

# **Evidence to the Commissioners on the proposed Canterbury Land and Water Regional Plan from Catherine & Ad Sintenie**

## **1. EVIDENCE**

### **Our background in the area**

- 1.1. Our names are Catherine & Ad Sintenie. We have lived at 78 Silverton Road, next to Coopers Creek since March 1988; over 25 years.
- 1.2. Our house is located less than 10 meters from Coopers Creek. Our domestic shallow well is also less than 10 meters from Coopers Creek
- 1.3. We have chosen to live and work in a rural area and consider ourselves extremely fortunate to be able to live in such an amazing place.
- 1.4. We are well aware of, and appreciate the importance of profitable farming to local families, land-owners and the wider community. We have always been supportive of sustainable farming activities and efforts to look after Coopers Creek.
- 1.5. We signed our neighbour's request for a well in 1998 for irrigating his dairy conversion under the understanding that this well would have "less than minor" effects on the creek and our domestic water supply. In hindsight there was not much credible evidence to back up the assurances that we were given and we were not made aware that this consent did not have a minimum flow restriction on Coopers Creek. We were supportive but naive.
- 1.6. We trusted that sound judgement and management by our regulators would protect the values of the Creek. However, we can now see that the Canterbury Regional Council (CRC/ECan) has failed in their duty to protect the values of the Coopers Creek.
- 1.7. The reliability of supply to other consent holders (with flow restrictions) has reduced by granting a consent without including minimum flow conditions to protect the values of

- 1.8. 3Coopers Creek. Since granting the initial consent without flow restrictions, more consents without minimum flow conditions have been granted within the catchment exacerbating the problems for Coopers Creek and users with these conditions.
- 1.9. We were instrumental in developing a stream-care group and spend many months establishing riparian planting and weeding on land owned by our neighbour.

#### **The problems we encounter and observe**

- 1.10. We have become increasingly concerned about the obvious decline of water quality in Coopers Creek and the effects that increasingly lower flows are having on its ecology and consent holders that are bound by minimum flows.
- 1.11. We are also concerned about the ongoing reliability and quality of our domestic water supply. Our drinking water quality is now borderline suitable for consumption due to e-coli and nitrogen levels. Our well level is directly affected by the level of water in Coopers Creek (Refer to well graph, and Burberry Hydrological report). We are deeply concerned, not only for our ongoing security of a household water supply, but also for the health implications which may flow from drinking water which is borderline suitable for consumption. We are sceptical that ECan/CRC will ensure this water quality will not continue to decline.
- 1.12. We are disappointed that CRC has continued to grant additional consents and consent changes within the Upper Coopers Creek Catchment, despite credible and independent research advising the contrary. The lack of sufficient scientific data continues to be given as the reason for further water takes whilst it is obvious that the creek is suffering and water quality is in decline. We see Coopers Creek being killed by a 1000 cuts (less than that in fact). There is clearly a cumulative effect of the consents being granted.
- 1.13. We are also seeing that poor planning decisions are affecting current consent holders and their business.

#### **Our participation in the planning process and concerns**

- 1.14. We have participated in Orari Flow and Allocation Planning since it was first initiated in 2008 and more recently Ad has been a member of the Community Steering Committee developing the plan.
- 1.15. Prior to the Orari Flow and Allocation Plan, we have been advocating for the Orari Catchment through the initiation and development of an Orari Integrated Catchment Management Plan. This was a truly collaborative process (over more than 4 years) and actually produced a document with a shared vision for the Orari Catchment. Unfortunately this process was halted and the document shelved when the commissioners took over from the elected council.
- 1.16. We are concerned about our domestic water supply and the lack of measures to protect the remaining values of the already significantly depleted Upper Coopers Creek. The so called “collaborative” proposed Flow and Allocation Plan has been developed without consideration of the “*Review of the Spring-fed Coopers Creek*” Hydrological assessment or the “*Coopers Creek Ecological Values and Flow Requirements*” Assessment. The Flow and Allocation Plan as it stands at present is therefore contrary to the best available and independent science, and will inevitably lead to the further decline of Coopers Creek and further disharmony amongst our community.
- 1.17. We are deeply disappointed that Ecan/CRC has been less than forthcoming with essential information that, in our view, would have been vital in creating a truly collaborative and sustainable outcome. We have raised our concerns consistently but the information that was critical to support our argument was not tabled for discussion or presented to us or despite the Hydrological Assessment being with Ecan/CRC since 2011. We understand that some other members of the committee did have the “Review of the Spring-Fed Coopers Creek” but choose to keep this to themselves, undermining the “good faith” of the collaborative process.

