

BEFORE THE INDEPENDENT HEARING PANEL

UNDER

the Resource Management Act
1991 (**RMA**)

IN THE MATTER

the Proposed Far North District
Plan (**PDP**)

STATEMENT OF EVIDENCE OF JEFFERY JOHN GARNHAM ON BEHALF OF

Public Health

13 May 2024

1. SUMMARY OF EVIDENCE

- 1.1 The evidence primarily provides clarity to the intent of Public Health – Te Whatu Ora submission and further submission relief seeking the amendment of specific objectives and provisions of the Far North District Council Proposed District Plan (“**PDP**”) to provide for the protection of people and community public health and safety.
- 1.2 From a public health perspective, the Resource Management Act 1991 (“**RMA**”) is considered critical public health legislation. The need for public health to be included throughout planning documents to give effect to the Section 5 of the RMA is emphasised, with commentary on the need for alignment with National Policy Statements that are relevant to Public Health.

2. INTRODUCTION

- 2.1 My full name is Jeffrey John Garnham. I am a Health Protection Officer with Te Whatu Ora – Health New Zealand as part of the Te Tai Tokerau Northern Region Te Whatu Ora Public Health Northland. Prior to the health reforms Ngā Tai Ora Public Health Northland were known as Northland District Health Board Public Health Unit reporting to the Ministry of Health. I am based in Kerikeri but undertake my work throughout Northland.
- 2.2 I am a qualified Health Protection Officer having a New Zealand Certificate in Science (Chemistry), National Diploma in Environmental Health Science, National Diploma in Drinking Water Assessment. I have over 30 years’

experience as a Health Protection Officer. During this time, I have been employed in various roles as an Environmental Health Officer (via contract) Far North District Council, Drinking Water Assessor, Warranted Biosecurity Officer, Hazardous Substances Enforcement Officer, with the overarching function of a Health Protection Officer including experience with:

- (a) Processing applications for permission for the use of Controlled Substances under Section 95A of the Hazardous Substances and New Organisms Act 1996 (“**HSNO**”) (primarily cyanide and 1080 based toxins), assessing whether there is a public health risk and setting appropriate permission conditions.
- (b) Approval and auditing of Food Safety Plans and Water Safety Plans.
- (c) Submitting on Resource Management Act 1991 (“**RMA**”) plan changes and consents. These have ranged from regional plans and district plan changes through to subdivision and land use resource consents, with the latter being primarily in the Far North District.
- (d) Part of the team undertaking surveillance for the detection of exotic mosquitos at ports of first entry in Northland.
- (e) Responding to public enquires and complaints where there are concerns relating to public health matters. These are diverse and include matters relating to hazardous substances, often involving incompatible activities and sensitive, vulnerable populations.
- (f) I have undertaken extensive work in compliance, monitoring and enforcement, using a wide range of diverse legislation such as the Health Act 1956 and its regulations, the Food Act 2014, RMA (in particular Sections 16 and 326).
- (g) I am member of Te Whatu Ora National Public Health Service (previously the Ministry of Health) Hazardous Substance Focus Group from its inception 18 months ago.
- (h) I have worked on the ground in numerous civil defence emergency responses to natural hazard events including in three major flood events: North Hokianga in 1999 and two in Far North District in 2007) and drought response in 2022 and COVID response.

(i) I was also involved in a minor capacity in the Waiharara Fire in 2022.

2.3 I attach a copy of my CV in **Attachment 1** which provides further detail on my experience and expertise.

Purpose and scope of evidence

2.4 This evidence is in respect of a submission by Public Health Northland on Far North District Council's ("**Council**") Proposed District Plan ("**PDP**") in relation to the Strategic Direction chapter.

2.5 My evidence will address the following topics:

(a) Public health;

(b) Reverse Sensitivity

(c) Natural Hazards and climate change Hazards.

(d) Resilient infrastructure

2.6 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in preparing this statement of evidence. 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. I have no conflict of interest to declare with respect of PDP.

3. INVOLVEMENT WITH PDP

3.1 In July 2023 I was tasked with liaison with Barker and Associates on the writing of the submission on PDP, I have been involved in the development of the submission¹ and further submission from a Public Health perspective and on the writing of the Brief of Evidence ("**BOE**").

3.2 I confirm that I have reviewed the Section 42A Report ("**s42A**") and Ms McGrath's evidence in the preparation of my statement of evidence.

¹ Original Submission S516 – see Attachment 2 of Ms McGrath's Planning Evidence and Further submission FS402 – see Attachment 3 of Ms McGrath's Planning Evidence.

