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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STATEMENT OF EVIDENCE OF IAN DAVID MAYHEW – PLANNING

25 June 2021

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1 INTRODUCTION

Qualifications and Experience

1.1 My full name is Ian David Mayhew. I am employed by 4Sight Consulting Ltd (**4Sight**) as a Principal Planning and Policy Consultant and Technical Director.

1.2 I have the qualification of MSc in Geology and a post Graduate Diploma in Geothermal Energy Technology. I am a full member of the New Zealand Planning Institute and am an Accredited Hearing Commissioner.

1.3 I have more than 30 years of experience in environmental and resource management. I have previously held a range of positions with (the then) Auckland Regional Council, firstly as a Water Resource Scientist and ultimately as the Manager, Land and Water Quality. In this role I oversaw the management of urban development-related activities and their potential impacts on land and water quality including earthworks, stormwater discharges, wastewater networks, industrial site pollution and contaminated land.

1.4 I have been a consultant for more than 20 years, initially as a senior consultant at Mitchell Partnerships Ltd. and, prior to joining 4Sight (then Andrew Stewart Limited) in 2011, as a Director of Hill Young Cooper Ltd. In these roles I have gained substantial experience in natural resource management, associated regional plan development/appeals and consent acquisition and stormwater and wastewater network management. My relevant experience includes:

a) Consent acquisition and planning and resource management advice to Metrowater Limited, over a period of approximately eight years. Metrowater was responsible for managing Auckland City's local drainage network (water, wastewater and stormwater) prior to the establishment of the Auckland Council.

b) Developing freshwater and stormwater network provisions for the Auckland Unitary Plan (**AUP**) – including regional policy statement and Auckland-wide objectives, policies and rules – and supporting these through the plan process, including mediation and expert planning evidence to hearings before the AUP Independent Hearing Panel. I also supported the wastewater network provisions through the mediation and hearing process.

c) The recent acquisition of a region-wide stormwater network discharge consent for the Auckland stormwater network, including guiding technical investigations,

preparing the application, tangata whenua engagement, mediation and planning evidence to the Independent Hearing Panel.

d) Several commissions for the Ministry for the Environment on regional freshwater plan approaches and issues across New Zealand. This included the preparation of an "Issues and Opportunities" report, which resulted in a number of subsequent central government initiatives in respect of freshwater management. I was also engaged as one of two independent consultants to assist the Ministry in assessing regional council implementation of (the then) National Policy Statement for Freshwater Management 2014.

e) Acquisition of resource consents and/or designations for major infrastructure including rural land drainage networks, stormwater networks, Auckland's road network and energy projects.

f) Reporting planner for a number of major infrastructure projects, most recently a major industrial wastewater discharge in Southland.

1.5 I am currently advising a number of councils and private clients in respect of projects under the new National Policy Statement for Freshwater Management, 2020 (**NPS-FM 2020**) and the National Environmental Standards for Freshwater 2020 (**NES-F**) including:

a) The review of the discharges (and other) sections of Bay of Plenty Regional Natural Resources Plan;

b) Consent acquisition for a strategic urban growth project in Tauranga; and

c) Water take applications in Northland, Gisborne and the Waikato.

Code of Conduct

1.6 My qualifications as an expert are set out above. I confirm that I have read the Expert Witness Code of Conduct set out in the Environment Court's Practice Note 2014. I have complied with the Code of Conduct in preparing this evidence. Except where I state that I am relying on the evidence of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed in this evidence.

Scope of Evidence

1.7 My evidence addresses the following aspects of the application for resource consents for wastewater overflows (the **Application**):

a) My involvement in the Application (Section 2);

b) An overview of the network and the Proposal (Section 3);

c) A summary of the scope of the Application and notification process (Section 4);

d) A summary of the potential effects of wastewater overflows (Section 5);

e) An outline of the conditions proposed by the Applicant (Section 6);

f) An assessment of the Application against the statutory framework (Section 7);

g) An assessment of submissions (Section 8);

h) Comments on the processing officers report under section 42A of the RMA (s42A Report) (Section 9);

i) Summary and conclusions (Section 10).

1.8 My evidence also contains the following appendices:

a) Proposed conditions of consent (Appendix 1);

b) An assessment against the relevant statutory provisions (Appendix 2); and

c) My response to comments/recommendations from the authors of the s42A Report (Appendix 3).

2 MY INVOLVEMENT IN THE WASTEWATER OVERFLOW CONSENT PROJECT

2.1 4Sight was first engaged by Gisborne District Council (**GDC** or **Council**) in March 2017 to assist in the wastewater overflow consent and I have led 4Sight's involvement in the project from the outset. The initial phase of this involvement was the identification of information gaps for the future Application in the context of the relevant statutory framework, and assisting Council in developing work packages to fill those gaps. A key aspect of this initial work was the implementation of a water quality monitoring

programme to provide robust information on the nature of wastewater overflows and effects on water quality and the wider environment.

2.2 Since that time, I have been closely involved with the Council team in most aspects of the programme and Application. This includes:

a) scoping and overseeing the technical assessments that have been undertaken to assess the potential impacts of wastewater overflow discharges;

b) providing input into, and review of, Council's DrainWise programme and other aspects of wastewater overflow management (including response and monitoring protocols etc);

c) preparing the resource consent Application and assessment of environmental effects;

d) supporting engagement with key submitters;

e) co-ordinating the response to requests for further information;

f) attending and presenting at the prehearing meeting;

g) liaising with the independent processing team to ensure all the necessary information has been provided to enable the processing of the Application; and

h) refining the proposal and associated proposed conditions following submissions.

3 THE PROPOSAL

Gisborne Wastewater System

3.1 The Gisborne Wastewater System (**GWS**) is described in the Application and the evidence of Mr West. It comprises an extensive network of pipes, pumping stations and other components that conveys wastewater from homes and commercial properties to the Gisborne Wastewater Treatment Plant (**WWTP**), which treats the wastewater prior to its discharge via a marine outfall in Tūranganui-ā-kiwa/Poverty Bay.

3.2 The GWS is essential regional infrastructure which provides a sanitation service that is functionally required to service Gisborne's community. Accordingly, it is a lifeline utility specified in the Civil Defence Emergency Management Act 2002 (CDEMA) and

also infrastructure that provides significant health and safety benefits to the Gisborne community.

3.3 As described in the Application[1] and the evidence of Mr West, the GWS has developed and evolved over many years to meet the changing needs and expectations of the Gisborne community and improve performance. As of today, the GWS is sized and operated such that the main elements of the system are sized to cater for up to four times the average flow of wastewater in dry weather (**ADWF**) in the main interceptors and up to six times ADWF in upper catchments. Overall, the GWS is assessed as having been designed adequately to convey six times ADWF. As advised in Mr Garside's evidence, this is consistent with standard practice in New Zealand[2].

3.4 Importantly, the GWS also comprises a large number and length of private pipes and other components. As outlined in the evidence of Mr West, approximately 50% of the reticulated wastewater network is located on private property, being the pipes that take wastewater from individual houses and buildings to the council network, and is owned by the property owner with the other 50% being publicly owned and managed by Council. These two components operate as one system – with both public and private responsibilities – which presents specific management challenges. The delineation between the public and private components of the network is shown graphically in Figure 5 of the Application[3].

Wastewater Overflows

3.5 While for the most part the GWS conveys wastewater efficiently and effectively to the WWTP, discharges from the reticulated network (wastewater overflows) occur from time to time. This is not a situation that is unique to Gisborne, but one which is common to almost all (if not all) wastewater networks in New Zealand – particularly those that have developed over many years. The causes of the overflows are described in the Application and in the evidence of Mr West. However, by way of context there are two types of overflows: wet weather overflows (WWOs) and dry weather overflows (DWOs).

[1] See Section 2
[2] Mr Garside – para 21
[3] Application, Figure 5 at p12

Wet Weather Overflows (WWOs)

3.6 WWOs occur when excessive rainwater/ stormwater enters the wastewater network through inflow and/or infiltration. Over time, stormwater ingress through cracks, joins and cross connections is inevitable and hence a wastewater network is designed and sized to accommodate some stormwater. However, where the combined volume of stormwater and the wastewater flow carried in the network exceeds the capacity of the system, a combination of stormwater and wastewater will be discharged – either through formal (designed) overflow points or otherwise via informal overflow points such as manholes and private gully traps at low points in the system.

3.7 In Gisborne, WWOs are controlled to occur at specific locations and are directed to Gisborne's main rivers. While this is not desirable, it is done to avoid the more significant health risk consequences of overflows occurring through informal overflow points in potentially unknown locations – including on private property – often mixed with flood waters. Overflow points require manual intervention – the opening of a valve and closing it when wastewater/stormwater flows have sufficiently subsided.

3.8 As detailed in the Application, and the evidence of Mr Kanz, Mr West and Mr Garside, flows in the wastewater network exhibit a quick response to heavy rainfall – indicating the primary sources of stormwater ingress have a direct connection to the wastewater network, with those of the greatest impact[4] being:

a) Roof water being piped into the wastewater network;

b) Flood waters over-topping private gully traps; and

c) Leaking gully traps.

3.9 Secondary sources include private laterals (the private pipe that conveys wastewater from a house to the public network) and associated joints. The third, and lowest impact source is leaks in the public mains through cracks and joints.

3.10 The sources of stormwater ingress, and their relative contribution, was explained further in the 2nd RMA section 92 request for information. As discussed in that response, the different nature and design of the private and public network – particularly the limited accessibility of the public network to quick stormwater inflow and the ongoing asset maintenance and replacement required for public drainage networks

[4] Evidence of Mr Kanz, Figure 1 and supporting paragraphs

– gives council and its experts confidence that private sources of stormwater predominate. This is supported by network modelling. I note that the Technical Review accompanying the s42A Report agrees that flow monitoring shows the network is subject to significant direct inflow (fast response)[5].

3.11 As Mr West details, Council has invested in a range of improvements to the network and has refined its monitoring of flows and overflow procedures to progressively reduce the number of active overflow points, only open the overflow valves when absolutely necessary and to close them as soon as possible.

3.12 WWOs are now managed to discharge through specified overflow locations[6] as follows:

a) Primary overflow points (utilised only where necessary);

b) Secondary points, utilised only in large events (between the 5% and 10% Annual Exceedance Probability [**AEP**] events - 2-year and 10 year Annual Return Interval [**ARI**]) as circumstances require;

c) Tertiary overflow points, which may be required to be opened in very large rainfall events (larger than the 10% AEP/10-year ARI).

3.13 In extremely heavy and infrequent rainfall events (larger than the 5% AEP / 20-year ARI), where surface water flooding is extensive and deep, numerous gully traps could be overtopped by flood waters and overflows could occur from both the controlled (primary, secondary and tertiary) and uncontrolled (manholes/private property) overflow points. Accordingly, protecting a network from stormwater ingress in larger events is impracticable.

Dry Weather Overflows (DWOs)

3.14 As described in the Application and the evidence of Mr West, DWOs occur as a result of unexpected problems in the wastewater network resulting in wastewater being discharged from manholes or gully traps and, in rare instances, pump stations. In Gisborne DWOs generally occur where there is a blockage in the network, mostly associated with a third party putting a foreign object in the wastewater system or fat build-up, and can occur as a result of an extended power failure to a pumping station

[5] As summarised at paragraph 9.6 of the s42A Report.
[6] These have been amended following further investigation as discussed later in my evidence

or a break in the network – although as advised by Mr West, the latter two causes are uncommon in Gisborne.

3.15 As they are problem/fault related, DWOs can occur anywhere in the network and the overflow exits the network at the lowest open point upstream of the blockage – typically a private gully trap or a manhole.

3.16 As described in the Application, most DWOs are infrequent, of short duration, small in volume and only approximately one quarter reach a waterway. Given their predominant causes, Council implements a programme of public education to help prevent avoidable blockages and a programme of proactive maintenance (cleaning) of problem areas to reduce material build up that may lead to a blockage. This work is ongoing as these causes are never able to be entirely eliminated. Again, these matters are addressed further in the evidence of Mr West.

Wastewater Overflow Performance

3.17 WWO performance is detailed in Section 2.4 of the Application. Over the past 14 years (from 1 July 2006 to 30 June 2020[7]) there were 34 overflow events – at an average of 2.5 per year – with only one overflow occurring in some years and up to four in wetter years. I am advised that only one WWO occurred in the 2020/21 financial year and that it has been almost one year since that overflow.

3.18 DWO performance is outlined in Section 2.5 of the Application. On average, since 2015/16, DWOs occurred seven times per year, with the most being 12 per year and the least being two per year (2019/20).

3.19 In respect of how this compares with other councils in New Zealand, I assisted GDC to benchmark performance against published overflow information for 2018/19 based on data obtained from the Water New Zealand National Performance Review 2018/19[8].

3.20 While the results of this assessment should be treated with some caution, as councils report overflows differently and weather-related events will vary from district to district in any given year, the comparison indicates that Council's (2018/19) wet and dry weather overflows performance (per connection) is at the low (better) end of the range of participant council performance – both in respect of similarly sized councils and

[7] Annual overflow performance is aligned to financial years rather than calendar years to align with AMP and LTP reporting
[8] Section 2.6 of the Application

across all councils. This indicates that the Council's wastewater system and associated management is comparable to the better end of the spectrum of national practice in terms of overflows.

Future Overflow Performance

3.21 Resource consent for overflows is sought on the basis of measures and actions to ensure that overflows are minimised to the extent practicable and to mitigate adverse effect, including:

a) the DrainWise programme[9], which aims to substantially reduce stormwater inflow to the wastewater network in order to reduce the frequency of WWOs from the current average of 2.5 per year to less than one per two years and to reduce overflow volumes;

b) the Infrastructure Improvement on Private Property Strategy (**IIOPPS**[10]), which is part of the DrainWise programme and provides the approach to addressing the central issue of illegal or poor performing private drainage;

c) refined operational procedures to limit WWOs to only those that are necessary to avoid uncontrolled overflows;

d) ongoing implementation of asset management programmes to ensure that the wastewater network continues to be designed, operated and maintained to minimise the risk of both DWOs and WWOs[11];

e) education in respect of the wastewater network, given that a significant cause of DWOs is third party actions[12];

f) response and monitoring protocols to minimise risk, if and when overflows occur;

g) on-going meaningful engagement with tangata whenua and incorporating matauranga Maori into monitoring;

h) transparent reporting and review.

[9] Described further in the evidence of Mr Kanz
[10] Appendix B of the Application and described further in the evidence of Mr Kanz
[11] Matters in paragraphs (c) and (d) are described further in the evidence of Mr West
[12] Described further in the evidence of Mr Kanz and Mr West

3.22 The DrainWise programme in particular is central to improving the overflow performance of the GWS and, as described in detail by Mr Kanz, is a comprehensive and multi-faceted programme that incorporates elements including:

a) Property Inspections and minor public-funded works – to identify drainage problems and fix the easy ones on the spot;

b) Compliance and enforcement in respect of illegal drainage, carried out in accordance with Council's IIOPPS;

c) Public drains on private property – providing stormwater drainage extensions onto private property where needed;

d) Education and Awareness – which is essential to reduce both WWOs and DWOs; and

e) Public network upgrades and renewals – on-going works to continue to improve the public component of the network and its performance.

