REF APP-123774

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER OF	discharge and land use resource consents for the operation and maintenance of the Wairoa wastewater treatment plant and sewer pump station overflows
BY	**Wairoa District Council**
	Applicant

STATEMENT OF EVIDENCE OF STEPHEN MURRAY HEATH ON BEHALF OF WAIROA DISTRICT COUNCIL

16 November 2020

INTRODUCTION

1. My name is **Stephen Murray Heath.**

2. I am the Group Manager for community assets and services and oversee $275 million of infrastructure at Wairoa District Council ("**WDC**").

3. My evidence is given in relation to the application by WDC for resource consents to Hawkes Bay Regional Council ("**HBRC**") for discharges and associated activities for the Wairoa Wastewater Treatment Plant ("**WWWTP**").

QUALIFICATIONS AND EXPERIENCE

4. I have the following qualifications and experience relevant to the evidence I shall give:

Education / Qualifications:

a) 2019 Maori Management-NZQA.

b) 2018 Asset Management Planning, Development and writing IPWEA.

c) 2017 National Certificate in Occupational Health and Safety Level 4-NZQA.

d) 2010 Maintenance Management Software - System Admin/Expert-MEX CMMS AU. 2008 Supervisory Management Papers-NZIM.

e) 2007 Food Tech/Processing Systems - Massey University.

f) 1990 Advanced Trade Toolmaking (Dip level 6) Auckland/Wellington-polytechnic.

Employment History:

a) Group Manager Community Assets and Services Wairoa District Council.

b) Utilities Manager Wairoa District Council.

c) Business Operations Manager Parr and Co Engineering Ltd.

d) Maintenance Manager South Canterbury District Health Board.

e) Maintenance & Contractor Coordinator Ardagh Group.

f) Engineering Team leader Impress Cans.

5. I am a member of several relevant associations including:

a) JWG (Joint Working Group), Post Havelock North drinking water incident, in December 2016 a JWG was formed between the District Health Board, the Drinking Water Assessors, Hastings District Council, and Hawke's Bay Regional

Council focussed on providing clean, safe drinking water for Havelock North and Hastings. Napier City Council was invited and accepted to join the JWG shortly following its inception, WDC has since started attending monthly meetings in mid-2018.

b) 3 Waters Review Group: Central Hawke's Bay District Council, Hastings District Council, Hawke's Bay Regional Council, Napier City Council and Wairoa District Council jointly commissioned Morrison Low in December 2018 to review the current and potential three waters (drinking, waste and stormwater) service delivery options for the region.

   This contributes to the strategic priority areas for the 2019-2022 triennium, Water – safety, security and planning agreed by the Hawke's Bay Leaders Forum on 25 November 2019. Specifically cooperative approaches on the regional 3 waters review of the provision of drinking water, wastewater and storm water services .which includes representatives from HDC, NCC, CHBDC, WDC and HBRC; and

c) NZ Society of Local Government Managers.

CODE OF CONDUCT

6. I confirm that I have read the 'Code of Conduct' for expert witnesses contained in the Environment Court Practice Note 2014. My evidence has been prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

BACKGROUND AND ROLE

7. In my role as Group Manager Community Assets and Services I oversee $275 million of infrastructure in the Wairoa District and I have been involved in the overview of the resource consenting process over the last two years. This has involved community engagement and assisting our project team.

SCOPE OF EVIDENCE

8. My evidence addresses the following matters:

   a) Background to Wastewater Treatment in Wairoa;

   b) Consultation;

   c) The Current Consent Application;

   d) Reticulation and Pump Station Improvements – Past and Future;

   e) WWTP Modifications – Past and Future;

   f) Response to Council Reports; and

g) Outcome Sought.