4. PUBLIC HEALTH

4.1 In my opinion it is important that the PDP, in particular the Strategic Direction, enable people and communities of Far North District to provide for their health and safety. I describe what health is and its determinants to provide context and to achieve the critical nature of the Resource Management Act 1991 (“**RMA**”) and its associated processes such as district plans to it.

4.2 The World Health Organisation defines health as “as state of complete, physical, mental and social well-being and not the mere absence of disease or infirmity”² with health determinants described as:

“Many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, **the state of our environment**, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact.”³ [Emphasis added]

4.3 Te Whatu Ora describes public health as:

“This means that public health is about

- protecting against community health risks and threats
- preventing illness
- promoting health and wellbeing
- across the whole population or population groups.

² Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. <https://www.who.int/about/governance/constitution>

³<https://www.who.int/news-room/questions-and-answers/item/determinants-of-health#:~:text=To%20a%20large%20extent%2C%20factors,services%20often%20have%20l ess%20of>

Two things that generally distinguish public health from other health areas are that public health:

- keeps people well
- focuses on groups of people, not individuals.
- Public health protects and promotes the health of populations rather than treating diseases, disorders and disabilities in individuals. It is the fence at the top of the cliff.”⁴

4.4 Public Health is also defined as “the science and art of preventing disease and, prolonging life and promoting health through the organised efforts of society”⁵

4.5 In my opinion, in order to be effective, measures to protect the public’s health should wherever possible be precautionary, which from a public health context has been defined as:

“Public Health is inherently about identifying and avoiding risks to the health of populations as well as identifying and implementing positive interventions to improve public health. However traditional public health interventions have focussed on the removal of hazards that have been identified. In contrast, the precautionary principle states that action should be taken to prevent harm even if some cause and effect relationships have not been fully established”⁶

4.6 In my opinion the meaning(s) of public health is/are parallel to or are paraphrasing of Section 5 of Resource Management Act 1991, which states: “which enables people and communities to provide for their social, economic,

⁴ <https://www.tewhātuora.govt.nz/whats-happening/what-to-expect/for-the-health-workforce/public-health-workforce-development/about-public-health/#:~:text=Publicly%20funded%20health%20includes%20all,mental%20health%20services>

⁵ <https://www.wdwb.org.nz/our-community/our-public-health-centre/what-is-public-health/>

⁶ Martuzzi, Marco, Tickner, Joel A. & World Health Organization. Regional Office for Europe. (2004). The precautionary principle: protecting public health, the environment and the future of our children. World Health Organization. Regional Office for Europe. <https://apps.who.int/iris/handle/10665/346211>

and cultural well-being and for their health and safety”. And I consider that the RMA and its associated process, policies and plans is one of, if not the most critical public health legislation in New Zealand as the organised efforts of society.

- 4.7 The Far North District is an area of high deprivation “people in more deprived areas are more vulnerable to environmental risk”⁷, and as such are highly vulnerable populations. Highly vulnerable populations are defined as a population at risk⁸ that has been exposed to an environmental hazard⁹ that they have insufficient resources to prepare or cope with.
- 4.8 In my opinion an understanding population vulnerability is important to ensure that the needs of vulnerable population groups are considered in the planning process.
- 4.9 As such I consider the relief sought by Te Whatu Ora to change the Strategic Direction to increase policy direction and the inclusion of the “community health and safety” is necessary to ensure that there are population centred objectives that ensure sustainable resilient development which:

⁷ <https://www.ehinz.ac.nz/indicators/population-vulnerability/socioeconomic-deprivation-profile/#people-in-more-deprived-areas-are-more-vulnerable-to-environmental-risks>

⁸ Populations at risk potentially include:

- (a) infants and children;
- (b) older adults;
- (c) people with lower socioeconomic status;
- (d) people with a chronic health condition; and
- (e) people with a disability

⁹ These hazards can include natural hazards such as drought, flooding, earthquakes, volcanoes, tsunamis, events related to climate change such as wildfires and rises in sea level, as well as air pollution, water pollution, infectious disease and other environmental hazards.

- a. Avoids, mitigates or remedies adverse environmental impacts on public health of the Far North's populations.
- b. Enhances the physical, mental and social well-being of the communities concerned.
- c. Inequities, be it economic, health or other are where possible are improved.

5. REVERSE SENSITIVITY

5.1 Te Whatu Ora submission has sought a new objective in the Strategic Direction to avoid reverse sensitivity effects between incompatible activities and zones. In the last thirty years I have investigated complaints and issues (often involving cases of illness or health concerns) in the Far North District which had, in my opinion been generated by incompatible land use's being located in close proximity to each other. Many of these adverse effects, in my opinion would have either been avoided or largely mitigated by more stringent planning controls that had prevented the circumstances occurring.