3.23 In my opinion, this is a very comprehensive and detailed programme that has the aim of inspecting every property that connects to the GWS and to set in train a process to resolve problems in a way that is affordable to the community, particularly those property owners who have drainage problems they must address. This is coupled with the other components listed above and described in Mr Kanz's evidence. The s42A Report writers concur with this, stating that '*the DrainWise Programme is an appropriate and effective method to engage with the community and to progressively reduce the issues of inflow from private properties'*.[13]

3.24 Mr Kanz's evidence details the current implementation of the DrainWise programme across Gisborne. This clearly demonstrates that it is not a theoretical programme, but one that is being implemented with success. Furthermore, the full DrainWise programme is appended to Mr Kanz's evidence, showing the structured approach to its implementation. Resourcing for the programme has been included in Council's Long Term Plan, as advised by Mr Wilson.

3.25 The future performance targets that are intended to be met are included in the draft conditions of consent (Appendix 1 of my evidence). As I discuss later in my evidence, it is intended that targets will be reset at year 10 of the consent.

[13] S42A Report – para 1.15

3.26 Response protocols – for both DWOs and WWOs are currently being updated and will be provided prior to, or at, the hearing. While these are operational protocols and are currently being implemented, some further changes may be required as a result of this consent hearing. This is provided for under the proposed conditions of consent.

4 THE APPLICATION AND NOTIFICATION

Scope of the Application

4.1 Consent is sought under Tairāwhiti Resource Management Plan (**TRMP**) for wastewater overflow discharges from the GWS, subject to a range of actions and measures that seek to progressively reduce overflow frequency, volume and risk to the extent practicable and to appropriately manage health and other risks if and when overflows occur.

4.2 As detailed in the Application, it relates to overflows from the wastewater system that services the Gisborne Reticulated Services Area[14], including any new wastewater network that is constructed within this area and covers the following:

- The point source discharge of untreated sewage/wastewater, resulting from overflows from wastewater reticulation, during wet weather to land or freshwater. Consent for this activity is sought as a restricted discretionary activity under Rule 6.2.3(10) of Part C6 of the TRMP.
- The point source discharge of untreated sewage/wastewater, resulting from overflows from wastewater reticulation during dry weather, to land or freshwater. Consent for this activity is sought as a non-complying activity under Rule 6.2.3(15) of Part C6 of the TRMP.
- The point source discharge of untreated sewage/wastewater, resulting from overflows from wastewater reticulation in both dry and wet weather, to the coastal marine area (CMA). Consent for this activity is sought as a non-complying activity under Rule 2.6.2(6) of Part D of the TRMP.

4.3 In respect of the last point, I advise that there are no known direct discharges of wastewater to the CMA (there are no WWO points that direct wastewater to the CMA and no wastewater pipe bridges located over the CMA) and none are proposed in the future. Accordingly, a coastal permit is only being sought out of an abundance of

[14] See Figure 3 of the Application

caution to cover the extremely unlikely event of an unexpected incident that causes wastewater to flow directly to the CMA.

4.4 Consent is sought for overflows from both formal and informal overflow points to cover the potential for discharges from any part of the network and is necessary given the unpredictability of DWOs. Finally, the resource consents are sought subject to the improvements and management regime described in the Application and proposed conditions, which seeks to progressively reduce overflow frequencies and volumes to meet specified objectives and targets and to manage and minimise the effects/risks of overflows if they occur.

4.5 As the Application for both wet and dry weather overflows have been sought together, the Applications are 'bundled' and are to be assessed as a non-complying activity. However, in other circumstances the Application for wet weather overflows would be a restricted discretionary activity. In this regard, I note that the matters of discretion are broad.

Pre-notification Engagement

4.6 Prior to the Application being lodged, Council undertook meetings with tangata whenua to better understand the cultural impacts of the discharges and how (or whether) cultural effects can be mitigated to some extent. This collaborative engagement was facilitated by Mr Kanz and is summarised in the Application and Mr Kanz's evidence.

4.7 Council also undertook engagement with a range of stakeholders including:

a) Hauora Tairāwhiti;

b) Water Users Groups (waka ama, surf and boardrider clubs, yacht clubs); and

c) Interested Stakeholders (Department of Conservation, Fish and Game, Gisborne Port and iwi representatives).

4.8 The aim of this pre-lodgement engagement was to advise of the Application and receive initial feedback to help frame the Application and ensure that it addressed key issues. Notes from the meetings were attached as Appendix Q to the Application.

Notification

4.9 As indicated in the Reporting Planner's report prepared under section 42A of the RMA (**s42A Report**), the Application was publicly notified at the request of Council (as

applicant) in August 2020 with a six-week submission period that closed on 16 September 2020. This period is longer than that prescribed in the RMA and was to ensure all parties had sufficient time to input into the notified consent process.

4.10 A total of 21 submissions were received, with 19 in opposition and 2 with conditional support. I address the submissions in Section 9 of my evidence below.

Further Information (section 92) Request

4.11 A request for further information was provided to Council by the independent processing team on 6 November 2020. The s92 request covered a range of matters and the response to this request, together with the individual technical responses, was provided on 29 January 2021.

4.12 A further clarification request was made on 3 March 2021, which was responded to on 21 April 2021. This further clarification largely related to wastewater modelling and stormwater matters.

4.13 Both these responses were uploaded by GDC Regulatory onto Council's webpage for the Application:

https://www.gdc.govt.nz/consents-and-licenses/notified-consents/notified-consents/gisborne-reticulated-services-area

Pre- Hearing Meeting

4.14 A prehearing meeting was held on Tuesday 23 March 2021 and was chaired by Mr Patrick Willock. I attended the meeting, together with Mr West and Mr Kanz for Council, and presented a PowerPoint outlining the key aspects of the Application. A summary of work and actions completed post-lodgement of the Application (including through the two responses to further information requests noted above) was also provided.

4.15 A copy of the minutes from the prehearing meeting are appended to the s42A Report[15]. They accord with my own notes from the meeting. In respect of the identified actions, I advise:

Points 1 and 2[16]: Information regarding planting and clearing of the creek and effect on fish life and evaluation of the stream.

[15] Appendix 2
[16] Minutes from Pre-Hearing Meeting – 23 March 2021

a) This is discussed in Mr Kanz's evidence. The Owen Stream (adjacent to Turenne St/Seymour Rd) was walked as part of the Application. Mr Kanz advises[17] that Council is undertaking a detailed watercourse assessment, which will provide information on freshwater values, will identify maintenance requirements in the stream, as well as potential improvement projects.

Point 3: The s92 report on the Turenne St/Seymour drain (creek) to be put on the website

b) This report is on the notified consent webpage as Appendix G to the s92 response.

Point 4: Meeting between Mr West, Mr Kanz and Mr Webb re drainage

c) This was undertaken on 16 April 2021 and I am advised that this matter was resolved.

Point 5: Application information and links confirmed, including options to identify and assist private land owners

d) This is on the notified consent webpage. The IIOPPS is Appendix B of the Application.

Point 6: Additional information provided to all parties well before the hearing

e) The section 92 response and subsequent clarification were uploaded on the notified consent webpage and available to all parties.

Ongoing Engagement

4.16 Council has offered or undertaken a number of meetings with some submitters to clarify and respond to issues as necessary. Some of these submitters attended to the pre-hearing meeting while others indicated a preference for a 'one-on-one' meeting. I have been involved in some of those interactions, while Council has led others. I advise as follows:

Ministry of Education (MoE)

4.17 MoE's concerns relate to potential adverse effects on schools and early childhood centres and the need to ensure that risks are minimised, including notification of, and

[17] Mr Kanz, para 78

liaison with, schools and childhood centres should an overflow potentially affect them. A workshop was held on 22 March 2021 to discuss MoE's concerns and how they may be addressed in the conditions and response protocols and an agreement 'in principle' was reached.

4.18 Proposed changes to the WWO and DWO response protocols, including notification of schools and early childhood centres were made. These were provided to MoE on 8 June 2021. At the time of preparing my evidence, I had not received a response from the Ministry.

Forest and Bird

4.19 A meeting was held with a representative from Forest and Bird on 10 May 2021 to discuss their submission and concerns. This was a general discussion around the Application and the proposal to reduce overflows. Forest and Bird advised they would consider their position further.

Ngāti Oneone

4.20 As outlined in the evidence of Mr Kanz, representatives of Ngāti Oneone participated in the pre-consent engagement process as part of the KIWA Group. Ngāti Oneone have lodged their own submission.

4.21 A representative of Ngāti Oneone was contacted on 15 March 2021 and 13 May 2021 and an electronic copy of the lodged Application was provided, together with links to the information. Council's offer to meet and discuss was not taken up.

Te Aitanga-a-Māhaki Trust

4.22 A representative of Te Aitanga-a-Māhaki Trust was contacted on 15 March 2021. They advised that they were kept up to date with the Application through the KIWA Group meetings and an additional meeting was not required.

Rongowhakaata Iwi Trust

4.23 A short meeting was held with a representative of the Rongowhakaata Iwi Trust on 16 March 2021 as an initial discussion on the Application. General concerns with overflows and the management of public health risk, including the survival of pathogens in marine sediments, were raised.

4.24 Rongowhakaata Iwi Trust continue to be part of the KIWA Group, which is discussed in Mr Kanz's evidence.

Hauora Tairāwhiti

4.25 A meeting was held with Osman Mansoor and Cathy Walker on Monday 8 March 2021. The Application was discussed in general, and GDC provided an update on the primary overflow into Owen Stream, specifically measures to avoid overflows into that stream in the future.

KIWA Group

4.26 The KIWA Group has been Council's primary vehicle for on-going engagement with tangata whenua. Mr Kanz addresses this engagement in his evidence.

Changes Since Consent Lodgement

4.27 Since the resource consent was lodged there has been several amendments to the Application. These do not change the scope of the Application, but rather are targeted at minimising adverse effects and improving overflow management and response. These are:

a) A change in the location and classification of the primary overflow in the Seymour/Turenne area.

b) Changes to the response and notification protocols for DWOs and WWOs including the addition of parties to be notified in the event of a wet weather overflow. These changes were made following the prehearing meeting and discussions with MoE. The monitoring requirements for DWOs that reach a waterway were also expanded following advice from Council's ecology expert, Mr Shane Kelly. As previously advised, the updated protocols will be provided prior to, or at, the hearing.

c) Updated conditions in response to the pre-hearing meeting and the submissions. These are attached as Appendix 1 to my evidence and I address these later in my evidence.

4.28 The most significant of these amendments is the change in location and status of the overflows in the Seymour/Turenne area. As Mr Kanz and Mr West outline, this area has been the subject of investigation and work for some time. Following the significant

interest and concern expressed in the submissions by property owners and schools in the area, Council has undertaken further investigations to assess whether this overflow can be removed. It has concluded that the overflow can be diverted to a location adjacent to the Waimata River and both the existing and new overflow be classified as tertiary (used only in very large rainfall events – if at all). Mr Kanz advises that the works necessary to enable this are currently being designed and budget has been made in the 2021/22 financial year to construct the necessary changes.

4.29 In my opinion, this is a very positive outcome that will reduce both health risks and potential environmental effects and is a good example of the work that is proposed under the consent to progressively reduce overflow frequency, volume and adverse effects. I propose conditions to reflect this change, including an updated map of overflow locations that will apply once the works are completed.

5 POTENTIAL EFFECTS OF THE ACTIVITY

5.1 While consent processes focus on the adverse effects of activities, it is also important to recognise the positive benefit that a well-functioning wastewater drainage network provides to Gisborne's community. An effective and efficient wastewater network is fundamental and essential (lifeline) infrastructure in an urban environment and an element of all towns and cities.

5.2 The network provides for the transport of wastewater from homes, commercial premises and other facilities for treatment and disposal. Wastewater networks such as Gisborne's are not static, they expand to meet the needs of a growing city and developed and improved to meet changing community, cultural and environmental expectations. As with all wastewater (and drainage) networks, this process of expansion and improvement is on-going.

5.3 All wastewater systems include the provision for overflow relief – it is a part of the design of systems to protect them from excessive flows and to enable overflow discharges to be controlled rather than occur in an uncontrolled and potentially random manner. Additionally all wastewater networks are subject to occasional failure and blockages leading to largely unpredictable and unavoidable DWO events. Proactively minimising the likelihood of DWOs and resolving these failures and blockages as efficiently as possible is a common issue faced by all wastewater network operators.

5.4 Council has undertaken a number of assessments to understand the performance of the wastewater network and the nature and extent of potential adverse effects

associated with overflow discharges, both dry weather and wet weather. These assessments were provided as appendices to the Application and are addressed in expert evidence to the hearing. Below I provide a brief overview of each assessment and its key conclusions.

Gisborne Wastewater Network Model Updates and Upgrade – Beca 2017

5.5 The Gisborne Wastewater network model has been developed, calibrated and refined over a number of years as outlined in Section 2.3 of the Application and Mr Garside's evidence. The model assists the management of the wastewater network in a number of ways:

a) understanding the performance of the network and its capacity to convey dry weather flows;

b) understanding network performance in wet weather;

c) identifying the network capacity upgrades necessary to meet desired levels of performance;

d) Predicting overflow volumes under specified rain events.

5.6 As identified in the Application[18], and confirmed by Mr Garside, the model has confirmed that the Gisborne wastewater network has been designed and constructed adequately to convey six times ADWF without overflowing.

5.7 However, as Mr Garside explains, the GWS is subject to a high level of fast-response (direct) stormwater inflow and as a result, overflows in large rain events. Over time, the model has been updated and specifically calibrated to enable it to model rain-induced overflows. As is identified in the response to the 2nd request for further information, the model was calibrated against flow information that was collected in areas of the network that are subject to high stormwater ingress and subject to overflows to enable it to accurately represent overflow performance.

5.8 The model has then been used to model overflows volumes in specified rain events (the 2 year ARI and 10 year ARI events) that this information was subsequently used in other assessments, including to predict wastewater dispersion dilution and associated potential adverse effects.

[18] Section 2.2.2

Analysis of Rainfall and Overflow Events

5.9 WWOs can occur in periods of heavy rainfall. To assess whether a correlation between rainfall events and overflows could be determined, Council undertook a detailed statistical analysis of rainfall and overflow events. This was undertaken by Ms Bridget Bosworth and provided as Appendix D of the Application and is discussed further in Ms Bosworth's evidence.

5.10 The aim of the assessment was to identify whether there was a clear correlation between rainfall duration/intensity and the opening of overflow valves. Ms Bosworth examined 15 rainfall events when the overflow valves were opened and 7 high rainfall events when the valves were not opened, all between April 2014 and February 2020. She analysed rainfall data from 5 rain gauge sites around Gisborne city which Council either owns or manages and focused on rainfall duration intensity and ARI to see if there was a pattern between the rainfall event and the opening of the overflow valves.

5.11 The overflow valves were opened on nine occasions when the rainfall had an ARI of more than 2 years. There were also six occasions when the overflow valves were opened for rainfall events when the ARI was less than 2 years. The analysis indicated that each rainfall event is different and there is currently no clear relationship between rainfall duration/depth and the point at which the overflow valves are required to be opened[19]. She considers that 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 and that the overflow valves being opened could also be contributed to by other factors, e.g. a blockage in the system[20]. In my opinion, this latter conclusion supports the importance of effective network maintenance to reduce the likelihood of both DWOs and WWOs.

5.12 Notwithstanding Ms Bosworth's conclusion that there is currently no clear relationship, Council still considers it beneficial to continue to analyse and report on rainfall intensity and duration for overflow events. Further analysis may provide a clearer indication of critical rainfall events, which in turn may aid management and refine priorities for upgrades.

