shall be maintained under terms satisfactory to the landowner or operator.*

Amend condition to read:

CONDITION T10 (Permanent Works). Where existing property access is restricted as a result of the scheme races, the consent holder shall provide one access per property of an equivalent standard to that existing at a location to the satisfaction of the landowner and Road Controlling Authority..

13. *CONDITION T11 (Permanent Works). Access to parcels of land within properties that are divided by the works shall be provided under terms satisfactory to the land owner or operator.*

Condition is not required as internal access is not a traffic management issue and will be subject to the negotiation and agreement with the individual landowner. In relation to the scheme races, there are no rights of access to construct the distribution network, and therefore agreement with each and every property owner is inherent in the final design solution. In relation to the head race, where designation is sought, CPWL has undertaken to provide a single point access across the headrace for any properties divided by the race. Crossings in excess of this would be by individual agreement..

14. *CONDITION T12. (Permanent Works). A minimum of three intermediate control gates each capable of remote controlled un-manned operation shall be located within the header race to minimise the impact of any failure of the header race upon road infrastructure or traffic operations.*

As written, the intention of this condition is appropriate but this can be addressed in a more appropriate way. It forces design without appropriate risk assessment or consideration of other options. Please refer to evidence given by Walter Lewthwaite on planned approach to design of the headrace.

15. *CONDITION T13. (Permanent Works). The minimum diameter of culverts passing beneath the header race shall be 1.5m.*

The intention of this condition is appropriate but as a blanket condition this is not an appropriate solution. Whether the condition has been agreed to on another scheme or not is irrelevant. It forces design without appropriate risk assessment or consideration of other options. The forced size also potentially increases the extent of existing stream beds or similar may need to be regraded to facilitate a deeper culvert invert if other constraints (such as line and level of road, Condition T14) are taken into account. Alternatives may be more appropriate. For example a blockage of a smaller culvert may not be problematic if alternative flow paths to other culverts are available or

other design options being appropriate. Please refer to evidence given by Walter Lewthwaite on planned approach to design of the headrace.

16. *CONDITION T14 (Permanent Works). Unless explicitly permitted by the relevant Road Controlling Authority the horizontal and vertical profiles of all road carriageways shall be preserved at the existing lines, grades, crossfalls and levels at all road crossings.*

Condition is acceptable.

17. *CONDITION T15 (Permanent Works). Where a road is operating as a two way road then, regardless of the traffic flow on that road the bridge or culvert crossing will be built to at least the minimum standard in the Bridge Manual for a low volume two-lane bridge, with clearances meeting the Preferred Minimum Standard.*

Condition is acceptable.

18. *CONDITION T16 (Permanent Works). All culverts will extend to a point at least 3.0m clear of the edge of the formed carriageway.*

Amend condition to read:

CONDITION T16 (Permanent Works). Unless explicitly permitted by the relevant Road Controlling Authority all culverts will extend to a point at least 3.0m clear of the edge of the formed carriageway.

19. *CONDITION T17 (Permanent Works). Where a bridge is located within the road reserve within 500m of a living zone of a township or settlement or within such a living zone, then the bridge shall provide for a pedestrian foot path on at least one side. The footpath shall be at least 2.0m wide to provide for pedestrian and cycle traffic.*

Amend condition to read:

CONDITION T17 (Permanent Works). Where a new bridge is constructed, or an existing bridge with pedestrian facilities is modified to accommodate the works, within the road reserve within 500m of a living zone of a township or settlement or within such a living zone, then the bridge shall provide for a pedestrian foot path on at least one side. The footpath shall be at least 2.0m wide to provide for pedestrian and cycle traffic.

20. *CONDITION T18 (Construction). On State Highways the maximum duration of all works requiring traffic management on SH73 and (separately) on SH77 shall be one year.*

See T19 below:

21. *CONDITION T19 (Construction). On District Road unless determined differently under the provisions of any specific Traffic Management Plan the maximum duration of works requiring traffic management on any ten kilometre section of road shall be one year.*

Replace T18 and T19 with the following:

CONDITION T18/T19 (Construction) - When planning the timing of any works on any one route, the consent holder in preparing its Traffic Management Plan shall take into account other planned works on the project that will affect the route to ensure the overall impact on the road user is minimised. This shall include making an assessment of the overall delays to the route upon which the specific Traffic Management Plan applies and submitting a programme of works affecting the route with the Traffic Management Plan.

T18 and T19 as written by Viastrada, in real terms means all works affecting a route, including works on another road using the route as a detour, would need to be constructed in a single year. For example all crossings on the 28km length of Rakaia Terrace Road would need to be constructed in the same year as they are typically within 10km of the next crossing, plus all crossings of other roads that use Rakaia Terrace as a detour route would fall into this category and need to be constructed in the same period. Similarly for the SH works. Where the headrace is constructed, all other works crossing the highways, such as the distribution network which may form part of a later phase would need to be constructed in the same year as the head race crossing. Similarly again, you could be in a situation where there are up to 15 or so worksites on any one road e.g. Coal Track Road at once to achieve the one year duration. If there is say a 3 min delay at each, that could be 45 min delay on one route or multiple detours. If the sites are spread over a greater duration, then the actual delay would be less.

The above scenarios eliminate the potential to proactively manage and optimise (being minimise) the overall impact to road users for the duration of the project. They also make planned phasing nearly impossible as it is likely that all crossings and/or detours will be within 10 km of another crossing

resulting in a necessity to construct the entire scheme in a one year duration. This is clearly impractical.

The condition as I have amended it allows flexibility to achieve solutions that are agreeable to all parties on a case by case basis, rather than imposing a blanket solution to traffic management that is both impractical and is likely to be less than optimal to both parties.

22. *CONDITION T20 (Construction). The heavy goods vehicle access to the Waianiwaniwa Valley construction site and to the dam borrow area shall be created as a grade separated underpass junction. All heavy traffic accessing the valley worksite from Homebush Road shall use this junction.*

Condition is not acceptable. In the event that an area directly below SH77 is used as a borrow pit for the dam construction, heavy off-road goods vehicles will cross the highway through an underpass. This would require separate consent as it is not included within the scope of the current applications. If and when such a consent is applied for, this matter should be considered at that time, and it is anticipated that such a condition would be appropriate and acceptable for that consent.

23. *CONDITION T21. (Construction and Permanent Works). For the duration of the project, including the full duration of all maintenance periods the applicant will pay all reasonable direct costs arising from the appointment of such staff or consultants necessary to address the Council's responsibilities on relation to the project (including but not necessarily limited to: Road Traffic Safety Auditors, Design Auditors and traffic Management Coordinators).*

Condition is not required as s36 of the RMA enables the consent authority to recover costs for the administration of consents and no further provision should be provided.

24. *CONDITION T22 (Construction and Permanent Works). The applicant agrees to be party to the design checking and traffic safety processes outlined above and to provide reasonable lines of communication between the Road Controlling Authorities staff and its own designers and safety engineers to facilitate the process.*

Condition is not required as the process described is that necessary to obtain the approval of the respective Road Controlling Authorities to undertake the works.

25. I note that Mr Tipler has included the conditions as recommended by me in his latest draft consent conditions.