

Mackenzie District Plan Change 13

Further elaboration of Submission on Plan Change 13 and proposed Twizel water Protection zone by John & Pauline Beekhuis at Hearings Committee Meeting on 3 November 2008.

My name is John Beekhuis. My wife and I own a section of land in Hocken Lane . We bought the land in November 2004 with the express purpose of building a holiday home on it at some stage in the future.

We initially viewed the property in early 2004 when it was advertised for sale by LJ Hooker. At that time we were told that the sale of the land was subject to approval of the subdivision by the MacKenzie District Council. Our purchase of the land was conditional upon subdivision approval being granted and also upon receipt of consents to permit the building of a dwelling.

The council took many months to reach a decision on the matter and we assumed that this was to allow it time to check out the suitability of allowing the land to be built on and other factors such as proneness to flooding and servicing of the properties. We were in no hurry for the decision as we wanted to be sure that Council was satisfied with the development of the area into rural lifestyle blocks and that it would take into account a range of factors, including the effect of changes to the landscape and sewage disposal.

After about 5 months we were notified that MDC had agreed to the subdivision and had issued consents relating to the siting of a habitable dwelling and also to the **disposal of household sewage on site**. We also received a copy of an earlier report dated 2 March 2001 on the flood risk assessment of the site which had been prepared by RJ Hall Civil and Environmental Consulting Ltd of Timaru.

We relied heavily on the information provided at that time on whether to proceed with the purchase.

After due consideration of all the facts that had been presented to us, we believed that we could meet the conditions of the Consents which were imposed by the MDC, namely;

- (1) the siting and foundation design and preparation for a dwelling
- (2) the construction of a suitable on-site sewage treatment plant capable of providing a high grade of effluent which could be discharged into the ground without undue risk of groundwater contamination.

It is important to note that the LIM report provided by Council at the time of this decision to purchase showed no other restrictions.

No mention was made that the site was in the Twizel Water Supply Protection Zone nor that Council was contemplating a rezoning of the area to restrict building in order to preserve landscape qualities of the area.

I should also mention at this point that an adjacent neighbour purchased his property less than a month before proposed plan change 13 and the Twizel Water Supply Protection Zone came out. No mention of this proposal was made in the LIM report obtained by his solicitor prior to the purchase. We would have thought that it was the responsibility of Council to make potential purchasers aware of such plans if it knew about them. Our neighbour is now caught by the same restrictions as all of us.

While we can understand Council's desire to maintain the outstanding landscape values of the Mackenzie basin, we feel that such changes, if implemented, should not affect existing obligations or agreements. In particular, any consent already issued should be honoured but that any new development should be subject to the plan change. If we had been made aware that Council was contemplating such changes we would **never** have agreed to proceed with the purchase of the property.

We are not developers, just lay people who very much value the beauty of the area and particularly the peace and quiet and wonderful views and atmosphere that the McKenzie basin offers. We have been coming to the area for over 20 years and while we own a small house in Twizel township, we felt that the land in Hocken Lane was a haven, and one which we would really enjoy. We have no intention of subdividing it any further.

The whole proposal of Plan Change 13 and the imposition of a Twizel Water Protection Zone has put a lot of stress and anxiety upon us. We have invested a considerable sum of money in this property and it appears that at the stroke of a pen, the Council can destroy our dreams and back track on its original agreement or consent and considerably devalue our investment.

We are extremely disappointed at the manner in which we came to hear about the proposed plan change at all. At no time were we contacted or consulted by the Council. In fact if we had not been notified by a neighbouring property owner who had got wind of the proposal, we would not have known at all and would have been caught out totally unawares. This is hardly a just or democratic action on Council's part. We are in essence an affected party and believe it was incumbent on Council to inform us. Not to do so is Rule-Change-by-Stealth.

I would now like to comment on a number of matters in the proposed plan change itself and also the report on submissions, dated 15 October 2008, prepared by Patricia Harte.

(1) Flood Risk

We relied on the information provided by R.J.Hall in making our assessment of the flooding risk of the site. The report concludes that the whole area is exposed "to flood waters and consequential flood related effects of 1/500 year event" and as such, gives recommendations on the minimum level of possible building platforms in the area to be above the calculated flood level.

At no stage prior to purchase were we made aware that our site was at risk from flooding by a possible breach of the Pukaki-Ohau Canal.