[19] Ms Bosworth – para 23
[20] Ms Bosworth – para 24

5.13 Accordingly, a condition of consent is proposed requiring a similar analysis to be provided on an annual basis as part of consent performance reporting. I note that Ms Bosworth supports this.[21]

Water Quality

5.14 Council undertook monitoring of water quality in Gisborne's main rivers (the Taruheru, Waimata, Waikanae, Kopuawhakapata and Tūranganui during and following seven overflow events between April 2017 and June 2018. Analysis of the data from this sampling was provided in Appendix I of the lodged Application and the s92 response titled 'Technical Note – Gisborne District Council – Wastewater Overflow Consent' dated January 2021, which was included as Attachment D to the s92 Response dated 29 January 2021. This analysis of water quality effects was prepared by Dr Peter Wilson, as detailed in his evidence.

5.15 Dr Wilson assessed the existing environment to provide context for the wastewater overflow analysis by analysing state of the environment monitoring data. He advised that at times, the water quality in Gisborne's urban rivers is degraded due to elevated levels of contaminants (faecal bacteria, sediment, nutrients, and heavy metals) that are unrelated to wastewater overflows.

5.16 The greatest effect of WWOs on water quality is a large increase in faecal bacteria; faecal bacteria concentrations can be up to twice as high than they are during a rainfall event with no wastewater overflows. However, faecal bacteria concentrations exceeded the recreational water quality guidelines during heavy rainfall with and without wastewater overflows, indicating that the water was highly likely to be unsuitable for swimming at these times.

5.17 Wastewater overflows contribute to the levels of nutrients, including ammonia, total suspended sediments, and metals; however, the dominant source of these contaminants during heavy rainfall is typically catchment (non-wastewater) derived. In respect of these:

a) Dr Wilson advises that WWOs are unlikely to give rise to ammonia toxicity effects, but that a DWO into a small watercourse could exceed the NPSFM 2020 annual maximum bottom line. This reinforces the need for prompt and effective response to these largely unavoidable discharges.

[21] Ms Bosworth - para 26

b) Both DWOs and WWOs are unlikely to result in nitrate toxicity effects.

c) DWOs could temporarily decrease oxygen concentrations near the discharge location particularly if a significant DWO enters a small stream. Again, this reinforces the need for prompt and effective response.

5.18 In respect of WWOs, contaminants levels in the rivers returned to pre-event concentrations within about 48 hours of the rainfall event. This period is no longer than would be expected following heavy rainfall with no overflows.

5.19 Dr Wilson concludes that GDC has committed to upgrading wastewater and stormwater systems and reducing the frequency and volumes of overflows as part of its DrainWise Wastewater Discharge Reduction Programme. Reductions in the frequency and volume of wastewater discharges are likely to result in overall improvements to the water quality in Gisborne urban rivers.

5.20 Dr Wilson recommends consent conditions in relation to signage during and after overflow events and a revised monitoring plan to measure instream microbiological contaminants during overflow events – both of which have been addressed within the Application (and response protocols).

Aquatic Ecology

5.21 As indicated in the s42A report, wastewater overflows have the potential to affect aquatic ecology. Accordingly an assessment of ecological effects of wastewater overflows was commissioned and undertaken by Dr Shane Kelly of Coast and Catchment, as detailed in Appendix H to the lodged Application and Dr Kelly's evidence.

5.22 Dr Kelly advises that wastewater overflows have the potential to adversely affect receiving water, habitat quality and aquatic communities by increasing nutrient concentrations and productivity, through the deposition and decomposition of organic matter, and through the effects of toxic contaminants. However, the actual ecological effects caused by any particular overflow depends on the nature of the discharges, discharge loads and frequency, whether overflows occur during dry or wet weather, and the values and assimilation capacity of the receiving environment.

5.23 The ecological assessment, which integrated information on existing water and sediment quality, hydrodynamic modelling, and benthic ecology (which included sampling directly below major overflow points), found little evidence of controlled

overflows (WWOs) having adverse ecological effects. Dr Kelly's overall conclusion was that the potential for the controlled wastewater discharges to degrade receiving water quality sufficiently to cause more than minor adverse ecological effects appears to be low.[22]

5.24 However, the potential for substantial (most likely short-term) impacts from DWOs cannot be discounted if they make their way into streams and watercourses. He supports putting effective systems and processes in place to prevent, detect and respond to such – including public awareness campaigns; monitoring and cleaning schedules and procedures; and contractor response plans.

5.25 In response to Dr Kelly's concerns regarding the potential for DWOs to have adverse effects on small waterways (although this is not a frequent occurrence), I worked with Council to refine its DWO response protocol to incorporate enhanced monitoring of waterways should they be affected by a DWO (adopting Dr Kelly's recommended parameters). This is provided for in the updated DWO Response Protocol that will be provided to the Panel at, or prior to, the hearing. Dr Kelly supports this monitoring[23].

Modelling / Dispersion

5.26 A hydrodynamic model of the rivers and Tūranganui-ā-kiwa/Poverty Bay was developed to model the dispersion of wastewater over a range of discharge scenarios and conditions (Appendix J to the lodged Application) and the evidence of Dr Beamsley. The model encompassed the full area of the bay and beyond, with model cells being concentrated in the rivers and near shore environments.

5.27 Overflow dispersion was modelled for the following discharge scenarios:

a) 2-year ARI rain event – current performance of the wastewater network;

b) 10-year ARI rain event – current performance of the wastewater network;

c) 10-year ARI rain event – future performance of the wastewater network following the successful implementation of the DrainWise programme and removal of 85% of stormwater inflow.

5.28 The dispersion modelling of wastewater overflows consisted of simulating overflow discharges for both 2 and 10-year ARI events, using modelled overflow discharge

[22] Dr Kelly – para 20
[23] Dr Kelly – para 28

volumes from the wastewater model (which is calibrated to monitored flows), under a range of climatic conditions. The modelling assessed the existing stormwater and wastewater drainage regimes for both 2 and 10-year ARI events and the 10-year ARI level for the future stormwater and wastewater drainage network assuming the implementation of the DrainWise programme resulting in a substantial reduction in stormwater inflow as described elsewhere in this Application.

5.29 Dr Beamsley's evidence shows how the discharge 'plume' tracks under various discharge scenarios and tidal and wind conditions in the bay. Of particularly note is the change in extent and concentration for enterococci levels pre and post the implementation of the DrainWise programme[24] – demonstrating the benefits of substantially reducing stormwater inflow.

5.30 Dr Beamsley's dispersion modelling was also an input into other assessments.

Public Health Risk

5.31 Wastewater overflows have the potential to affect public health, primarily in relation to swimming/recreating or consuming shellfish collected from areas that are affected should an overflow occur. The primary risk is associated with WWOs, as they are substantially larger and of longer duration than DWOs. Accordingly, Council commissioned Dr Chris Dada (formerly of Streamlined Environmental and now of QMRA Data Experts) to undertake a Quantitative Microbial Risk Assessment (**QRMA**) to quantify this risk. The assessment was provided as Appendix M of the Application.

5.32 In his evidence, Dr Dada describes the process for developing and applying the QRMA and notes that a 'precautionary and extremely conservative approach' was adopted to over, rather than under-predict potential risk[25]. He further advises that a key objective of the QMRA was to estimate health risks before and after the implementation of the DrainWise programme. He assessed risks for three scenarios – current overflow discharges under both a 2 and 10 year ARI rainfall event and future (post DrainWise) discharges under a 10 year ARI event – noting that the DrainWise Programme is aimed at achieving no overflows in a 2 year ARI (50% AEP) event and predicted risks at 14 identified potential contact sites (either swimming or shellfish gathering, or further out in the bay).

[24] Dr Beamsley - Figures 7, 8 and 9
[25] Dr Dada – para 19

5.33 Dr Dada concludes:

a) During the two current overflow discharge scenarios, overall predicted enteric illness risks associated with contact recreation (among children being the most sensitive receptors) were below the no observable adverse effect level (**NOAEL**) at five of the 14 sites and low enteric illness risks were predicted to be at the nine other exposure sites. Following the implementation of the DrainWise programme, risks are predicted to be below the NOAEL at all sites.

b) During the two current scenarios, overall predicted acute febrile respiratory illness risks among children who engage in secondary contact recreation (e.g. kayaking) were below the NOAEL at four of the 14 exposure sites and low at the remaining 10 sites. Again, predicted risk reduced to below the NOAEL at all sites following the successful implementation of the DrainWise programme.

5.34 In respect of these conclusions, I note the following:

a) A 10-year rainfall event is a large rainfall event – the scale of which only occurs once on average every ten years.

b) As Dr Dada advises, he has assessed risk on the basis that an event has occurred. The DrainWise programme will reduce the frequency of overflow events, such that WWOs occur less often.

c) Health risks reduce over time, and will be less within 48 hours after an overflow event.

d) Exposure risk in the period immediately following an event can be mitigated by appropriate warnings and signage and Dr Dada supports improving signage, including the installation of permanent signage in areas that are affected by multiple urban and rural discharges (not just WWOs).

e) Dr Dada's assessment did not consider cumulative risk (from other sources), but instead took an extremely conservative approach in the assumptions used in the assessment.

5.35 In respect of shellfish consumption, Dr Dada predicts low to high risks at potential shellfish harvesting sites under current 2 and 10 year ARI discharge scenarios and low to moderate risks under the future 10 year ARI scenario. In regard to the latter future

scenario, as indicated in Table 7 of the QMRA Report[26], moderate health risks were rare and only applied to a few sites under certain wind conditions.

5.36 Notwithstanding the potential reduction in health risk associated with consumption of raw shellfish following the implementation of the DrainWise programme, Dr Dada raises a concern that viruses may persist in the flesh of shellfish for some time and that this should be assessed to help ensure that health risk is appropriately managed – for example health warnings should be in place for longer. Accordingly, I have included a requirement for this assessment as a condition (Condition 16 in the proposed conditions) as I discuss later in my evidence.

5.37 One further issue that Dr Dada addressed was the risk of skin infections, which has recently been raised as a potential issue. His conclusion is that the risk posed by overflows in respect of skin infections is very low.

5.38 Overall, Dr Dada supports Council's multi-faceted approach to overflow prevention, management and response to address health risks associated with infrequent wastewater overflows. This includes consent conditions that ensure overflow discharges are managed/reduced to the extent possible, with appropriate monitoring and reporting if they do occur, along with notification protocols and procedures which will manage any potential health risks in an appropriate manner[27]. In my opinion, this response is provided for in the Application and associated overflow response protocols.

Ecology (Emerging Organic Contaminants)

5.39 Emerging organic contaminants (**EOCs**) are any synthetic or naturally occurring organic chemical that is not commonly monitored in the environment but has the potential to enter the environment and cause known or suspected adverse ecological and (or) human health effects. Major sources of EOCs include treated wastewater discharges, wastewater overflows, stormwater and landfill leachate. A risk assessment of EOCs in wastewater overflows was undertaken by Dr Michael Stewart of Streamlined Environmental Limited (Appendix N to the lodged Application).

5.40 As detailed in Dr Stewart's assessment and evidence, untreated and undiluted wastewater overflows in Gisborne contain EOCs at concentrations that have the potential to lead to adverse ecological effects and potentially effects on human health.

[26] Appendix M of the Application
[27] Dr Dada – para 88

However, his assessment concludes that the potential for adverse ecological effects and the current risk from EOCs is low due to dilution in the receiving environment. He also considers that reduction in the volume and frequency of stormwater and wastewater overflows (once the DrainWise programme is implemented) will further reduce the ecological risks from EOCs.

5.41 Dr Stewart notes a potential for bioaccumulation in marine species has been identified for six of the priority EOCs measured, however this bioaccumulation rate will reduce once the DrainWise programme is implemented.

5.42 Notwithstanding this conclusions, Dr Stewart recognises that information and may change during the term of the consent and that is would be prudent to reassess risk posed by EOC in the future. He recommends that future monitoring should include a review of the literature and incorporation of this into a modified monitoring programme for ecological risk and (if appropriate) human health consumptive risk from EOCs in marine species.

5.43 Given this recommendation, I have included a condition that requires this assessment within ten years of the commencement of the consent as recommended by Dr Stewart. The results of this assessment will then feed into the proposed ten-year review that I discuss later in my evidence.

Cultural Effects

5.44 An assessment of tangata whenua values and the cultural effects of wastewater overflows has been undertaken by the KIWA Group in their Engagement Report (Appendix L of the lodged Application). A summary of this work and actions post lodgement of the Application are described in Mr Kanz's evidence.

5.45 The KIWA Group engagement was a technical engagement as experts in mātauranga Māori, mauri, and tikanga, with the work reflecting those aspects. It was emphasised that contributions by iwi and hapū representatives in the group work would not impact on any group's ability to be involved in the formal consent process once that started. Tangata whenua have provided further input on cultural effects through the submissions process.

5.46 As Mr Kanz describes, an intensive engagement process was followed, with the intention of working together with relevant iwi and hapū to enable accurate and

comprehensive assessment and reporting on the effects of wastewater overflows on tangata whenua.

5.47 The wastewater overflows effects were summarised by the KIWA Group as follows:

a) The practice of allowing wastewater overflows is unacceptable to tangata whenua as it affects them deeply spiritually, socially, and culturally.

b) The wastewater overflows have a significant negative effect on tangata whenua, in terms of cultural identity, mauri, tikanga, wairua, kaitaikitanga, the practice of customary rights and protocols, and substantially diminishing or making it impossible to practice some fundamental elements of Māori society and culture.

c) Human wastewater, particularly containing mortuary wastewater, mixing with natural water is extreme tapu for tangata whenua.

d) Tangata whenua consider that they have not been able to exercise their role as kaitaiki in terms of the wastewater overflows into the city's rivers.

e) While the reduction in wastewater overflows proposed by Council will improve the above and this is considered a positive step, tangata whenua will continue to object to wastewater overflows and seek to work together with Council with the objective of eliminating overflows.

5.48 Mr Kanz advises[28] that key recommendations from the KIWA Group were that tangata whenua need to be engaged on an ongoing basis moving forward, in a meaningful, authentic, and practical manner, and that they should be provided with opportunities to work alongside Council to resolve these issues.

5.49 This is reflected in the proposed condition of consent that include the establishment of a Tangata Whenua Reference Group to provide input and contribute to supporting tangata whenua in their exercise of kaitiaiki of the environment, and incorporating matauranga Maori into monitoring conditions. These are given effect to in the Application through proposed conditions of consent (Appendix 1) that include:

a) The establishment of a Tangata Whenua Reference Group to recognise the kaitiakitanga of Māori who have a kaitiaki relationship with the wai and provide a

[28] Mr Kanz – para 67

forum for discussing the cultural aspects and effects of the operation of the consent and input and advice on a range of matters;

b) The collaborative development and implementation of a Tangata Whenua Cultural Monitoring Plan to assess and report on the performance and effects of the wastewater network from a cultural perspective; and

c) The provision of a report as part of Council's annual reporting, to enable Tangata Whenua to provide their own perspective on the implementation of the resource consent.

6 PROPOSED CONDITIONS OF CONSENT

6.1 Proposed (draft) consent conditions were included in the lodged wastewater overflows Application. Amendments have been made as a result of matters raised in response to submissions at the pre-hearing meeting, advice from Council's technical experts and in response to comments provided as part of the s42A Report.

6.2 In the following paragraphs I provide a brief introduction to the conditions and discuss the material changes that I have proposed from the Application version. Please note that I have used the numbering of conditions corresponding to that in Appendix 1 of my evidence and have identified where I have incorporated suggestions from the s42A report.