5.2 For example I have observed sensitive activities adjacent to or within horticultural/agriculture/industrial areas, being exposed to dust, spray drift, and noise effects. Many of the circumstances that occurred were effectively unresolvable or required compliance, abatement or mitigation that was costly, difficult to implement and monitor effectively.

6. NATURAL HAZARDS AND CLIMATE CHANGE

6.1 Te Whatu Ora have sought changes and amendments to the Strategic Direction to strengthen policy direction to manage natural hazard risk including response to climate change. I support this relief, in my opinion natural hazards and climate change has a detrimental effect to public health and safety.

6.2 The impact of climate change on health determinants and hence public health was recently summed up:

“Climate change mitigation is an urgent global priority. The health damaging effects in Aotearoa New Zealand were demonstrated by floods and storms that affected northern parts of the country in early 2023. Climate change affects human health directly, via extreme meteorological events; (deaths and injuries

from storms, floods, heatwaves and fires); indirectly, due to changes to the environment and ecosystems; (increases in temperature and/or changes in rainfall patterns affecting food production, food availability, diets and nutrition; altered transmission of communicable diseases) and due to social and economic changes. All of the above impacts will have important effects on livelihoods, household costs and the distribution of income. In turn, these changes have important health impacts.”¹⁰

6.3 A similar viewpoint has been expressed in a recent research paper published in *The Lancet* November 2023¹¹ with regards to climate change and natural hazards which states in relation to RMA “local government plays a critical role in managing climate change effects on health through **land use controls and adaptive strategies**. Their actions must align with national policies and consider health and wellbeing in their communities” with specific reference to natural hazard management the same paper states “Local governments have responsibilities to mitigate natural hazards, including those related to climate change, and protect community health aligning with national policies” (Emphasis added)

6.4 I particularly note the following are examples of risk to public health which in my opinion are directly attributable to natural hazards and will be exasperated by climate change:

(a) Te Whatu Ora’s mosquito surveillance sampling programme show Northland to be the best breeding environment for mosquitos in New Zealand. There are already 3 exotic species established these are fortunately poor transmitters of disease. In my opinion it is a matter of when and not if further exotic mosquitos of greater vector competency for mosquito borne disease are established and we have cases of locally sources diseases such as dengue, and ross river fever occurring.

¹⁰ <https://doi.org/10.1016/j.lanwpc.2023.100954> THE LANCET *Regional Health* Western Pacific November 14,2023

¹¹ Health and climate change: adaptive policy in Aotearoa New Zealand table 1 pg 4 [https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065\(23\)00272-9/fulltext](https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065(23)00272-9/fulltext)

(b) The recent effects of Cyclones Hale and Gabrielle on the actual and potential transmission of enteric disease has been considered in the April 14 2023 New Zealand Medical Journal “It is too soon to determine the full health losses, but it is likely they will be substantial. Previous research in Aotearoa demonstrated that with every heavy rainfall event comes a surge in hospital admissions for children with gastroenteritis. Hawke’s Bay is already seeing an increase in cases of leptospirosis resulting from contact with flood waters on livestock farms. In Napier, the wastewater treatment plant was severely damaged by silt, leaving it inoperable with untreated sewage being discharged to the sea. As a result, kaimoana has been dangerous to harvest and beach-swimming unsafe. The current marine heatwave is not only driving storm severity, but also making the consequences worse, because enteric pathogens flourish in warmer waters”¹².

6.5 Based upon my experience as a drinking water assessor investigating waterborne disease and from working in a number of significant flood events, I consider that an integrated catchment management approach is critical to achieve good public health outcomes for effects of natural hazards and climate change.

7. RESILIENT INFRASTRUCTURE

7.1 The Napier Wastewater treatment plant noted above and the repeated damage to the Paihia Water treatment Plant from flood waters and high suspended solids¹³ are graphic examples of not only the need for integrated Catchment management but also for resilient infrastructure.

7.2 Resilient infrastructure is critical to ensure that risks to health are avoided or at least mitigated by having adequate capacity and being appropriately designed and located to cope with growth and changes that may affect them regardless of the cause. This not only applies to drinking and wastewater

¹² <https://nzmj.org.nz/journal/vol-136-no-1573/superheated-storms-climate-drivers-health-effects-and-responses>

¹³ <https://www.nzherald.co.nz/northern-advocate/news/water-shortages-in-paihia-whangarei-after-floods-damage-treatment-plants/TPNCLBOKAMWRZZIA2SMEFSWUCY/>

systems (3 waters) but also electrical supplies, and telecommunications as noted in Te Whatu Ora's submission.

8. CONCLUSION

- 8.1 The intent of this evidence is to ensure that there an understanding of public health and the importance of RMA in achieving good health outcomes is appropriate emphasis across all levels of the plan, that it's in objectives, policies and at rule levels.