As an Engineer with over 30 years experience in catchment hydrology, bridge waterway analysis and dam break studies, I consider this to be an extremely unlikely event. The embankment section of the canal is unlikely to breach catastrophically even under a major seismic event. In an extreme situation, the more likely scenario is a small gradual opening with the water spilling initially as a small stream and gradually increasing in size. The flood plain over which the water is to flow is very wide with numerous small watercourses. Our property is located over one kilometre from the canal and it is likely the water from a break would initially follow the watercourses and then fan out over the whole plain as it increased in volume and at worst would be no more than about 30 cm deep at the location of our property. In any case the flow would only be temporary and of limited small volume as the inflow into the canal can be stopped by control gates fitted at the intake structure at Lake Pukaki.

If a catastrophic breach were to occur, I believe the whole of the Twizel township area would also be at risk as the breach could occur at any point along the canal where it is on embankment fill and could flow out over the plain that Twizel is situated on. The diagram presented in Attachment C of Ms Harte's report indicates a flood fan originating from a breach in the canal between Maryburn Culvert and SH8 yet ignores a potential breach point between the Maryburn Culvert and the Fraser Stream Culvert under the canal. A breach in the latter section could result in flood flows spreading out down Glen Lyon Road to Twizel.

Maryburn Dry Stream
Maryburn Dry Stream

Furthermore, the area to the west of NW Arch up to the canal, which is proposed by Ms Harte as being included in the 'Rural Zone' is much closer to the canal than our property in Hocken Lane and would be at a much greater risk from a major canal breach inundation.

If such a canal breach study has already been undertaken, we would like to examine the report and the assumptions and method of calculation. We would also like to know what original design parameters were made by the former Ministry of Works particularly in regard to the effect of seismic loadings on the stability of the canal embankments. From my experience it would be normal to design such a crucial facility as the canals for a 1/500 year seismic event.

Hence in my view this whole matter of canal break is a relatively remote scenario and its effects poses a very low risk to flooding the areas below the canal embankment. It should accordingly not be considered as a reason for disallowing any further development of the properties in the Hocken Lane Area.

(2) Access

Ms Harte has commented that Hocken Lane is of a poor standard, unsealed, very windy and narrow.

We do not agree with her on this point.

Note that many rural council roads are also unsealed. Many council roads are also windy and narrow and are signposted accordingly. Our road is no different. The road is considered to be perfectly adequate by the majority of residents who use it. It is accepted that it is narrow in places and accordingly, speed restriction signs are in place and passing areas have been provided. Visibility and sight distances are perfectly acceptable and adequate. It is a low speed environment and is a private road. It is not a public road and hence minimum council geometric standards should not have to apply in this instance.

We have an association of landowners who contribute annually to a fund for the general maintenance of the road surface and the bridges. The lane has been gravelled and graded recently and is in excellent condition, as you will note if you inspect the lane at present.

In fact we would be loath to have it transferred to Council because we wish to preserve its beautiful tree lined aesthetic values. It is part of the pioneering heritage of the area and should be maintained as a monument to those who established the area in the late 19th and early 20th centuries.

Ms Harte also appears to condemn the bridges, saying that there is no certification as to the standard to which they have been built. Records which I have obtained from the Council's building control department indicate that the bridges were built to the old MWD Lightly Trafficked Rural Bridge standards of the 1980's. As an experienced bridge design and construction engineer with over 35 years experience in this field, I can confirm that this standard specifies a design live load capacity which meets the current loading of Class 1 heavy motor vehicles. The bridges are therefore perfectly adequate for taking all normal weight traffic loads without the need for placing any loading restrictions on them. Any overweight or overwidth vehicles can use fords nearby.

Accordingly, we submit that the existing Hocken Lane access including the bridges, is perfectly adequate for the purpose of providing access to all the existing allotments served by it without further modification or improvement.

(3) Water supply protection zone

Ms Harte has stated that a more 'scientific approach' has been undertaken to determine the area which could contribute to the possible contamination of the existing water supply wells for Twizel. We would like to examine the report on

the study or studies which have been carried out to arrive at the model of the water abstraction zone.

Have isotope tracking tests, standpipe tests or water age tests been carried out to determine likely source or movement of ground water flows over the whole area, including areas to the south, east and west of the wells? Is water, abstracted from the bores, routinely checked for e-coli to establish a control measure on the range of current concentration of the bacteria in the supply? Has a **Catchment Sanitary Inspection** been carried out to determine what other contaminants (including possible stray flows from fractures in the Twizel sewerage system itself) may put the water supply at risk? It should be noted that **e-coli**, are present in the gut of all warm blooded animals; not only humans. Has the possibility that the faeces of farm animals could also be a source of ground water contamination?