6.3 Condition 1 is included to ensure that the scope of the consent is clear, including what is, and what is not encompassed by the consent. A change has been made to include two maps of the primary, secondary and tertiary overflow points (Attachments A1 and A2) – the first applies until such time as the changes in respect of the Seymour/Turenne overflow location are made, the second applies following that change.

6.4 Condition 2 seeks a consent term of 20 years. The actual date will be inserted once the consent is approved. This is clearly a key issue for this Application and, accordingly, I discuss term in detail later in my evidence.

6.5 Condition 3 seeks that the consent be exercised generally in accordance with the information and processes included in the Application and appendices; in particular, Attachment B (Wastewater Overflow Consent Objectives and Targets) (referred to as Table 14 in the lodged Application).

6.6 This proposed condition has been amended from that lodged to:

a) remove reference to the network levels of service from the Long Term Plan (**LTP**) 2018/2028[29] (referred to as Attachment C; previously referred to as Table 13 in the lodged Application) and replace it with an advice note. These measures and levels of service are prepared in accordance with the Local Government Act 2002 and include some mandatory measures from Audit New Zealand. In my opinion, they are not matters of compliance under this Application and I recommend amending the conditions to make this clear. That said, the conditions require them to be monitored and reported to enable a holistic assessment of the performance of the wastewater network.

b) Reference to the Wastewater Overflow Location and Operation Manual and Scour Overflow Events Sampling Protocol have also been removed as these are more specifically (and appropriately) addressed in Condition 4.

6.7 I note that the s42A comments sought *'more specific details required on plan content including the process for updating and review'*. I agree, but this relates to the operational plans rather than the lodged information. I have provided for this in my changes to Conditions 4 – 8.

6.8 Conditions 4 – 8 set out the Operation Management Plans/Protocols which are required to be in place and adhered to at all times, and the procedures for updating these plans/protocols. Amendments to the naming of these plans and protocols have also been made to ensure clarity of their scope and consistency in terminology used. I have also:

a) Included a process for the revision and updating of these plans as sought by the s42A Report authors; and

b) Corrected references to GDC Consents Manager as sought by the s42A Report authors (this change was made throughout the conditions).

6.9 As I have discussed previously, I have worked with Council staff to refine the overflow response protocols (from those lodged with the Application and the first s92 request) to reflect changes agreed with submitters (predominantly Ministry of Education in respect of notification for both the WWO notification and DWO response protocols) and experts for Council (DWO response protocol – monitoring).

[29] This may need to be updated once the 2021/31 LTP has been adopted

6.10 Conditions 9-15 set out the Monitoring Plans which are required to be in place and adhered to at all times. These include a Wet Weather Overflow Events Monitoring Protocol and a Tangata Whenua Cultural Monitoring Plan. The Tangata Whenua Cultural Monitoring Plan (**TWCMP**) is to be prepared in conjunction with the Tangata Whenua Reference Group (**TWRG**). As the TWCMP has yet to be prepared, the conditions have been expanded from those initially lodged to provide more detail as to the expected content of the TWCMP to better enable its certification. Procedures for updating these plans are also included.

6.11 Condition 16 provides for an assessment of the persistence of viruses in shellfish that may be taken for consumption. This assessment has been recommended by Dr Dada to help refine the management of health risk associated with shellfish collection.

6.12 Condition 17 stipulates the required wastewater levels of services required to be met under the consent – with reference to Attachment B to the conditions. The conditions explicitly refer to the WWO performance target of a wet weather overflow occurrence of no more than 50% probability in any given year within 10 years of the commencement of the consent – consistent with that of the TRMP.

6.13 In respect of DWOs the condition requires that these are managed to a practicable minimum, recognising that there are factors outside of the control of Council that may lead to DWOs including:

a) natural disasters;

b) breakages and blockages;

c) third party actions or damage; and

d) mechanical or power failure at pump stations or storage facilities.

6.14 The causes of DWO and Council's multi-faceted response to managing DWO are comprehensively covered in the evidence of Mr West. While the above causes are able to be mitigated and minimised through good asset management practices and public education, they cannot be entirely eliminated as I discuss later in my evidence. I also note that Attachment B specifies an overall performance target for DWOs.

6.15 Condition 18 requires on going monitoring and reporting against LTP measures.

6.16 Conditions 19 to 21 set out the process for updating the overflow locations and classifications following completion of the works to replace the Seymour/Turenne overflow location which, as I have previously advised, are programmed for the 2021/22 financial year. These are offered as Augier Conditions and signal the intention to implement these works as described in the initial s92 response.

6.17 Conditions 22 to 25 set out the process for establishing the TWRG and its associated purpose and role. Condition 26 has been added to provide for the disbanding of the TWRG if it was no longer supported by a majority of tangata whenua – this has simply been included from a technical viewpoint as Council cannot be held to conditions that require a TWRG (being a third party) when it is not desired by tangata whenua. However, as discussed in Mr Kanz's evidence, there has been a high level of engagement by tangata whenua in the KIWA Group pre-consent process, with the issue of wastewater overflows of significant concern to tangata whenua. The likelihood of disbanding the group therefore appears low, and as highlighted above, this has simply been included from a technical consent compliance viewpoint.

6.18 Conditions 27 and 28 set out the annual reporting requirements. These have been expanded from the Application version to be explicit that the reporting is to include those matters identified in Attachment B (Annual Reporting). While I consider this reporting was inherent in the draft conditions in the Application, this change was made to reflect the recommendations of the S42A and Dr Kelly that explicit reference should be made to key reporting requirements. The reporting requirements now also include the ability for the TWRG to provide an independent report/commentary on cultural matters and the requirement for identify major projects for the upcoming 12 months.

6.19 Condition 29 sets out the five year reporting requirements. The intent of this condition is to undertake a broad assessment of the programme and its achievements, including trends in performance and receiving environment quality. An additional aim of this review is to provide an early indication of whether the programme is achieving its aims or whether contingency planning needs to commence for an alternative approach. This is consistent with the s42A Report recommendations and Mr Garside's evidence.

6.20 Conditions 30 and 31 introduce a 10 year review, the purpose of which is to provide a comprehensive review of performance, including updating the wastewater network model, dispersion modelling and assessments of EOCs (as recommended by Dr Stewart). This review includes the re-setting of targets in light of the success of the DrainWise implementation, and a range of other matters (Condition 31 a to f), to

continue to seek improvement beyond the first ten years of the consent. This addition addresses issues raised in submissions and the s42A Report.

6.21 Conditions 32 and 33 relate to a s128 review. Condition 32 has been amended following the pre-hearing meeting to provide for the consent to be reviewed at any time following the transfer of the wastewater management functions of the Consent Holder to another agency if this transfer of functions necessitates a change in consent conditions.

6.22 Condition 34 is purely administrative and advises the applicant will pay full and reasonable costs in carrying out its functions in terms of certification and monitoring under the consent.

6.23 The Attachments have been added to ensure the consent conditions are 'stand alone'.

6.24 Overall I consider the conditions provide a robust basis for the implementation of the wastewater overflows consent. The conditions incorporate changes that have been made to improve their functionality and to address matters raised by submitters and the s42A Report.

7 STATUTORY FRAMEWORK AND EVALUATION

7.1 There are a number of statutory instruments that are relevant to the consideration of the wastewater overflows consent. I provide an overview of these instruments and an assessment of the Application against key provisions below. A detailed 'provision-by-provision' assessment is provided in Appendix 2 of my evidence.

RESOURCE MANAGEMENT ACT 1991

RMA PART 2

7.2 Section 5 of the RMA states and defines the sustainable management purpose of the RMA. Sustainable management means enabling people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;*

b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

7.3 Section 6 states matters of national importance, that are to be recognised and provided for in relation to managing the use, development, and protection of natural and physical resources. Of relevance to the Application are the following:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development

(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

7.4 Section 7 identified 'other matter's to which particular regard shall be had. Of relevance to the Application are the following:

(a) kaitiakitanga:

(aa) the ethic of stewardship:

(b) the efficient use and development of natural and physical resources:

(c) the maintenance and enhancement of amenity values:

(d) intrinsic values of ecosystems:

(f) maintenance and enhancement of the quality of the environment:

(i) the effects of climate change:

7.5 Section 8 requires the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) to be taken into account in relation to managing the use, development, and protection of natural and physical resources.

7.6 Whether Part 2 of the RMA is applied to the consideration of resource consent applications is directed by case law. Accordingly, I consider the relevance and application of Part 2 at the conclusion of my statutory assessment below.

RMA s 104(1)

7.7 RMA s 104(1) requires that when considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to:

(a) any actual and potential effects on the environment of allowing the activity; and

(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and

(b) any relevant provisions of—

(i) A national environmental standards;

(ii) Other regulations;

(iii) a national policy statement;

(iv) A New Zealand Coastal Policy Statement;

(v) a regional policy statement or proposed regional policy statement;

(vi) A plan or proposed plan; and

(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

RMA S104(1)A - ACTUAL AND POTENTIAL EFFECTS

7.8 The actual and potential effects of the discharges have been presented in the Application, and summarised in the technical evidence and my evidence above. As discussed, wastewater overflows are unavoidable; however, the aim for the consent and associated conditions is to minimise the likelihood of overflows as far as practicable. This is through the comprehensive DrainWise programme (as outlined in the Application and evidence of Mr Kanz) primarily in relation to WWO.

7.9 The management and minimisation of DWOs incorporates a multi-faceted approach as outlined in the Application and evidence of Mr West, which includes proactive maintenance and surveillance, systems control and duplication, trade waste

compliance, public education; and prompt response and clean-up protocols, and to mitigate the effects of overflows should they occur. The consent is supported by conditions that provide for monitoring (including cultural monitoring), on-going engagement with tangata whenua, transparent reporting of performance and improvement and review processes.

RMA S104(1)AB – PROPOSED POSITIVE EFFECTS

7.10 The GWS is an essential lifeline utility that provides for the health and safety of the community by transporting wastewater from homes and businesses to the WWTP for treatment and disposal and, as discussed by Mr Wilson, a valuable community asset. Overflows occur as a result of the operation of the network as is common in most, if not all, wastewater networks.

7.11 No specific offset or compensating mitigation is proposed. Mitigation is directed at the DrainWise and similar programmes to minimise overflows. It is considered that directing resources to resolving 'on the ground' problems is the best investment of available resources to mitigate effects.

RMA S104(1)(B)(I) NATIONAL ENVIRONMENTAL STANDARDS

Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F)

7.12 The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-F**) were gazetted at the same time as the NPS-FM 2020. The regulations set requirements for carrying out certain activities that pose risks to freshwater and freshwater ecosystems and are designed to protect existing wetlands, protect streams from in-filling, ensure fish passage, set minimum requirements for some agricultural activities to restrict agricultural intensification and to limit the discharge of synthetic nitrogen fertiliser to land.

7.13 I do not consider there are any provisions that directly affect the Application and note that the Reporting Officer reaches the same conclusion[30].

[30] Section 42A Report at 10.11

National Environmental Standard for Sources of Human Drinking Water (NES – Human Drinking Water)

7.14 The National Environmental Standard for Sources of Human Drinking Water (**NES – Human Drinking Water**) applies to sources from which water is abstracted for use in registered drinking water supplies. These are community supplies that are recorded in the drinking water register maintained by the Ministry of Health.

7.15 The wastewater overflow discharges will not affect any water supply take. I consider that the NES-Human Drinking Water does not apply, and that Regulations 7 and 8 of the NES- Human Drinking Water do not prevent or restrict the grant of the discharge permits sought.

RMA S104(1)B(II) OTHER REGULATIONS

7.16 I am not aware of any other regulations of relevance to the Application.

RMA S104(1)B(III) NATIONAL POLICY STATEMENTS

National Policy Statement for Freshwater Management 2020 (NPS-FM 2020)

7.17 The NPS-FM 2020 provides direction on the considerations and expectations for freshwater management within New Zealand. Local authorities must give effect to the NPS-FM "as soon as reasonably practicable". As the NPS-FM came into force on 3 September 2020, the TRMP has not yet given effect to it. An initial assessment of the Application against the NPS-FM 2020 was provided as Appendix H to the s92 Further Information Request (response dated 29 January 2021). This supersedes the assessment against the NPS-FM 2017 set out in the lodged Application.

7.18 Central to the NPS-FM 2020 is the concept of Te Mana o Te Wai, which is:

'a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.'

7.19 Te Mana o Te Wai encompasses six principles relating to the roles of tangata whenua and other New Zealanders in the management of freshwater. The six principles are:

(a) ***Mana whakahaere:*** *the power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater;*

(b) ***Kaitiakitanga:*** *the obligation of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations;*

(c) ***Manaakitanga:*** *the process by which tangata whenua show respect, generosity, and care for freshwater and for others;*

(d) ***Governance:*** *the responsibility of those with authority for making decisions about freshwater to do so in a way that prioritises the health and well-being of freshwater now and into the future;*

(e) ***Stewardship:*** *the obligation of all New Zealanders to manage freshwater in a way that ensures it sustains present and future generations; and*

(f) ***Care and respect:*** *the responsibility of all New Zealanders to care for freshwater in providing for the health of the nation.*

7.20 Aligned to these principles is a hierarchy of obligations which sets out the freshwater management priorities. Te Mana o te Wai prioritises first, the health and well-being of water bodies and freshwater ecosystems; second, the health needs of people (such as drinking water); and third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. These are also set out the single objective of the NPS-FM 2020, which is:

(1) The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises:

(a) first, the health and well-being of water bodies and freshwater ecosystems

(b) second, the health needs of people (such as drinking water)

(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

7.21 There are 15 policies included in the NPS-FM 2020. I assess these individually in Appendix 2 of my evidence and summarise my assessment of the key policies below. I note however that the NPS-FM 2020 requires GDC (in its capacity as a Regional Council) to undertake a statutory planning process to give effect to the NPS-FM 2020 through future planning processes (which have not yet occurred). Those processes

require the direct involvement of tangata whenua which will likely give expression to the concept of Te Mana o Te Wai in the specific Gisborne context. Nevertheless, the NPS-FM is a matter which must be 'had regard to' under s104 and accordingly I have assessed against the objective and policies to the extent possible at this point in time.

Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai.

7.22 Noting the above comments, I consider that the Application is consistent with this policy. The proposal:

a) will manage natural and physical resources in a way that prioritises the health and wellbeing of water bodies and freshwater ecosystems as:

   i the adverse ecological effects of wastewater overflows have been assessed by technical specialists who have advised that these potential adverse effects of WWOs are minor;

   ii overflows are proposed to be managed to a practicable minimum; and

   iii consent is sought on the basis of a substantial programme to ensure overflow performance is improved to meet objectives and targets that are consistent with those of the Waipaoa Catchment Plan (Urban Freshwater Management Unit). As a result, the overall health and wellbeing of water bodies and freshwater ecosystems will improve over time through the progressive reduction in the frequency of overflow events and overflow volumes.

b) reflects that while tangata whenua and the community oppose wastewater overflows, as recognised by the KIWA Group and in submissions, Council is working closely with tangata whenua to integrate tikanga, mātauranga Māori, and Māori values into its management of overflows. I acknowledge that this does not resolve the cultural issues inherent with wastewater overflow discharges to water. However, the ongoing involvement of tangata whenua in managing this challenging issue is consistent with the intent of the NPS-FM 2020 and in my view assists in mitigating and reducing impacts on tangata whenua values.

c) prioritises the essential health needs of people. The GWS is critical infrastructure which provides an essential sanitation service to protect the health of Gisborne's community and provide for their social, economic and cultural well-being, both now and in the future, while mitigating adverse effects.

d) Seeks to improve the water quality in, and health of, water bodies from their current state.

