



## Defective bore may have allowed contaminated groundwater into water supply

MARTY SHARPE Last updated 13:55 02/02/2017  
JOHN COWPLAND/ FAIRFAX NZ

The Government Inquiry in the Havelock North Campylobacter outbreak began in Hastings District Court on Monday.

Contaminated water may have entered the Havelock North water supply through a defective bore, scientists have found.

The new evidence was provided on day four of the Government Inquiry into Havelock North Drinking Water at Hastings District Court on Thursday.

The finding came after a caucus of four scientists over Wednesday night and Thursday morning.

Tony Cussins, a hydrological engineer, told the inquiry the scientists believed it there was a provisional 75 per cent probability that contaminated water entered the Hastings District Council's Brookvale Road bore No. 1, through defective casing beneath the ground.

### READ MORE:

- \* [Gastro inquiry hears that contamination may have come from nearby stream](#)
- \* [Canned prosecution cost Hastings ratepayers \\$271,000](#)
- \* [Emergency declaration would have helped in gastro outbreak report finds](#)
- \* [Council's \\$445,000 investigation leads to it issuing a \\$1000 fine for another council](#)
- \* ['Antagonistic' council relationships hamper Havelock North water solution](#)

If water entered the casing this way it would explain why there were no positive results before the August storm event, but continued positive results thereafter, Cussins said.

The finding had "great significance for the issue of bore design and asset management in municipal water supplies" the scientists agreed.

Cussins said the scientists felt there was just a 20 per cent probability that the contaminated water entered the top of the dry wells on bore 1 by overtopping during the storm event that occurred immediately prior to the outbreak.

The inquiry heard that while the contaminated water may have got into the bore through the casing, the vast majority of water came through the screens which are at depths of 11 and 25 metres.

The scientists also believed that had bore 1 been overtopped the alarms would have been activated, and they weren't.

Cussins said the caucus wanted further assessments to be carried out soon to confirm the theory.

He said this testing would require pressure testing and this could take one to two days.

On the first day of the inquiry it was revealed that the source of the contamination was likely to be sheep faeces from a nearby paddock, which entered the Mangateretere Stream, which is near one of three bores supplying the town water. Dye tests showed that water from a pond in the stream had entered the groundwater being drawn through the bores.

The inquiry kicked off on Monday and is expected to run for two to three weeks. The three-strong panel consists of Stevens, Karen Poutasi and Anthony Wilson. It is looking into the widespread outbreak of gastroenteritis in Havelock North in August 2016, with more than 5000 people falling ill, following the confirmation of the presence of ecoli in the water supply.

On Monday the inquiry heard that the infection likely came from sheep faeces that entered the Mangateretere Stream and that the town bores, which are near the stream, had drawn the contaminated

water into the water supply through permeable layers in the ground.

The Inquiry will report back by March 31 with findings on how the Havelock North water supply system became contaminated how this was subsequently addressed, how local and central government agencies responded to the public health outbreak that occurred as a result of the contamination, and how to reduce the risk of outbreaks of this nature recurring.

**- Stuff**