## **2. HISTORY OF COOPERS CREEK**

- 2.1. Coopers Creek is spring fed stream and has been well known as a good trout fishery and spawning place.
- 2.2. Sometime during the 1950's the Scotsburn was diverted into Coopers Creek and a confluence was created below the springs. The Scotsburn diversion into Coopers Creek only flows intermittently and for short times during high rainfall. It usually happens once or twice a year.
- 2.3. In 1998 concerns about Coopers Creek were raised during consent review hearings (CI2c/140774) by members of the community.
  - a Fish & Game viewed Coopers Creek as a suitable area for trout spawning and an excellent nursery stream and did find it necessary in some years to salvage fish during low flow season, usually between SH79 and Pitt Road.
  - b Mrs Lee Burdon said that she noticed, since moving to her property in 1959 (approx 2 Km downstream from SH79) that the Creek through her property dried up within 24 hrs after irrigation was turned further upstream. She opposed any increased ground and surface water takes from the Upper Coopers Creek area.
  - c Mr McGregor Simpson raised concerns about increased water extraction in the Coopers Creek area and suggested that there was a correlation between irrigation on the Kerse's property and drying up of the Creek on his land. He also suggested that increase in surface and groundwater takes in the Coopers Creek area had the potential to threaten the water supply in Arundel. Mr Simpson supported consents being issued for existing users (only 2 or 3 at that time) for a short time to allow a total hydro-geological and ecological assessment of the effects of abstraction in the area.
- 2.4. Fish & Game carried out has carried out 3 fish salvage operations in Coopers Creek, below SH72 during 3 of the last 5 years compared to 4 or 5 occasions over the preceding 25 years. Fish become stranded as flow is lost to alluvial aquifer. Numbers of large fish (trout and eels) observed during salvage operations have dramatically

declined. Twenty years ago several hundred fingerling trout and 20-40 adults would be observed, compared to 20-30 fingerlings and 1 or 2 adults currently.

### **3. 2002 REPORT BY GEORGE MCEWAN**

3.1. In 2002 report was prepared by George McEwan; The Hydrology of the Orari River Shallow Aquifer system (Uo2/02). From this report we learn that:

- a The minimum flow of Upper Coopers Creek was apparently determined in consultation with the local water users group during the 1998 hearing regarding the renewal of their consents. At the time there was little known about the area and the low flow was based on the best estimates designed to maintain the ecology of the surface water system. The restrictions were the foundation of the management of Upper Coopers Creek, however, due to the case by case application of the conditions, there was little consideration given to cumulative effects within the Upper Coopers Creek aquifer system.
- b The report states as a management objective that a minimum is maintained in the springs that feed the upper reaches of Coopers Creek (p24).
- c The report also notes that shallow groundwater abstraction within the Coopers Creek zone will have a direct effect on the surface water resources adjacent to the abstraction. Due to the unconfined nature of the system this effect will be shallow but far reaching and as a result a cumulative analysis needs to be done to assess the combined impacts.
- d This report is clearly ringing some alarm bells. Sadly, most warnings and suggestions in this report have been ignored by our regulators.

3.2. The situation in the Upper Coopers Creek zone, determined by its clay-claybound gravel existing within its area makes it unique within the region. The management of the Upper Coopers Creek zone will affect the sustainability of domestic supply in the area. This was evident during the 2000/2001 irrigation season where a factor of

extremely low rainfall and river flows combined with extensive irrigation led to a number of domestic wells going dry.