Policy 2: Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.

7.23 As I have indicated above, Council is working closely with tangata whenua to integrate tikanga, mātauranga Māori, and Māori values into its management of overflows including through a Tangata Whenua Reference Group and Tangata Whenua Cultural Monitoring Plan. This is intended to be a long term relationship to work together to reduce overflows and their associated adverse effects on cultural values, including mahinga kai.

Policy 5: Freshwater is managed through a National Objectives Framework to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.

7.24 The National Objectives Framework (**NOF**) has yet to be fully implemented in Gisborne. However, as I discuss below, the Application is consistent with the objectives set for the Gisborne Urban FMU and seeks to improve water quality over time to protect the health and wellbeing of freshwater bodies to meet freshwater objectives set in conjunction with communities and tangata whenua. A proposed condition provides for the review of the consent to reflect any future implementation of the NPF-FM 2020.

Policy 7: The loss of river extent and values is avoided to the extent practicable.

And Clause 3.24(1)[31] *"The loss of river extent and values is avoided, unless the council is satisfied:*

(a) that there is a functional need for the activity in that location; and

(b) the effects of the activity are managed by applying the effects management hierarchy."

[31] Clause 3.24 requires the policy to be inserted into regional plans but it is assessed here due to its alignment with Policy 7.

7.25 There will be no loss of river extent as a result of the proposal. "Loss of value" in the NPS-FM 2020 refers predominantly to any values identified under the NOF process. As outlined above, Council has not yet been through the NOF process to implement the requirements of the NPS-FM 2020. However, it also refers to five aspects 'whether or not they are identified under the NOF process'[32]; being ecosystem health, indigenous biodiversity; hydrological functioning; Maori freshwater values; and amenity. Accordingly, out of an abundance of caution, I have considered these matters further.

7.26 I consider that the nature of the discharges, being existing, intermittent and for a short duration, will not result in a permanent and irreversible loss of values but rather a temporary and occasional reduction in values that have been avoided to the extent practicable for the following reasons:

a) The discharges are existing and the ecological evidence is that they are having no more than a minor effect on ecological heath;

b) The discharges will have no effect on indigenous biodiversity or hydrological functioning of the river;

c) Any discharges are relatively infrequent, temporary and are avoided where possible through Council's comprehensive management regime;

d) The public component of the wastewater network has been progressively upgraded to accommodate six-times ADWF – in-line with best national practice;

e) As demonstrated in Section 2.6 of the lodged Application, the overflow performance of the Gisborne wastewater network is already currently on-par with the better performing councils nationally;

f) The proposed programme to address stormwater inflow will further reduce overflows over the existing situation, and minimise these as far as practicable;

g) Council continues to refine its maintenance, management and response processes; and

[32] Clause 3.21 of the NPS-FM 2020 – definition of 'loss of value'

h) Council has, and continues to, work closely with tangata whenua to better integrate Māori values into the management and enhancement of the wastewater network and areas that are affected by wastewater overflows.

7.27 Accordingly, I do not consider there is a 'loss of river extent and values' and therefore I do not consider Clause 3.24(1) is engaged. In any event, if it were considered there is some loss of values, the Application would still be consistent with Clause 3.24(1), because:

a) There is a functional need for the activity in this location (subclause (a)); and

b) The effects are managed by applying the effects management hierarchy (subclause (b)).

7.28 In respect of the first point, as I have indicated previously, the wastewater network is essential regional infrastructure providing significant benefits to the Gisborne community, including a critical public health function.

7.29 While it may be desirable to have no DWO and WWO discharges from the network, they are an inevitable consequence of having a wastewater network that has been developed, extended and refined over a period of more than 100 years. The discharges from the network, both dry and wet weather, occur where they do because of the location of the Gisborne urban area and the nature and function of the wastewater network:

a) Dry weather overflows occur as a result of blockages and other faults and hence occur generally in the vicinity of (downstream of) where the problem occurs;

b) Wet weather overflows are actively monitored by Council and manually controlled to predominantly occur at primary and secondary overflow points. These locations have been selected where they are required to reduce pressure/flows within the wastewater network and to minimise the number of overflow points (and hence the extent of adverse effects).

7.30 As such, there is a functional need for the discharges in the locations they occur and, accordingly, Clause 3.24(1)(a) is met.

7.31 In respect of Clause 3.24(1)(b), the effects management hierarchy is outlined in Clause 3.21 of the NPS-FM 2020. It is an approach to managing the adverse effects of an

activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) and requires that:

(a) adverse effects are avoided where practicable

(b) where adverse effects cannot be avoided, they are minimised where practicable

(c) where adverse effects cannot be minimised, they are remedied where practicable

(d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible

(e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided

(f) if aquatic compensation is not appropriate, the activity itself is avoided

7.32 In respect of this hierarchy, adverse effects have been avoided and minimised to the extent practicable in accordance with the past, current and proposed measures outlined in the Application and in evidence.

7.33 Notwithstanding that overflow discharges will be progressively reduced, it is not possible to entirely eliminate overflows as they relate to events (blockages/heavy rainfall) that are outside of the control of the network operator. Where overflows occur, their adverse effects are remedied and mitigated through appropriate response and management processes.

7.34 A key aim of the Application is to reduce wastewater overflows to a minimum, such that WWOs do not occur in rain events up to the 50% AEP and DWOs are managed to a practicable minimum. Hence is it considered that aquatic offset or compensation is not required. It is also noted that any investment in offset or compensation is investment that is not made in reducing wastewater overflows.

7.35 In summary, if it is determined that this policy applies to the Application, then it is considered that the application meets the two 'tests' of Clause 3.24(1).

Policy 12: The national target (as set out in Appendix 3) for water quality improvement is achieved.

7.36 The national target is to increase proportions of specified rivers and lakes that are suitable for primary contact and also to improve water quality across all categories. The aim of the Application and associated DrainWise programme is to reduce the frequency and duration of wastewater overflows, which will positively contribute (albeit in a small way) to the ability to swim in Gisborne's rivers. This is consistent with the national aim of increasing the proportion of rivers that are suitable for primary contact.

Policy 15: Communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement.

7.37 A well-functioning wastewater network is fundamental to the social, economic and cultural well-being of the Gisborne community. The Application provides for the ongoing operation of this network, subject to a range of management and maintenance requirements and a programme of progressive improvement which collectively ensure overflows and associated adverse effects are managed to a practicable minimum.

7.38 Overall, the NPS-FM 2020 seeks to improve water quality over time to protect the health and well-being of freshwater bodies to meet freshwater objectives set in conjunction with communities and tangata whenua and to better provide for tangata whenua to undertake a role natural resource management. The Application is consistent with this approach. It includes:

a) a range of performance measures and targets and an associated programme to reduce overflows and hence, progressively reduce adverse effects on fresh and marine waters and contribute (albeit in a small way) to the achievement of the national target for primary contact;

b) includes protocols to manage human health risk, should overflows occur; and

c) provides for meaningful input from tangata whenua into resource management processes and assessing and mitigating effects on cultural values.

7.39 I consider that the proposed discharges, being intermittent and for a short duration (and subject to on-going reduction), will not result in a permanent and irreversible loss of values but rather a temporary and infrequent reduction in values which have been avoided and minimised over time to the extent practicable. Additionally, over time, adverse effects will reduce further as overflows (particularly WWOs) become less frequent and lower volume.

7.40 Further, the wastewater network is essential regional infrastructure – an effective and efficient wastewater network is fundamental and critical infrastructure supporting an urban environment by transporting wastewater away from homes, commercial activities and industries and providing for its treatment and disposal.

7.41 Overall, I consider that the Application, and the progressive improvement that it promotes, is consistent with the objective and policies of the NPS-FM 2020.

National Policy Statement on Urban Development 2020 (NPS-UD 2020)

7.42 The Application included an assessment against the National Policy Statement on Urban Development Capacity 2016. In July 2020 the National Policy Statement on Urban Development Capacity 2016 was replaced with the NPS-UD 2020. As such, the commentary below supersedes that set out in the lodged Application.

7.43 The NPS-UD 2020 recognises the national significance of:

a) Having well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future; and

b) Providing sufficient development capacity to meet the different needs of people and communities.

7.44 Objective 1 in the NPS-UD 2020 is that New Zealand has "well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future". Section 3.5 of the NPS-UD 2020 requires that local authorities must be satisfied that additional infrastructure to service the development capacity is likely to be available.

7.45 I consider that the Application is consistent with the policy direction in the NPS-UD 2020. An efficient and effective wastewater network is a critical component of a well-functioning urban environment and the proposal will ensure that the GWS:

a) continues to service the existing urban area;

b) enables and provides for growth;

c) significantly improves wastewater overflow performance; and

d) is managed in a way the mitigates potential health and other risks.

RMA S104(1)B(IV) NEW ZEALAND COASTAL POLICY STATEMENT (NZCPS)

7.46 The NZCPS provides direction for managing the effects of land use and discharges on the coastal environment. No direct discharges of wastewater from the network to the CMA are anticipated. However, the NZCPS is still of relevance to this Application as overflows do (or can) discharge into the *coastal environment*.

7.47 The NZCPS provides guidance for managing the effects of land use and discharges on the coastal environment. The NZCPS includes the objective of safeguarding:

"the integrity, form, functions and resilience of the coastal environment and sustain its ecosystems … by ….maintaining coastal water quality and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity".

7.48 In respect of the discharge of contaminants, the NZCPS acknowledges that wastewater (alongside stormwater) is a contributor to adverse effects in coastal waters. The NZCPS seeks to manage discharges to the coastal environment, having regard to a range of factors including the sensitivity of the receiving environment, the capacity of the receiving environment to assimilate contaminants and avoiding significant adverse effects on ecosystems. In achieving this the NZCPS includes several policies of relevance to wastewater including:

Policy 21 Enhancement of water quality

Where the quality of water in the coastal environment has deteriorated so that it is having a significant adverse effect on ecosystems, natural habitats, or water-based recreational activities, or is restricting existing uses, such as aquaculture, shellfish gathering, and cultural activities, give priority to improving that quality by:

c. where practicable, restoring water quality to at least a state that can support such activities and ecosystems and natural habitats;

7.49 As outlined in Dr Kelly's (and other) evidence, overflow discharges are not leading to significant ecological effects. However, overflows have the potential to temporarily restrict water-based activities and shellfish gathering. In accordance with the policy priority has been given through minimising overflow discharges and hence adverse

effects. Public health management protocols are also implemented to mitigate the effects of overflows, should they occur.

Policy 23 Discharge of contaminants

1. *In managing discharges to water in the coastal environment, have particular regard to:*

    a. *the sensitivity of the receiving environment;*

    b. *the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and*

    c. *the capacity of the receiving environment to assimilate the contaminants; and:*

    d. *avoid significant adverse effects on ecosystems and habitats after reasonable mixing;*

    e. *use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and*

    f. *minimise adverse effects on the life-supporting capacity of water within a mixing zone.*

2. *In managing discharge of human sewage, do not allow:*

    a. *discharge of human sewage directly to water in the coastal environment without treatment; and …*

7.50 The Application involves overflow discharge to the coastal environment, but not the CMA. However, these discharges are not excluded by this policy as indicated in NZCPS Guidance[33] which states that:

Policy 23(2)(a) is strong direction against discharges of untreated human sewage to water in the coastal environment. It signals that very clear justification should underpin any provision for discharge of untreated sewage to water in the coastal environment.

[33] https://www.doc.govt.nz/about-us/science-publications/conservation-publications/marine-and-coastal/new-zealand-coastal-policy-statement/policy-statement-and-guidance/sewage-discharges/

However, it is not a rule, and does not mean that resource consent applications that involve discharges of untreated human sewage cannot be approved.

As with all management of natural and physical resources, particular situations must be looked at in context. In relation to activities involving the discharge of human sewage the relevant context will include location, frequency, duration, volume, level of treatment, and the extent to which the discharge is the best practicable option (within a relevant timeframe). Relevant matters will vary according to the source of a discharge (e.g. from a treatment plant, or an overflow from a reticulation network) and whether it is in the course of normal operation or caused by an anticipated and perhaps unavoidable operational disruption (such as a blockage, power interruption or overflows in some wet weather events). There is a continuum that should result in different discharges of human sewage being dealt with differently within plans, both in policies and activity classifications (rules), and through the determination of resource consent applications.

7.51 The Application relates to existing overflow discharges that have occurred for many years and they are not a new activity. As outlined in the evidence of Mr West, it is standard wastewater design practice to install overflow relief points in wastewater networks to protect public health and important infrastructure components. The Applicant's evidence confirms that Council's wastewater network is designed and sized in accordance with national practice to carry adequate flows without overflowing. Accordingly, these are not ongoing discharges, but rather are occasional, intermittent, of limited duration, and as outlined in the evidence, disperse relatively quickly. As noted above, there are no known direct discharges to the CMA; and WWO discharges are carefully monitored by Council with the overflow valves only manually opened as a last resort.

7.52 Overflow performance has progressively improved and the performance of the GWS is currently on a par with the better performing wastewater networks nationally and is assessed as having no more than minor effects on ecology. The proposal that the Application seeks to authorise is to further reduce the frequency and volume of WWOs, which will further ensure adverse effects are minimised to the extent practicable, and to manage DWOs to a practicable minimum.

7.53 Accordingly, I consider that the proposal is consistent with the provisions of the NZCPS to improve the quality of water in the coastal environment and not contrary to other policies.

RMA S104(B)(V and VI) TAIRĀWHITI RESOURCE MANAGEMENT PLAN (TRMP)

7.54 The TRMP is a combined regional policy statement and regional plan that includes aspects of specific relevance to the wastewater overflows consent. As there are numerous objectives and policies, I provide a more detailed assessment of the Application against these in Appendix 2 of my evidence. Below I provide an overview of the key provisions and summarise my overall assessment.

Regional Policy Statement

B1 – Tangata Whenua.

7.55 Provisions identify the need to take into account the principles of the Treaty of Waitangi, have regarding to kaitiakitanga (and accommodate the views of individual iwi and hapū), promote (where practicable) the preservation and protection of sites of value to Māori, and recognise and provide for the relationship of Māori with their culture, traditions, ancestral lands, and other resources.

7.56 I acknowledge that the discharge of wastewater to water is offensive to tangata whenua and has significant negative impact on the mauri of affected waterbodies. As Mr Kanz advises, Council has undertaken intensive engagement with tangata whenua through the KIWA Group, which has provided a very clear indication of the negative effects of overflows on tangata whenua and cultural values and practices. It is important that these effects are addressed as far as practicable and that Council continues to work alongside tangata whenua to achieve this. This is clear in the recommendations of the KIWA Group[34].

7.57 A substantial reduction in overflow volumes and frequencies and ongoing engagement with tangata whenua is incorporated in the Application and Council's approach moving forward, and is required by proposed conditions of consent. Ten-year overflow reduction targets have been set and the proposed ten-year review aims to set future targets beyond this time. Tangata whenua will continue to be involved in the consent through the TWRG, including the development of cultural monitoring measures and a range of other actions. This will not fully resolve tangata whenua concerns regarding wastewater overflows, which will remain while overflows occur. However, it assists in mitigating effects and is consistent with the RPS provisions.

[34] Appendix L, pages i and ii

B3 – Built Environment, Energy and Infrastructure

7.58 The RPS seeks the provision of the efficient development, operation and maintenance of network utility infrastructure throughout the Region in a way that avoids remedies or mitigates adverse effects on the natural and physical environment.