BACKGROUND TO WASTEWATER TREATMENT IN WAIROA

9. As described in the Consent Application "**AEE**"[1] and elsewhere, Wairoa's wastewater systems have developed as follows:

    - When Wairoa was first established, individual or collective latrines were dug into the ground (both Maori and European settlers adopted this practice);
    - Prior to the 1950's, wastewater was reticulated from four different catchment areas to four pump stations which each discharged raw sewage into the river (using the pipes that are now only used for storm overflows from each of these pump stations);
    - During the 1950's the pump stations were connected by underground gravity-flow pipes to the Kopu Road pump station which discharged all of Wairoa's raw wastewater directly into the Wairoa River; and
    - In 1980-81, the WWWTP was constructed and new sewer mains were installed to link the pump stations to a new pump station at Fitzroy Street which then pumped all wastewater up to the WWWTP for treatment and then discharge to the Wairoa River.

10. More detail on the discharge history and its regulatory approval is provided in the Consent Application AEE.

11. When connecting the pump stations to a single outfall, the original pump station outlets to the Wairoa River were re-purposed for coping with high inflows, typically as a result of storm events and high groundwater levels.

12. The WWWTP built in the 1980s consisted of an oxidation lagoon and a large oxidation pond. The oxidation pond was built with 500 mm of freeboard to allow for storage of up to 5,400 m^3 in order to cater for storm flows and management of discharges to the Wairoa River. The discharge regime has always been during out-going overnight tides.

13. When selecting the treatment and discharge locations in the lead-up to building the WWWTP, various WWTP sites were considered along with various discharge locations into the river, to land, and directly into the sea. The WWWTP location and its river discharge location were considered to be the best practicable option at that time. The WWWTP design was also considered to be suited to Wairoa's wastewater treatment needs and the selected site.

14. Further detail is provided in the AEE as mentioned.

[1] WDC (2018:C0) Wairoa Wastewater Treatment Plant Discharge Resource Consent Application and AEE, Section 3.1

CONSULTATION

15. The AEE[1] and Consultation Summary[2] demonstrate the extent to which WDC consulted the community and the timeframe over which this occurred. I believe WDC has consulted thoroughly and has obtained a good understanding of the community's views on past and future wastewater treatment and discharges.

16. A key aspect of the consultation was strong inclusion of local Maori in order to obtain their views on the acceptability of the existing discharges and how it should be improved for future generations.

17. The consultation summary consistently shows that land discharge is the long-term goal of both the community and WDC. In direct response to this outcome, WDC have committed to developing land treatment. However, in order to achieve this, all parties have acknowledged that it will be expensive, difficult, and over many years.

18. WDC's 2018-28 LTP committed WDC to developing land discharge opportunities, which was supported by public submissions. The proposal developed out of the consent consultation process was a strongly publicised key aspect of the LTP consultation that WDC were keen to obtain public feedback on. It was important that both the consenting direction and funding provisions were supported by the community.

19. WDC has tried to balance all preferences with the reality that river discharges cannot stop any time soon. The addition of filtration and UV treatment is seen to directly address public health, recreation, and some of the cultural concerns with continuing to discharge to the river. Some changes to the discharge regime are proposed so that the effects on the river are reduced, particularly when river flows are lower which is often during summer recreation seasons. This is seen to help make summer recreation and fishing in and around the river more acceptable. These aspects are discussed further in the evidence of Mr Lowe, Mr Lake and Mr Drury.

THE CURRENT CONSENT APPLICATION

20. The consent application package is a subset of a large package concerning Wairoa's wastewater. Reticulation improvements, storage, additional treatment, land application, continued river discharge and Wairoa River enhancement work are all part of a much wider Package. What is a fundamental requirement of the Package is the continual discharge, at least in the short term, of wastewater to the Wairoa River.

21. While a 'fix up job' was initially proposed, a new outfall into the river is vital and necessary. Complementing this, and committed to as part of the consent application process, is the installation of UV treatment with a sand filter. In all other

[2] WDC (2018:C0) Wairoa Wastewater Treatment Plant Discharge Resource Consent Application and AEE, Appendix B: Consultation Summary

respects WDC will focus additional funds as they become available on Infiltration and Ingress (I & I) reductions and land discharge development.