- 3.3. The report recommends maintaining the status quo (note this was 2002) and assess an individual consent on the basis of the effects on nearby wells and water ways. This will result in the continued allocation of groundwater in the region and will cause surface water features to go dry faster and for longer periods of time. This will eventually over allocate the resources resulting in little surface water environments being present (exactly what we see happening in Coopers Creek)

#### 4. **HYDROLOGICAL ASSESSMENT (independent Ecan funded Review of Spring Fed Coopers Creek, Lee Burberry May 2011 Report no 1050-8-R1)**

- 4.1. We asked Sarah Drummond for this report to be tabled and note that this report is not included as an appendix to the *Section 42A Report Volume 3 – Proposed Canterbury Land and Water Regional Plan Technical report*. We ask, why is it not included?

- 4.2. This important technical and independent report was not made available to us during the “collaborative” process, nor was it tabled for discussion. It seems to us that the key findings in this report did not sit well with the planners and some water users in the Upper Coopers Creek Catchment, however the opportunity to discuss this was never presented.

- 4.3. The report certainly confirmed our concerns and provide a credible explanation to what we actually see happening.

- 4.4. Some key statements from the report.

“The unique and vulnerable position of the spring-fed Coopers Creek warrants a local flow management plan, as a sub-catchment within the broader Orari catchment. Criteria could be drafted for reducing potential cumulative stream depletion effects from groundwater abstractions within the

zone, which would be demarked by the extent of Orari River deposits between the Gorge and SH72.”

“Given the current state of knowledge about the physical nature of Coopers Creek, it is not without scientific reason to suspect that the pumping effects from K37/0684 and K37/0668 could potentially cause Coopers Creek springs to dry out, if irrigation restrictions were deferred to the Orari Gorge 75%-MALF trigger value.”

This is just as applicable if monitoring is deferred to upstream Ohapi, as proposed in the plan.

“It is therefore concluded that if granted, the proposed change in consent conditions would have a major change in effects on Coopers Creek flows. This contradicts the opinions expressed by Irricon Resource Solutions. That being that the change in minimum flow conditions would: “have only a minor effect on flows in Coopers Creek (if any)”

## **5. COOPERS CREEK ECOLOGICAL ASSESSMENT**

5.1. Again this important technical and independent report was not presented during the “collaborative” Flow and Allocation meetings and was only released after the discussions had closed and after our request under the Local Government Official Information and Meetings Act 1987.

5.2. Given that the ecological values within Coopers Creek have suffered significant decline in the last 15 years, it should be of great concern when the ecological report states that “the risk to the current ecological values of managing flow in Coopers Creek from a distant minimum flow site is considerable”.

5.3. The report refers to the earlier mentioned 2011 Burbury Hydrological report which suggests that it would be inappropriate to manage Coopers Creek depleting groundwater abstractions from the Orari River due to the flow sensitivity of Coopers Creek and the absence of a robust relationship between

the Orari River minimum Flow site and Coopers Creek. The ecologist agrees with this conclusion and suggests “that in view of the short and flow sensitive reach of the stream which contains healthy ecological communities this stream should be managed as a separate sub-catchment with its own minimum flow at SH72”

5.4. The report states “A minimum flow on the Orari River is a viable option if a good relationship between flow in Coopers Creek and the Orari River can be established”. All the information and research that we viewed to date have pointed in a direction that makes this unlikely.

5.5. Unless the relationship between flows in Coopers Creek and the Orari River can be substantially improved there would be significant ecological risks to the fauna of Coopers Creek from water abstraction restrictions based on the flows in the Orari River.

5.6. The report also states:

“The current CRC recommendation is to tie all surface and stream depleting takes in the catchment to a minimum flowsite upstream of Ohapi Creek. Further hydrological analysis to establish a relationship between the Orari River, Coopers Creek and adjacent groundwater might allow abstraction in the Coopers Creek sub-catchment to be managed with acceptable certainty. However, any minimum flow applied to the stream depleting takes impacting on Coopers Creek should be configured in such a way that the stream at SH72 does not fall below the current minimum flow of 50l/sec as a result of abstraction, so that the ecological values around and upstream of SH72 are protected.”