7.59 As I have discussed above, the GWS is a critical essential lifeline utility that provides for the health and safety of the community by transporting wastewater from homes and businesses to the WWTP for treatment and disposal. Adverse effects are proposed to be minimised by a programme that progressively reduces WWO frequency and volume and manages DWOs to a practicable minimum.

B4 – Coastal Environment.

7.60 Relevant provisions relate to water quality (that this is maintained or enhanced/improved where appropriate), avoiding or mitigating the effects of point-source discharges on receiving waters, recognising the mauri of water and protecting natural physical resources and biological communities in the coastal environment.

7.61 As above, the Application is consistent with these provisions as it seeks to improve water quality by reducing the frequency and volume of WWOs and mitigate adverse effects through appropriate management of the network and response to overflows should they occur.

B6 – Freshwater.

7.62 Provisions relate to the sustainable management of land and freshwater, that water quality is maintained or improved where degraded or does not meet the relevant objectives for the freshwater unit, scheduled waterbodies are protected or enhanced to provide for their values, the planning and management of the region's freshwater resources is undertaken in a way that recognises the kaitiaki role of iwi and hapū and ensures that their values and interests are reflected in the decision-making processes, the mauri of waterbodies is recognised and provided for and action is taken to restore the mauri of degraded waters, and mana whenua values are reflected in resource management processes.

7.63 These matters have been discussed above. The proposal is to reduce overflows and hence improve water quality, to continue to engage with (and involve) tangata whenua to reflect their values and interests and to contribute to restoring degraded waters.

Region-wide

7.64 There are a range of objectives and policies in the TRMP that are of direct relevance to the wastewater overflows consent. Again, I highlight key provisions as follows:

C2 Built Environment, Infrastructure and Energy

7.65 The provisions for infrastructure:

a) Recognise the importance of infrastructure that enables people and communities to provide for and enhance their environmental, social, cultural and economic well-being in a way that leads to a safe and healthy environment and to manage adverse effects in a manner that avoids, as far as practicable, remedies or mitigates any adverse effects on the environment. (C2.1.3 Objectives 1 and 2 + C2.1.4.1 Policy 3).

b) Provides for the ongoing operation, maintenance, replacement and upgrading of network utilities and for the future development and operational requirements of new network utilities, recognising the benefits of efficient network utility infrastructure and, that in order to achieve sustainable management given the technical and physical constraints which may be experienced by network utility operations, including those associated with their scale, location, design and operation, a compromise of the natural and physical environment may occur C2.1.4.1 Policies 1 and 2).

7.66 In my opinion, the Application is consistent with the objectives and policies. The GWS is core urban infrastructure which provides an essential sanitation service and its ongoing operation is essential to the community. Adverse effects have been avoided, remedied and mitigated to the extent practicable – including improvement over a period of time that is consistent with the need to address drainage on private property on a site-by-site basis.

C3 Coastal Management

7.67 In respect of coastal waters, the TRMP seeks to:

a) Maintain or, where practicable enhance the physical and cultural quality of water in the Coastal Environment and progressively upgrade of the quality of existing point discharges to water including of infrastructure to manage the quality of urban runoff (C3.10.2 Objective 1 and 2, C3.10.3 Policy 2).

b) Manage coastal waters in accordance with identified water classifications and associated water quality standards, and not grant consents for a discharge to water of the CMA which will result in existing water classification standards being exceeded except where there are exception circumstances to justify the granting of the consent or the discharge is of a temporary nature and will not result in adverse effects that are cumulative. (Policy 3.10.3 (1) and (4)).

c) A discharge of human sewage direct into the water of the Coastal Environment, which does not pass through land, shall only occur where it better meets the purpose of the Act than disposal onto land and there has been consultation with tangata whenua and the community (Policy 3.10.5).

d) The discharge of a contaminant directly into the should only be allowed in circumstances where the existing water quality is maintained and, where appropriate, enhanced, the effects on the community of not allowing the discharge would not promote the social and economic well-being of the community and the discharge to an alternative receiving environment would create a greater adverse effect than the proposed discharge to sea. (Policy 3.10.3(7)).

7.68 As discussed previously, wastewater overflows occur intermittently and infrequently. A key aim of the consent is to reduce overflow volumes and frequency significantly over the first ten years and reset improvement targets after that time to continue to refine and improve network performance.

7.69 The water classification that applies to waters that are potentially affected by overflows is class SA and SB. Class SA is the most stringent and the key water quality standard is:

e) Aquatic organisms shall not be rendered unsuitable for human consumption by the presence of contaminants, and the water shall not be rendered unsuitable for bathing by the presence of contaminants.

7.70 As discussed in Dr Dada's evidence, there are periods where public health risk for both contact recreation and shellfish gathering is elevated and as such, temporary restrictions are warranted. However, I consider that there are circumstances justify this temporary discharge and restriction:

a) The GWS is essential infrastructure and some overflows in wet weather and as a result of blockages are unavoidable;

b) Wastewater overflows are infrequent and the proposal is to reduce these further, such that effects will be further minimised;

c) Potential health risk effects are actively managed and mitigated by Council through the processes and protocols outlined in the evidence, including through notification of the public and potentially affected stakeholders, health warnings and monitoring;

d) There are no direct discharges of wastewater to the CMA.

7.71 Accordingly, I consider that the discharge is consistent in respect of policies that seek improvement in the quality of discharges and water quality in the coastal environment and, while there are some infrequent and temporary restrictions on bathing and shellfish gathering, the Applications are not contrary to provisions in respect of discharges to the CMA and coastal environment.

C6 Freshwater

7.72 The TRMP includes a range of policies in relation to the discharge of contaminants[35]. Key policies include:

a) That there are no direct discharges to surface waterbodies, or to land where it can flow directly into a waterbody or to groundwater of untreated sewage, wastewater (except as a result of extreme weather-related overflows where these are being reduced over time) (Policy C6.2.1).

b) Manage point source discharges to land and water so that the existing ecosystem functions within the Region's waterbodies are maintained and the mauri of waterbodies is retained, and where degraded are improved (Policy C6.2.2).

c) Where a water quality objective is not being met or a limit/target has been exceeded or the waterbody, including coastal waters, is identified as degraded then new discharges and renewals of existing discharge consents will be managed to bring the waterbody back within the water quality limit and/or to better achieve the freshwater quality objective (Policy C6.2.6).

d) When waterbodies are identified in a catchment as degraded due to bacterial contaminants, wastewater discharges will be required to improve the quality of the

[35] The RPS Objectives are joint RPS and regional plan objectives

discharge and/or reduce the volume of the discharge in order to meet the relevant freshwater objective as quickly as practicable (Policy C6.2.7).

e) Policy C6.2.9, which states:

Discharges of untreated sewage from the reticulated infrastructure network are managed to:

a. Minimise the frequency of these discharges; and

b. Achieve performance of an overflow occurrence of no more than 50% probability in any given year;

c. Issue discharge permits for no longer than 5 years except where there is evidence from past performance to demonstrate that wastewater overflow events can reliably achieve the performance standard in clause b above.

7.73 Policy C6.2.2.1 seeks that there are no direct discharges to surface waterbodies, or to land where it can flow directly into a waterbody or to groundwater of untreated sewage/wastewater – except as a result of extreme weather-related overflows where these are being reduced over time. I note that the s42A report advises[36] that this policy isn't met as *'while the Applicant's work to reduce wet weather overflows is commendable, a 50% AEP event does not represent an extreme weather event threshold. The policy also does not provide any provision for dry weather events*.' I respond as follows:

a) It is difficult to determine what scale rainfall event was envisaged by the drafters of the TRMP as being 'extreme'. For example policy C6.2.9, which is specific to reticulated wastewater networks, seeks to manage discharges from wastewater networks to achieve a performance of 'an overflow occurrence of no more than 50% probability in any given year' – essentially no overflows in a 50 % AEP rainfall event. The policy then provides for longer term consents to be granted if there is confidence that this performance will be met – indicating that this is an acceptable, long term level of WWO performance.

b) It is not realistic to expect wastewater overflows to only occur in very large rainfall events (eg the 5% AEP event). The 5% AEP event is a very large event (that occurs, on average, only once every 20 years) and I am advised that Council's

[36] S42A, para 11.31-11.33

stormwater network is designed to a capacity aligned to the 10% AEP in accordance with the Building Act/Code. Additionally, as Mr Garside advises, DWOs cannot be entirely eliminated. Mr West comprehensively sets out the causes of DWO and the multi-faceted approach Council has to minimising them as far as practicable. Accordingly, protecting the network from overflows other than extreme (5% AEP or greater) is not realistic.

c) Lastly, the s42A Report does not appear to recognise that the proposed approach, for which resource consent is sought, is to improve the drainage network (including the private component) to significantly reduce stormwater ingress and manage the network to reduce both DWOs and WWOs to a practicable minimum. Ten-year performance targets have been established that seek to reduce WWOs to 'no overflows in a 50 % AEP rainfall event' – consistent with Policy C6.2.2(9). It is proposed to review these after ten years to establish new performance targets to achieve additional improvement beyond this initial target.

7.74 With respect, I consider that the interpretation of the polices needs to be made across the policies as a whole, with particular regard to those that are specific to reticulated drainage network. In this regard, the proposed reduction in overflow frequency and volume will improve the water quality of both freshwater and coastal water receiving environments, and contribute to restoring degraded water bodies, consistent with the aim of the policies C6.2.2, C6.2.6 and C6.2.7.

7.75 Policy C6.2.9(c) relates to the issue of term of consent, with the expectation of a five year term unless past performance demonstrates that the WWO target can be reliably achieved. Council seeks a 20 year term for both DWO and WWO. In my opinion, the Panel can be confident that the identified performance target of '*an overflow occurrence of no more than 50% probability in any given year*' will be achieved as:

a) The causes of wet weather overflows are well understood as a result of significant investigation, study, modelling and field experience;

b) As identified in the Application and Mr West's evidence, Council has implemented a systematic approach to reducing overflows through targeted infrastructure investment and improved management. This has included;

i increasing the capacity of the network;

ii progressively removing overflow locations;

iii more sophisticated surveillance and management of the network to ensure that overflows valves are only opened when absolutely necessary;

iv managing the network to minimising the number of overflows opened in any event; and

v progressively reducing overflow volumes.

c) The result of these improvements is that the GWS currently performs at a level that is on par with other well performing council networks.

d) Council has committed to a substantial programme (DrainWise) to address stormwater inflow from private property, supported by appropriate resourcing as advised in Mr Dave Wilson's evidence. While Mr Garside indicates that the aim of removing 85% of inflow is 'ambitious' the DrainWise programme itself is very intensive and detailed – involving inspection of *all properties* connected to the public network and the identification of cross-connections, faults etc. That is, the ambitious 85% target is being responded to with a comprehensive 'forensic' drainage inspection and investigation programme as discussed in Mr Kanz's evidence.

e) Importantly, Council has alternative infrastructure options should lesser reductions in inflow be achieved – providing additional reassurance that the WWO performance target can, and will be, met. This is backed up by regular reviews to ensure the programme of reducing overflows is on-track to achieving its goals and adapts as new information is available. I note that Mr Garside advises that such an adaptive approach is '*essential and is consistent with best management practice world-wide*'[37].

7.76 Overall, in my opinion, the Panel can have confidence that the desired overflow target will be met as outlined in the Application and evidence. I note that the s42A indicates that having confidence that the target will be met:

'is not the same as having actual proven results to demonstrate that the modelled improvements have been achieved. In my opinion, the Applicant's commitment to addressing the existing overflow issues through the current consent process is appropriate and should be supported, however this falls short of Policy C6.2.2.9 with regards to the proposed consent term of 20 years.'

[37] Mr Garside – para 50

7.77 Notwithstanding this, the s42A report recommends a term of 20 years for WWOs. I agree with this recommendation as it reflects the importance and value of the wastewater network and that time is required to address inflow issues on private property (including affordability and the need to undertake a site-by-site programme).

7.78 The Applicant's view, and my own opinion, is that critical public infrastructure should be subject to long term consents to reflect their essential and enduring function, particularly where (as is the case here) effects can be mitigated through consent conditions and a substantial programme is being implemented to continue to reduce overflows. This is entirely consistent with the TRMP policies in respect of infrastructure, for example Objective C2.1.3 and Policies C2.1.4.1 (1), (2) and (3).

7.79 In my opinion a short-term consent is a 'blunt instrument' by which to manage overflow performance and adverse effects and does not provide sufficient certainty for public infrastructure management and investment, or certainty for members of the public and tangata whenua around the appropriate long-term management of overflows. It will direct expenditure and resource away from resolving problems 'on the ground' to further assessment and consenting costs – and hence risks being counter-productive to achieving the desired reduction in overflows – a point the s42A authors acknowledge[38].

7.80 In addition to the matters I have identified in respect of Policy C6.2.9 above:

a) As overflows are the cumulative result of numerous sources of stormwater inflow, some time is required to implement sufficient remedial actions (primarily on private property) for an observable reduction in overflows to be achieved. This matter is addressed further in the evidence of Mr Garside.

b) Potential adverse effects on the environment can be mitigated and managed more effectively through consent conditions than through a reduced term.

c) The consent conditions direct a high level of 'transparency' including multiple reporting requirements to Council, iwi and the public.

d) The consent provides for a significant 10-year review and reset of targets; and

[38] S42A – para 1.19

e) A review condition in accordance with section 128 of the RMA is proposed, providing for the ability to review the conditions of consent should circumstances change.

7.81 I do not consider there is any justification for a separation of consent terms between DWO and WWO, as recommended in the Section 42A Report and, with respect, there does not appear to be a comprehensive technical justification for this distinction. The Reporting Officer considers that:

'*There does not appear to be a valid position to consent dry weather overflows as an ongoing or necessary by-product of the wastewater network when much of the risk of dry weather overflows can be managed by the Applicant"*[39].

7.82 This is addressed by Mr West, who advises that DWOs largely occur as a result of third party actions (including flushing of inappropriate materials, disposal of fat down drains etc) and network failures are rare. Mr West also clearly sets out the causes of DWOs and the multi-pronged approach that Council takes to management of the DWOs.

7.83 In addition, Mr Garside advises[40] that in his extensive wastewater network experience in New Zealand:

'Requiring eradication of dry weather flows has limited if no precedence that I am aware of in New Zealand; as dry weather overflows 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. Whilst the risks associated with these factors can be mitigated in part by education and backup systems and spares, they cannot be completely eliminated.'

7.84 In relation to DWOs that are more squarely within Council's control (for example, due to foreseeable breakdowns or equipment failure), Council has a number of protocols and procedures in place to address these matters. As set out in Mr West's evidence, Council has a system of preventative or proactive maintenance regimes to ensure performance is maintained – and these are programmed into Council's Asset Management System (AMS). This already provides the methodology for ensuring matters such as foreseeable breakdowns or equipment failure can be addressed. In addition, pump stations are remoted monitored and have early warning systems in

[39] Section 42A Report at 9.19
[40] Mr Garside, para 62

place, to ensure that blockages can be responded to quickly. I note that Mr West advises that the last pump station failure overflow was in June 2015, as a result of human error, and that measures have been put in place to address this. Accordingly, these protocols are already in place and, as indicated by the overflow benchmarking, and are working well - the GWS currently performs at a level consistent with better performing wastewater networks nationally.

7.85 Council accepts that DWOs are not desirable, but unfortunately they are inevitable. As outlined above and in the evidence of Mr West, Council has a comprehensive regime to address third party behaviour but ultimately cannot control that aspect – nor can it entirely control unforeseeable failures or breakages in its network. Accordingly, the aim is to minimise DWOs to the extent practicable through the actions that Mr West presents. To help ensure this is achieved, I have amended the proposed conditions of consent that specifies minimum requirements of an Operations and Maintenance Plan.