RETICULATION AND PUMP STATION IMPROVEMENTS – PAST AND FUTURE

22. The Summary of Changes Memo[3] outlines WDC's past improvements to reticulation, pump stations, and the WWWTP prior to lodging the consent applications. Since 2018 WDC has continued to improve these aspects of the wastewater systems. A few of the recent changes are detailed below:

    a) A focus on Inflow & Infiltration management has been considered more critical than treatment plant improvements, as reductions in flow will greatly influence treatment plant design;

    b) To help align WDC to the National Policy Statement for Freshwater Management, a reliability and resilience program for sewer pump stations was started in late 2017. A dedicated generator installation program was approved in the last LTP for each pump station, with the first installation to the WWTP and main pump station in 2020;

    c) New generation chopper pumps have been installed in all town pump stations, a programme completed in late 2018;

    d) Sewer Pipe relining started late 2017 and is now in its fourth year with over 30% of the network inspected using CCTV. Approximately 3,300 m of relining has occurred; and

    e) A major community partnership was initiated in early 2018 and all town properties, including schools, have now been smoke tested. This included 400 properties having work done to remove illegal storm water connections to the sewer network, and lift non complaint gulley traps. A total of 90% has been completed by mid-2020.

23. WDC has committed to continue its 20-year reticulation renewals programme in order to address the historic significant I&I issues. It is not possible to rapidly address these issues, but good headway is being made.

24. It is a reality that large weather events are unable to be predicted and will, at times, overwhelm the pump and pipe capacities. Overflow structures provide necessary engineered pressure relief functions. I&I reductions will decrease the frequency of overflows, however, this cannot fully prevent them. Flooding events or breakage of aging pipes will affect these outlets so WDC need to be able to maintain these without having to wait for consent processing.

WWTP MODIFICATIONS – PAST AND FUTURE

25. Critical to managing the quality of the wastewater discharge is the WWTP itself. A number of activities have been undertaken and are planned. These include:

[3] LEI (2018:C2) Summary of Changes

a) A step screen was installed in 2018 at the inlet to remove large non-biodegradable materials before they reach the treatment ponds;

b) New aeration was installed in the oxidation lagoon (first WWTP pond) late 2018, as the original aerators were reaching the end of their lives;

c) Desludging of the facultative pond was completed late 2019. Sludge accumulations had been an on-going concern affecting the treatment performance and discharge quality previously; and

d) In 2019 further automation was added to the WWWTP discharge valve to limit the frequency of opening, allowing it to be restricted to use three evenings out of four.

26. Going forward, WDC has committed to installing filtration and UV treatment. The design for this is underway with implementation planned in 2022/2023. Confirmation of design is subject to the outcomes of this hearing process.

27. In addition, WDC is actively investigating alternative and complementary treatment options in order to improve treatment before discharging to the river. However, WDC are also mindful that investment into the WWWTP is diverting funds from investing into land discharge systems which is the end goal of all parties. WDC is also aware that treatment does not need to be improved in order to be suitable for land discharges, so treatment upgrades are being approached with some caution. The underlying consideration for treatment upgrades is to ensure that limited funds are used wisely, with expenditure on treatment taking funds away from further developing land-based discharge options.

RESPONSE TO COUNCIL REPORTS

28. In response to the Regional Council reporting officer's report at paragraph 119 and related consent conditions for visual monitoring of the river mouth closure, I note that it is a function of HBRC to monitor and maintain the river mouth in an open state. As part of the existing WWWTP discharge consent, WDC have been daily noting when the river is closed and will continue to do so, but requests active involvement from HBRC for such monitoring. I note that the frequency of river mouth closure is quite rare, so the obligations on HBRC are relatively minor.

29. As explained above, implementation of land discharge systems requires time, consents, and funds. The river discharge consent needs renewal regardless and the river discharge needs to continue until alternative land discharges are able to be implemented: A number of aspects related to implementation mean that WDC needs a long-term consent. In my view, 20 years as suggested by the reporting officer is too short, and I ask that a term of 35 years continue to be considered by the Hearing Panel.

OUTCOME SOUGHT

30. I request that the consents be granted for a term of 35 years with the conditions as proposed in Version 22.

Stephen Murray Heath

16 November 2020