Under the Ministry of Health's Drinking Water Standards for NZ, is the source for the Twizel water supply classified as '**SECURE**' or '**NON-SECURE**'?

If it is **secure** then it would draw water from a deep aquifer which is overlain by an impermeable layer which prevents contamination of the aquifer by surface waters and therefore may not require bacteriological treatment; for example the Christchurch water supply.

If the supply source is classed as **non-secure**, then treatment is **MANDATORY**.

Ms Harte has stated in her report that the water wells are "a surface water take community supply". In other words, I interpret this to mean that that they draw water from a near surface groundwater source. In this case the source should be classed as non-secure and should be treated as a matter of course. Council is legally bound to do this under the MOH Drinking Water Standards. We therefore cannot see why a water supply protection zone has been proposed at all because it does not guarantee full protection of the water source. What about water borne contaminants entering the groundwater system from outside the zone, for instance via the Fraser or Twizel Rivers upstream from the proposed protection zone?

We therefore respectfully suggest that the discharge of treated household effluent from a package treatment plant located over **one kilometre** from the water abstraction point should have little or no effect on the water supply because the water would necessarily be treated after pumping from the bores and before it is distributed into the town reticulation system. Furthermore Ms Harte does not address the possibility of contamination of the ground water by livestock or by other sources within the proposed protection zone. Removal of livestock would affect farming operations.

To have the residents provide their own pumped sewerage system is an unreasonable demand and ignores possible contamination of the supply from other sources.

The diagram in Attachment D of Ms Harte's report shows a distorted narrow wedge shaped zone extending one kilometre upstream from the existing water wells with a 200 m radius circular zone extending around the well. We have noted that the diagram is drawn incorrectly. When scaled, the radius only appears to be 100 m. This throws into doubt the derivation and plotting of the protection zone area. From my own experience in the construction of water supply wells, the drawdown surface of the groundwater is generally concentric about a well. As a result I would expect the shape of the abstraction zone to be more concentric about the wells rather than the asymmetric plan shown in Attachment D, unless appropriate testing and groundwater modelling proves otherwise.

We therefore request that a more rigorous investigation be carried out and suitably reported on, with assumptions and testing procedures made public, before a so-called water supply protection zone is confirmed.

We see no benefit from establishing a water supply protection zone if contamination from all sources outside the area cannot be excluded from entering the groundwater system. Hence we request that it be deleted from further consideration and full treatment of the supply be adopted.

(4) Landscape issues

Ms Harte and also Graham Densem recognise that the area around Hocken Lane is considered to be of low vulnerability as far as landscape values are concerned. We concur with this view because most of the area is obscured by trees from both Glen Lyon Road and SH 8.

On the other hand, the area to the west of Twizel township between the Fraser River, the Pukaki-Ohau canal and Lake Ruataniwha is open, typical Mackenzie high country scenery with outstanding landscape qualities in our opinion. To us it therefore seems inconsistent with the desired outcomes and ideals of Plan Change 13 to allow this latter area to be taken out of the Mackenzie Basin Sub-Zone (MBSZ) and redefined as rural, while keeping the Hocken Lane Area which is of low vulnerability **inside the MBSZ!**

Why therefore, can we not have the area between the Twizel River, SH8 and the Pukaki-Ohau canal also included in the Rural Zone, or better still within its own Rural Residential zone inside Twizel township, thus exempting it from the various constraints of Plan Change 13?

REQUESTED OUTCOMES FROM COUNCIL:

As stated in our original submission on Plan Change 13 we reaffirm our request that Council:

- (1) Adopts all of the amendments sought by the Hocken Lane Landowners Association, Items 1-6 as forming part of our own submission
- (2) Honours its existing consent in regard to allowing the construction of a dwelling on our property as a permitted activity
- (3) Honours its existing consent to allow us to construct an on-site package treatment plant and outfall system for the treatment of domestic effluent

We also seek that Council:

- (4) Withdraws the proposed Twizel water supply protection zone and instead upgrade the water supply treatment facilities to include Ultra Violet disinfection and chlorination of the water against microbiological organisms.

Signed: *W. J. Beekhuis*
P. J. Beekhuis

Date: *2 Nov. 2008*