7.86 In light of the above, I consider that a term of 20 years is appropriate for both DWOs and WWOs.

Area Specific - Waipaoa Catchment Plan

7.87 The Waipaoa Catchment incorporates 12 major sub-catchment areas with a combined land area of 2,205km^2. The area is largely defined by the water catchment boundary of the Waipaoa River but also includes the separate catchment areas of the Waikanae Stream and Taruheru River. These two areas do not drain directly into the Waipaoa River but are both important components of the Poverty Bay Flats and to the Poverty Bay groundwater system and are included within this catchment plan. Freshwater values and Freshwater Management Units (FMUs) in the Waipaoa Catchment are closely related.

7.88 The Application has been assessed against the targets and limits in the Waipaoa Catchment Plan (set under the NPS-FM 2017 and specifically the Gisborne Urban FMU (Taruheru River, Waikanae Stream and tributaries)). These waterways are identified as having important in-stream and indirect amenity values – including swimming, boating and fishing. It is recognised that these urban rivers are currently degraded and have been affected by wastewater overflows.

7.89 Dr Wilson advises that the greatest effect that wastewater overflows have on water quality is the increase of faecal bacteria downstream of an overflow. For the Taruheru

River, the maximum concentrations were about twice as high during WWO events than the maximum recorded during routine (background) sampling.

7.90 The narrative and numeric objectives for the Gisborne Urban FMU are:

People are exposed to a low risk of infection (less than 1% risk) from contact with water during activities with occasional immersion and some ingestion of water (such as wading and boating).

Annual median ≤ 280 cfu/100mL; Annual 95th percentile ≤ 500 cfu/100mL; Median and 95th percentile values both calculated from monthly samples over a 5 year rolling period.

7.91 As indicated in the Quantitative Microbiological Risk Assessment (QMRA)[41], the risks to human health associated with WWOs affecting contact recreation at sites in Gisborne's rivers is either below the no observable adverse effect level (NOAEL – less than 1% risk of illness) or is low (between 1 and 5% risk of illness). This risk is managed through public health advisory warnings following an overflow event. However, the calculated risk reduces to below the NOAEL in a 10% AEP event following the implementation of the DrainWise programme – and further the likelihood of an overflow event occurring is substantially reduced. In my opinion, this is consistent with the narrative objective set for the Gisborne Urban FMU.

7.92 In respect of the numeric objectives for microbial contaminants and Dr Wilson has summarised these in his evidence. He concludes that overflow discharges are unlikely to significantly affect the ability to meet the identified objectives, other than potentially where a large DWO enters a small stream – which may affect both dissolved oxygen levels and ammonia toxicity for a period of time. However, it is important to note that these are not continuous, or even regular/repeat, discharges – but rare and of short duration. As I have discussed elsewhere in my evidence, Council is proposing to monitor these, and other parameters, should DWOs reach a waterway as part of its response.

F1.4.1 Information Requirements

7.93 Schedule F1.4.1 specifies requirements for information to be provided in Wastewater Network Assessment of Environmental Effects (AEE) for Discharges of Emergency Overflows of Sewage to Water and Land (Previously Schedule 18 to the Regional

[41] Appendix M to the Application

Freshwater Plan). My assessment of this is provided in Appendix 2. I advise that I consider that these requirements have been met.

Overall evaluation

7.94 Overall, I consider that the proposal is consistent with the relevant RPS and TRMP provisions as:

a) The GWS is a critical essential lifeline utility that provides for the health and safety of the community by transporting wastewater from homes and businesses to the WWTP for treatment and disposal.

b) Adverse effects are proposed to be minimised by a programme that progressively reduces WWO frequency and volume and manages DWOs to a practicable minimum and manages risks if overflows occur. This is ensured through appropriate conditions of consent.

c) The proposal will result in a progressive improvement in both coastal water and freshwater quality. Effects of wastewater overflows on ecosystems is currently low, and will be further reduced.

d) While the discharge of wastewater to water is offensive to tangata whenua and has significant negative impacts on the mauri of affected waterbodies, Council has committed to a substantial programme of improvement. In addition, tangata whenua will continue to be involved in the consent through the TWRG, including the development of cultural monitoring measures and a range of other initiatives aimed at reducing effects on the mauri of affected waterbodies and associated cultural values.

e) Council's progressive improvement of the public network and the management of overflows, together with its DrainWise programme moving forward provides confidence that the desired WWO target in Policy C6.2.9 will be met.

f) The programme to reduce WWO and DWO discharges will contribute to the water quality objectives for the Gisborne FMU being met.

7.95 In summary, I conclude that overall the Application is consistent with the objectives and policies of the RPS and the TRMP. Further, as I outline above, I consider that a term of 20 years is appropriate for both DWOs and WWOs.

RMA S104(1)C – OTHER MATTERS

Marine and Coastal Area (Takutai Moana) Act 2011

7.96 The Marine and Coastal Area (Takutai Moana) Act 2011 (MACA) applies if the Application for resource consent is 'in relation to a part of the CMA' where no Customary Marine Title (**CMT**) orders or agreements apply, but applications have been made to the Court for CMT (and notice has been given), or an applicant has applied to enter into direct negotiations with the Crown.

7.97 There are a number of parties/applicants who have applied for CMT within the wider Gisborne area, and those claims are currently working their way through the High Court process. As such, there are not currently any CMT orders or agreements in effect yet. Although direct overflows of wastewater to the CMA are not proposed and are highly unlikely, wastewater overflows may be transported (by rivers) to the CMA in some events – although any effects are temporary and will be progressively reduced.

7.98 As such, Council conservatively (and out of an abundance of caution) sought the views of all parties/applicants within the discharge area and/or within the dispersion modelling. No responses were received. It is noted that a number of CMT applicants have also been party to the tangata whenua engagement that is documented in the lodged Application and in Mr Kanz's evidence.

Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019

7.99 The purpose of this Act is to contribute to the legal expression, protection, and recognition of the continued exercise of mana by ngā hapū o Ngāti Porou in relation to ngā rohe moana o ngā hapū o Ngāti Porou. To this end, this Act gives effect to the deed of agreement between ngā hapū o Ngāti Porou and the Crown.

7.100 As noted above there are no direct overflows of wastewater to the CMA proposed by the Application and these are highly unlikely to occur, but may be transported (by rivers) to the CMA in some events – although any effects are temporary and will be progressively reduced.

7.101 The direction set out in this Act is recognised. As provided by this Act, I understand that Ngāti Porou were provided with the Application by Council as part of the service of the Application as is Council's standard practice. I note that Ngāti Oneone, a hapū of Ngāti Porou, has lodged a submission on the Application.

Statutory Acknowledgements

7.102 A Statutory Acknowledgement is a formal acknowledgement by the Crown of the mana of tangata whenua over a specified area. It recognises the particular cultural, spiritual, historical and traditional association of an iwi with the site, which is identified as a statutory area.

7.103 Statutory Acknowledgements are currently in place for the following water bodies (affected by overflows):

Ngāti Porou statutory areas are:

- Tūranganui River and its tributaries (to the extent that this area is within the area of interest), upstream of the coastal marine area.
- Waimata River (as a tributary of the Tūranganui River) to the extent that this area is within the area of interest), upstream of the coastal marine area.

Rongowhakaata statutory areas are:

- Tūranganui River within Rongowhakaata area of interest. Taruheru River within Rongowhakaata area of interest. Waimata River within Rongowhakaata area of interest.
- Waikanae Stream within Rongowhakaata area of interest. Rongowhakaata coastal marine area within Rongowhakaata area of interest.

Ngai Tāmanuhiri statutory areas are:

- Ngai Tāmanuhiri coastal marine area; and Part Waipaoa River (including Karaua Stream).

7.104 Regard has been had to these acknowledgements and I understand that all statutory acknowledgement parties were specifically notified of the Application. Significant engagement with these iwi or their hapū has been undertaken through the KIWA Group and this is proposed to be on-going.

Iwi Management Plans

7.105 Iwi or hapū Management Plans are a policy statement that describe resource management issues important to tāngata whenua. The Council has formally received Iwi Management Plans (**IMP**) from:

Ngā Ariki Kaiputahi; and

Te Aitanga-a-Māhaki.

7.106 Both IMPs include reference to significant water issues for iwi, including the discharge of wastewater to the moana, and their content is acknowledged within the Application and the engagement that has been undertaken.

7.107 These plans are acknowledged and have been taken into account in the development of the Application, including through the proposed consent conditions relating to the ability for tangata whenua to advise on, and input into, the implementation of the consent.

Tairāwhiti 2050: Shaping the Future of our Region

7.108 Tairāwhiti 2050 is Council's Spatial Plan and vision for the region for the next 30 years. It includes eight Strategic Outcomes and a range of opportunities and aspirations. Of particular relevance to the Application are

Outcome 5: We take sustainability seriously

Tairāwhiti has a circular economy that supports diverse, inclusive and sustainable growth. We are future-focused and plan and care about the future of the region, and how to enhance its natural and built environment for future generations.

7.109 This includes the aspiration that: *Wastewater no longer enters Tūranganui a Kiwa or our waterways.*

Outcome 6: We celebrate our heritage

Our natural taonga are healthy and protected for everyone to enjoy now and in the future. We celebrate our Māori identity, cultural, historic and natural heritage.

We recognise the intrinsic value of ecosystems and biodiversity. There is no further loss of significant natural, cultural or historic heritage. We have restored key areas of the environment as Tairāwhiti grows. We all practice active guardianship.

7.110 This includes the opportunity to: *'Support mana whenua in the exercise of kaitiaki responsibilities over the environment'* and the aspiration that: *'We can swim in our waterways…'*

7.111 The Application is consistent with these strategic directions and aspirations through the progressive reduction of wastewater overflows and the on-going involvement of tangata whenua into the implementation of the consent.

S104D

7.112 To be able to grant consent to a non-complying activity, a consenting authority must be satisfied that either the adverse effects of the activity on the environment will be minor (s104D(1)(a)), or the proposed activity will not be contrary to the objectives and policies of a proposed plan and/or plan (s104D(1)(b)).

7.113 This consideration is commonly known as the 'gateway test'. If either of the limbs of the test can be passed, then the Application is eligible for approval, but the proposed activity must still be considered under Section 104. There is no primacy given to either of the two limbs, so if one limb can be passed then the 'test' is passed.

7.114 While the adverse effects of wet and dry weather overflows on the environment are generally infrequent and temporary, and able to be mitigated, I acknowledge and accept tangata whenua's view that any wastewater discharge to water is culturally offensive. A key aim of this consent is to substantially reduce WWOs and manage DWOs to a practicable minimum to reduce (but not eliminate) this effect.

7.115 I have provided my assessment of the proposal against the relevant statutory provisions above. Overall, I consider that the proposal to discharge wastewater overflows, subject to conditions that that require a reduction in overflow volumes and frequency to a practicable minimum and measures to mitigate adverse effects and provide for meaningful engagement with tangata whenua is consistent with, and not contrary to, the objectives and policies of the TRMP. Accordingly, in my opinion, consent can be granted under section 104D.

RMA S105

7.116 Section 105 of the Act lists specific matters for a discharge permit or coastal permit to which a consent authority must have regard to. These include the three matters below.

a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects;

b) The applicant's reasons for the proposed choice; and

c) Any possible alternative methods of discharge, including discharge into any other receiving environment.

7.117 The nature of the discharge and the sensitivity of the environment to effects have been well traversed in the Application and technical evidence. The discharges are assessed as having minimal ecological effect – the primary effects relate to effects on cultural values and public health. Cultural effects cannot be completely avoided, but can be mitigated to some extent as proposed.

7.118 Due to the nature and design of the wastewater network, and its proximity to Gisborne's urban streams, there is little choice but to overflow to land and rivers as a result of blockages/faults and in very heavy rainfall. In wet weather, discharges to the river are undertaken in preference to uncontrolled discharges of wastewater on private and public land, which would give rise to more significant health risks. The wastewater overflow management objectives and associated overflow performance measures represent what is considered the most effective long term solution to reduce WWOs and DWOS and mitigating their effects when such events occur.

7.119 As DWOs primarily occur as a result of third party actions (blockages etc) there are few alternative methods available to Council to the current proposal which provides for on-going maintenance, surveillance, public education and response. Council has placed significant emphasis on the aspects within its direct control, including targeted cleaning and maintenance and ensuring appropriate and timely responses to minimise the likelihood of DWO discharges reaching water. It also has a significant programme of public education to help minimise DWOs caused by other parties' actions.

7.120 For WWOs, a number of alternatives have been considered. These are discussed in Section 3.5 of the Application and in Mr West's evidence. Council's staff and experts are of the firm view that the most effective and enduring method of reducing overflows is to substantially reduce the volume of stormwater entering the wastewater network.

Alternative options, such as additional network storage, can then be considered once substantial volumes of stormwater has been removed. This is provided for through the proposed conditions of consent.

RMA S107

7.121 Section 107 of the Act applies to the Application as it imposes restrictions on the granting of certain discharge permits. A discharge permit shall not be granted if, after reasonable mixing, the discharge of a contaminant or water into water is likely to give rise to all or any of the following effects in the receiving waters:

a) *the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*

b) *any conspicuous change in the colour or visual clarity;*

c) *any emission of objectionable odour;*

d) *the rendering of freshwater unsuitable for consumption; any significant adverse effects on aquatic life.*

7.122 Despite the above, a consent authority may grant a discharge permit if it is satisfied that the discharge is consistent with the purpose of the Act, and:

a) *that exceptional circumstances justify the granting of the permit;*

b) *or that the discharge is of a temporary nature;*

c) *or that the discharge is associated with necessary maintenance work.*

7.123 DWOs are unpredictable, but generally small in volume and of short duration. Effects are mitigated through education, proactive maintenance, timely responses including managing health risk and clean-up. In rare instances DWOs may occur to small streams and with effects on aquatic life. However, in general these overflows are of a temporary nature and generally have temporary effects in terms of any conspicuous change in the colour or visual clarity (if there is a discharge to a waterbody) and emission of objectionable odour.

7.124 WWOs are unlikely to produce conspicuous oil or grease films, scums or foams; however, some floatable or suspended materials may be present in the discharge. As these occur in high rainfall events, when these discharges occur, there would generally

be no conspicuous change in the colour or visual clarity, due to the contribution of other discharges (such as sediment run-off) from upstream catchments. As these discharges occur in saline environments at the bottom of catchments, the water is already unsuitable for consumption, irrespective of the wastewater discharge. Further, as indicated in the Application and the evidence of Dr Kelly, effects of WWOs on aquatic life are considered to be minimal.

7.125 Accordingly, it is considered that consent can be granted as the discharges are of a temporary nature. Additionally, there are exceptional circumstances that justify the granting of the Applications:

a) The drainage network is essential, lifeline infrastructure and its on-going operation is essential to the health and safety of the Gisborne community;

b) A programme is in place that seeks to achieve the wet-weather overflow performance target of an overflow occurrence of no more than 50% probability in any given year, consistent with Policy C6.2.2(9) of the TRMP;

c) Council's current overflow performance is at a level that is on par with the best performing councils nationwide, and further management improvements are proposed.

