

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

IN THE MATTER: of the Resource Management Act 1991

AND

IN THE MATTER: of applications by Gisborne District
Council for resource consents associated
with wastewater overflows

**SUMMARY STATEMENT OF EVIDENCE OF IAN GRAHAM GARSIDE
-WASTEWATER NETWORK MODELLING**

13 July 2021

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INTRODUCTION

1. My full name is Ian Graham Garside. I am a Director of ProjectMax Ltd, a specialised engineering consultancy. I have the qualifications and experience set out in my Evidence in Chief (EIC).

SUMMARY OF EVIDENCE

2. I have been involved with wastewater network planning with Gisborne District for over 20 years.
3. I was involved in the production of two wastewater network master plans issued in 2008 and in 2014.
4. I understand GDC's desire to move (under the DrainWise programme) to a flow reduction strategy for the management of wet weather overflows.
5. Inflow and Infiltration in the Gisborne Network is significant and is dominated by the fast response component. An example of the flow records which demonstrate that the substantial increases in wastewater network flows are a result of direct stormwater inflow (Fast Response) are set out in my EIC.
6. The Gisborne network was designed in accordance with industry standards and conforms with these standards.
7. A description of wastewater network model, the updates and assumptions in the model are set out in the Application. I describe the scenarios modelled in my EIC.
8. The modelling work which was carried out in 2017 confirms that an 85% reduction in fast response flows and stormwater ponding will virtually eliminate overflows during a 50% AEP (2 year ARI) rain event.
9. I believe that an 85% reduction in Fast Response component of RDII is an ambitious target, and to achieve it would require the identification and rectification of a very high proportion of the direct inflows and leaks into the wastewater network, a large number of which are likely to be in private property. I believe it to be prudent to have contingency network upgrades available in the event that this reduction is not achieved, and that is provided for in the Application.
10. I support the approach to reduce direct inflow as far as possible, as this directs effort at resolving the problem at its source and makes storage and containment of flows more

feasible and manageable. It is an appropriate 'first step', with the ability to modify the type of intervention if necessary to achieve the desired level of overflow containment.

11. The important aspect from my perspective is that resolving inflow requires a long term approach. As outlined in my EIC, wastewater network improvements take significant amounts of time to implement, to determine the extent to which the interventions are effective, and to enable the approach to be adapted to the results. It is essential that this approach adapts over time depending on results observed. It is therefore important that the results obtained (in terms of percentage reduction and more particularly overflow occurrence), are appropriately measured, recorded and acted upon. I consider the Application and proposed consent conditions provide for this process to be undertaken.
12. Finally, I note that the s42A Report has recommended a 10 year term for dry weather overflows (DWO) 'with an eradication strategy to be adopted into the consent conditions'. Requiring eradication of DWO has limited, if no, precedence that I am aware of in New Zealand; as DWO are often caused by factors outside the control of the Consent Holder. These factors include blockage and subsequent overflows caused by residents flushing inappropriate items in to the wastewater system and by power or mechanical failure, for instance. While these risks can be mitigated in part by education and backup systems and spares, they cannot be completely eliminated. Accordingly, I do not consider there is any justification from a wastewater management perspective for either a shortened consent term just for DWO, or adoption of an 'eradication strategy' for these types of overflows.

Ian Graham Garside

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