## **6. FUTURE PLAN**

6.1. Removing the minimum flow measure to protect the ecological values of Coopers Creek due to the lack of conclusive scientific data seems an invalid argument. It is the same argument that has been used each time new consents



have been granted within the catchment. There is sufficient evidence to indicate that the creek is in severe decline and has already lost much of its values, particularly in the last 10-15 years. The inclusion of a minimum flow in for Upper Coopers Creek as a precautionary measure is absolutely essential to maintain what values are left and to make any attempts to restore what has been lost in recent years.

6.2. According to comments in the Environment Canterbury Technical report (page 72) Cawthron support the notified flow regime for Coopers Creek with an upstream Ohapi Minimum flow.

6.3. Given that a lot of weight has been given, by planning staff, to this advice from Cawthron we question how Cawthron was able to make the statement, “I support the report’s conclusion that water abstraction from Coopers Creek should not be controlled by flows at the at the Orari Gorge, and instead flows in the Orari upstream of Ohapi Creek, or within Coopers Creek itself, are used to manage water abstraction from Coopers Creek” as there is no such a conclusion in the report.

6.4. This conclusion from Cawthron makes no sense as it is a contradiction to what the ecological rapport actually recommends:

“Further hydrological analysis to establish a relationship between the lower Orari River, Coopers Creek and adjacent groundwater might allow abstraction in the Coopers Creek sub-catchment to be managed with acceptable certainty. However, any minimum flow applied to the stream depleting takes impacting on Coopers Creek should be configured in such a way that the stream at SH72 does not fall below the current minimum flow of 50 L/sec, so that the ecological values around and upstream of SH72 are protected.”

6.5. This is also endorsed by the following statement:

“Furthermore unless the relationship between flows in Coopers Creek and the Orari River can be substantially improved there would be significant

ecological risks to the fauna of Coopers Creek from water abstraction restrictions based on flows in the Orari River.”

- 6.6. For more than 15 years it has been put on record that more science is needed and that new consents should have adequate monitoring conditions.
- 6.7. If we proceeded as suggested in the proposed Flow and Allocation Plan we will continue to make the same mistakes. Our descendants will certainly wonder how this could have happened and most likely not forgive us for being such poor decision makers.
- 6.8. It is obvious to us that the plan as it stands at present will further and significantly decline the values of Coopers Creek and that even temporary uncontrolled measures are likely to devastate the remaining ecology of the creek.
- 6.9. A slightly dryer year than we have in the last 2 years will more than likely run the creek and our well dry.
- 6.10. The hydrological report makes it clear the level in our domestic well is directly affected by the level in of Coopers Creek so we are concerned that the quality of our drinking water will continue to decline further as a result of reduced dilution and at worst the well will run dry during the summer months.
- 6.11. The plan as it is at present contradicts the principles and targets of the CWMS; which states that the short to medium term should enable restoration of ecological health and functioning.
- 6.12. We are very disappointed that the main water users within the Coopers Creek Catchment are not willing to acknowledge both independent reports and use them as a basis to collaboratively find sustainable solutions that actually help improve the Creek. It highlights to us how important it is to have clear rules and that community “collaboration” becomes meaningless unless there are clear bottom lines.
- 6.13. The plan as it stands at present does nothing to protect the values of Coopers Creek and given the science that is available will more than likely lead to further

significant decline and loss of reliability and quality of domestic water supplies within the Catchment.

6.14. We ask the Regional Council planners to review the technical reports and available science without bias and we ask for the commissioners to include adequate measures in the plan to ensure that the values of the creek are monitored and protected.

6.15. We sincerely hope due consideration is given to our submission, as we are becoming increasingly disillusioned by the process and increasingly concerned for water / health security.