

**BEFORE THE INDEPENDENT HEARING COMMISSIONERS  
FOR GISBORNE DISTRICT COUNCIL,**

**IN THE MATTER:** of the Resource Management Act 1991

**AND**

**IN THE MATTER:** of an application by Gisborne District  
Council for resource consent associated  
with wastewater overflows

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**SUMMARY STATEMENT OF EVIDENCE OF BRIDGET LUCY BOSWORTH  
– ANALYSIS OF RAINFALL AND OVERFLOW EVENTS**

8 July 2021

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## **INTRODUCTION**

1. My full name is Bridget Lucy Bosworth. I am employed by Gisborne District Council (**Council**) as a Senior Hydrologist. My qualifications and experience are outlined in my Statement of Evidence.

## **SUMMARY OF EVIDENCE**

2. I undertook a high level analysis of rainfall and overflow events to establish if there was a correlation between rainfall intensity/duration and when the wastewater network overflow valves were opened in Gisborne city. This work did not involve any hydrological modelling or modelling of the wastewater network.
3. I examined 22 rainfall events, 15 when the valves were opened and 7 high rainfall events when they were not opened. The overflow valves were opened on 9 occasions when the rainfall had an Average Recurrence Interval (ARI) of more than 2 years. There were also 6 occasions when the overflow valves were opened for rainfall events when the ARI was less than 2 years.
4. In my opinion, there is currently no clear indication of the critical rainfall event that leads to the overflow valves needing to be opened. Rain events are complex, in terms of intensity, duration and location. Both short duration/high intensity and long duration/lower intensity events can lead to the requirement to open the valves. However, in contrast, there have also been instances where rainfall has exceeded the 2 year ARI, but the overflow valves have not been opened.
5. In addition, in my opinion, the direct cause of the valves being opened may depend on where and when the rain occurred within the catchment and the travel time of surface runoff to and within the pipe network. I also believe that the overflow valves being opened could be contributed to by other factors, e.g. a blockage in the system.
6. I support the proposed conditions of consent that require a similar hydrological analysis to be conducted on future overflow events and regularly reported on.

**Bridget Lucy Bosworth**

**8 July 2021**