RMA s123 – Term of Consent

7.126 I have discussed term above. In my opinion, a term of 20 years is appropriate for both DWOs and WWOs.

PART 2 OF THE RMA

7.127 As advised above, recent case law guides the application of Part 2 of the RMA to resource consent decisions. Of relevance is the Court of Appeal Davidson Decision[42] which determined the circumstances in which Part 2 of the RMA can be considered, on the basis that Part 2 of the RMA is already required to be given effect to in national, regional and district policy instruments. The Davidson decision establishes that Part 2 can be considered only when the planning instruments are found to be invalid, incomplete or uncertain in terms of their alignment to Part 2.

[42] R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316

7.128 Whether this applies in respect of the Gisborne planning instruments is a moot point. However, I include an assessment against relevant Part 2 matters below.

S6(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development

7.129 Wastewater overflows are infrequent and of short duration. WWOs occur during very heavy rain, when river flows are large. DWOs can occur in all climatic conditions, but are typically small and rarely reach a water way. Accordingly, the potential for adverse effects on natural character are low and any current effects will be progressively reduced.

S6(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

S7(a) kaitiakitanga

S8 Treaty of Waitangi

7.130 I have addressed cultural aspect at length in my evidence and Mr Kanz outlines the engagement that has occurred to date and the outcomes from that engagement. While I acknowledge wastewater overflows are offensive to tangata whenua and affect Māori cultural values, Council is working closely with tangata whenua to integrate tikanga, mātauranga Māori, and Māori values into its management of overflows, and the basis of the Application is to reduce the existing wastewater overflows over time. This is intended to be a long term relationship to work together to reduce overflows and their associated adverse effects on mauri and associated cultural values.

7.131 Additionally, as Mr Wilson advises[43], Council has worked with its community to develop a Spatial Plan that includes a commitment to consultation and partnership with tangata whenua. The engagement with tangata whenua that has been undertaken, supporting tangata whenua in their exercise of kaitiaiki of the environment, and incorporating matauranga Maori into monitoring conditions are tangible outcomes of this commitment. Further, Council is cognisant that iwi/hapu are opposed to any wastewater discharges entering the waterbodies and it is committed to a programme that will ensure that over time these discharges will be reduced.

[43] Mr Dave Wilson, para 20

S7(aa) the ethic of stewardship

Stewardship is inherent in the approach taken by Council. It has progressively addressed past problems associated with wastewater and stormwater drainage and, through this consent, intends to continue to do so in the future to pass an improved wastewater network and environment on to future generations.

S7(b) the efficient use and development of natural and physical resources

7.132 The GWS is a physical resource of significance and one that is essential to the social and health needs of Gisborne's community, as well as being an important community asset as discussed in the evidence of Mr Wilson. Its on-going operation, subject to conditions to progressive reduce and mitigate adverse effects, is consistent with the efficient use of physical resources.

S7(c) the maintenance and enhancement of amenity values:

S7(f) maintenance and enhancement of the quality of the environment:

7.133 Wastewater overflows can affect amenity values and the quality of the environment. The proposal is to progressively reduce overflow frequency and volume and manage overflows to a practicable minimum. This will reduce effects on amenity values and enhance the quality of the environment.

S7(i) the effects of climate change

7.134 Climate change may affect the operation of the network. As indicated in the Application[44], the wastewater network design and overflow performance measures and targets take into account anticipated climate change projections by ensuring that all stormwater and wastewater network modelling (and sizing of new/upgraded infrastructure) take into account the impacts of climate change. The potential for climate change to increase winter rainfall further reinforces the benefit of addressing stormwater inflow at source.

7.135 Overall, the wastewater network is essential infrastructure that contributes to the health of people and communities. The Application is based on the on-going process of network development (to provide for growth) and improvement (to levels of service and progressive overflow reduction), in order to meet the foreseeable needs of future

[44] Application - para 8.4.3

generations and to provide for the health and well-being of the community. As I have indicated previously, the GWS is a well-functioning wastewater network that is essential to the health and safety of Gisborne's community, and the proposal is to improve its performance further.

7.136 The approach to wastewater overflow management and proposed conditions of consent set out the management framework for overflow events, which seeks to protect natural and physical resources and the health and safety of communities while progressively mitigating and minimising existing adverse effects. Through the proposed consent conditions, the potential adverse effects caused by the overflow events on the environment and to human health are avoided and minimised to the extent practicable and risks to human health are mitigated through appropriate overflow response procedures.

7.137 In my opinion, the Application is consistent with the purpose and principles of the RMA and Part 2 matters. It provides for the essential health needs of communities, while ensuring that adverse effects are appropriately avoided, remedied and mitigated.

8 ASSESSMENT OF SUBMISSIONS

8.1 A total of 21 submissions were received, including:

a) 19 in opposition /oppose in part;

b) 2 in conditional support (Hauora Tairāwhiti and Ministry of Education)

8.2 I have provided an assessment of the submissions in terms of what I consider to be the key submission points and changes sought in Table 1 below. The concerns raised are highlighted in the table and I have addressed many of these issues in my evidence above and summarise this below.

Key Issues Raised in Submissions

Issue	Number of Submissions[45]	Submission Points	Response
Term of consent	12	Term too long – various alternatives proposed by submitters, but generally 5 years	In my opinion a consent duration of 20 years is appropriate due to: ▪ Wastewater drainage is critical, lifelines infrastructure in an urban environment. Unfortunately, overflows are an inevitable consequence of the operation of a network – particularly one that have been in place for a long period of time. ▪ The causes of wet weather overflows are well understood as a result of significant investigation, study and field experience; such that there is confidence that the identified level of performance can be achieved. ▪ A substantial programme of work is being implemented to progressively reduce stormwater inflow to the network and, as a consequence, wet weather overflows. This programme is well underway. ▪ As overflows are the cumulative result of numerous sources of stormwater inflow, some time is required to implement sufficient remedial actions (primarily on private property) for an observable reduction in overflows to be achieved. Affordability is also a key issue for Gisborne that must be taken into consideration. ▪ Council has extensive protocols and procedures in place to manage overflows and respond accordingly, including response measures, notification and signage protocols, monitoring and reporting requirements; ▪ Council also has a multi-faceted approach to management of DWO including regular maintenance and jet cleaning regimes, trade waste compliance, public education campaigns, and response, notification and monitoring protocols if DWO do occur. ▪ Potential adverse effects on the environment can be appropriately managed through consent conditions which include a highly transparent reporting programme and review conditions.

[45] Most submissions raised multiple issues – accordingly the numbers of submission points are indicative only and this table does not attempt to 'rank' the significance of the issues raised

			▪ A review condition in accordance with section 128 of the RMA is proposed, providing for the ability to review the conditions of consent should circumstances change. ▪ Requiring a short-term consent is a 'blunt instrument' by which to manage adverse effects and does not provide sufficient certainty for public infrastructure management and investment. It will direct expenditure and resource away from resolving problems 'on the ground' to further assessment and significant consenting costs.
Drainwise/ Alternatives	10	Drainwise not sufficient or will not work – should be independently reviewed, other alternatives should be considered, particularly storage, options analysis insufficient	As detailed in the evidence of Mr Wilson, Mr West and Mr Kanz, there is significant investment and Council commitment to the DrainWise programme. This programme has been developed in response to the identified primary cause of wet weather overflows – being 'high-response' inflow as detailed in the evidence of Mr Garside and Mr West. Reducing this significantly will enable Council to achieve the target of a wet weather overflow occurrence of no more than 50% probability in any given year. This has been a key determining factor in the actions and interventions included in the DrainWise programme. As indicated in the lodged Application and post lodgement further information, Council has investigated what upgrades are required for 85%, 75% and 65% removal of direct inflow is achieved – noting that the less direct inflow removal achieved, the more network upgrades are required to achieve the overflow target. Those works associated with the 85% inflow target are being implemented. Regular reviews have been built into the consent conditions to enable the effectiveness of the DrainWise programme to be assessed and changes in approach made as necessary. Other alternatives for WWO minimisation, such as overflow storage, have been considered. However, a large storage volume is required (but rarely used), and this does not address the root cause of the problem. Reducing inflows at source is considered more sustainable and more resilient to the future effects of climate change. Additionally, storage options remain 'on the table' and will be more viable and can be considered if necessary once stormwater inflow has been reduced. Mr West address other alternatives that have been suggested in submissions.

Seymour Turenne	7	Oppose discharge from this overflow into stream that borders school and private property	As noted in section 4 of my evidence, Council has undertaken further investigations to assess whether this overflow can be removed. It has concluded that the overflow can be diverted to a location adjacent to the Waimata River and both the existing and new overflow be classified as tertiary (used only in very large rainfall events – if at all). As Mr Kanz advises, the works necessary to enable this are currently being designed and budget has been made in the 2021/22 financial year to construct the necessary changes. Conditions of consent have been proposed to ensure that this occurs.
Effect on Schools	5	As above for Seymour Turenne	As addressed above. I also note that all schools and childcare centres have been included on the notification list under the updated Wet Weather Discharge Notification Protocol and the Dry weather Overflow response protocol to be notified (if necessary).
Funding/Priority	6	Not a high enough priority for Council (link to shortened term sought), more funding should be allocated, funding should be sought from other sources	Funding is addressed in the evidence of Mr Wilson.
Clear Actions and measures	5	Clear deliverables and measurable actions required	I consider that Appendix B of the amended draft consent conditions, included as Appendix 2 to my evidence, sets out the consent objectives and targets to include clear deliverables, monitoring and measurable actions. In addition I consider the proposed annual, five-yearly reporting and 10-year review and re-set of targets provide a high level of transparency and appropriate certainty of actions and measures throughout the consent.
Cultural effects	4	Impact on cultural (and community) values, culturally offensive, relationship with taonga, KIWA recommendations not followed, use of environment,	As detailed in the lodged Application and in the evidence of Mr Kanz it is acknowledged that tangata whenua oppose any discharge of wastewater to water and that wastewater overflows are culturally offensive. While these effects are not able to be fully avoided, the proposal is to reduce overflows over time and implement additional actions to, in part, mitigate effects. Proposed conditions of consent have been provided to give effect to the KIWA group recommendations, including through the establishment of a Tangata

		food gathering etc, iwi participation and engagement	Whenua Reference Group and through the Tangata Whenua Cultural Monitoring Plan. Council proposes to work with tangata whenua over the lifetime of the consent to ensure that this engagement and input continues.
Inconsistency with national direction / plan requirements	4	Inconsistent with NPS-FM 2020; inconsistent with policy direction in TRMP; inconsistent with spatial plan strategy, inconsistent with RMA	I consider that the Application is consistent with the policy direction in the NPS-FM 2020, TRMP and RMA for the reasons set out in the statutory assessment in Section 7 of my evidence. I acknowledge that I did not explicitly review the Tairāwhiti 2050 Spatial Plan in my statutory assessment in the lodged Application but have done so in my evidence above. I consider the Application consistent with the key outcome of a resilient community and aspiration that by 2050 'everyone has access to affordably and safe essential services (water, wastewater, energy). I acknowledge that under the sustainability outcome is the aspiration that 'wastewater no longer enters Tūranganui a Kiwa or our waterways'. The consent Application seeks significant improvement over time and works towards achieving this aspiration.
Iwi/community group	3	Stakeholder group – iwi/community Partnership with iwi – Reference group should have decision making ability	As I outline at section 6 of my evidence, a Tangata Whenua Reference Group is proposed, reflecting Council's commitment of partnership with tangata whenua as expressed in the Spatial Plan and the NPS-FM 2020. However, I consider that a wider stakeholder group is not required as: ▪ The proposed consent conditions provide for a high level of transparency of performance and reporting of overflow events; ▪ (Council has a comprehensive public education campaign through the DrainWise programme; ▪ The WMC provides a forum for representation of the community and iwi in a governance role, as outlined in Mr Wilson's evidence; and ▪ As Mr Wilson advises, members of the public are able to actively participate in Council's LTP processes which directly relates to Council's expenditure on key infrastructure projects such as DrainWise.
Monitoring/ reporting	2	Transparent reporting and annual reporting requirements	As I have previously noted, significant and transparent annual and five-yearly reporting is proposed.

			A 10 year review and re-set of targets for years 10-20 is also proposed through the recommended conditions of consent.
DWOs (not allowed)	2	DWOs should not occur	Dry weather overflows (DWOs) occur as a result of unexpected problems in the wastewater network resulting in wastewater being discharged from manholes or gully traps and, in extreme cases, pump stations. As Mr West advises, in Gisborne DWOs generally occur where there is a blockage in the network, mostly associated with a third party putting a foreign object in the wastewater system or fat build-up, and also occur in rare instances as a result of an extended power failure to a pumping station or a break in the network. Mr Garside also addresses the inability to 'eliminate' DWOs.

9 COMMENTS ON THE S42A REPORT

9.1 The s42A Report and its supporting technical assessments provide a comprehensive evaluation of the Application. I agree with a large proportion of the assessment, in particular it concludes:

a) an extensive amount of technical information has been provided on the wastewater network and modelling of overflow discharges, particularly for wet weather events and the Application identifies key environmental and cultural issues arising from the overflow discharges and the measures available to progressively reduce the frequency, volume and effects of the discharge[46].

b) In respect of wet weather overflows, the wastewater network model is sufficiently detailed and is considered representative of the performance and function of the network[47].

c) The DrainWise Programme is an appropriate and effective method to engage with the community and to progressively reduce the issues of inflow from private properties.

d) the Applicant has engaged with tangata whenua and the community in a comprehensive and meaningful manner. This has been a constructive process and supports the broader understanding of the challenges facing the Applicant and the community in resolving the discharge issues[48].

9.2 I acknowledge the conclusions that:

The issue of untreated wastewater discharges is a contentious one, and it is very unlikely that any community would freely endorse the continued discharge of untreated wastewater onto land or into local water ways. The overflow discharge is repugnant to tikanga Māori and this is clearly articulated through the KIWA Engagement Report and in opposing submissions.

As unpalatable as the current situation is, overflow discharges do occur and the issues and challenges arising from these discharges must be addressed. The wastewater network is essential and regionally significant infrastructure and the overflow

[46] para 1.4
[47] para 1.13
[48] para 1.5

discharges are, at least in part, a function of the age, condition and location of the network. Any resolution will require ongoing community engagement and transparent monitoring and reporting. In addition, there are financial implications which need to be considered given that the costs of the maintenance and remedial works will involve both public (rates) funding and direct costs to individual property owners.

9.3 In my opinion, these are indeed the issues at the heart of the matter. Wastewater overflows are not desirable and are offensive to, and opposed by, tangata whenua and the community. Unfortunately however, they are a consequence of urban drainage networks, particularly one that has been in place for many years and simply cannot just be turned off or completely eliminated.

9.4 Accordingly, I concur with the conclusions of the S42A Report that the DrainWise Programme, on-going meaningful engagement with tangata whenua and other measures promoted in the Application are appropriate and effective to reduce the frequency and volume of overflows. In my opinion, the remaining issues relate to:

a) Term;

b) The eradication of DWOs; and

c) The conditions of consent.

Term

9.5 In respect of term, I have provided my opinion in my evidence above and do not repeat that here, other than to summarise my conclusion that a term of 20 years is appropriate for both DWOs and WWOs, given the essential nature of the wastewater infrastructure, the operations and maintenance regime that is currently in place and which will continue to be refined over time, the substantial programme of work and improvements that have been delivered in the past, the substantial DrainWise programme that has been committed to and the high level of engagement, reporting and review provided for in proposed consent conditions.

Eradication of Overflows

9.6 In respect of the eradication of DWOs, Mr Garside and Mr West advise that such an approach is not feasible, given the un-predictable nature of the causes of DWOs. Rather, in my opinion, the aim should be to minimise DWOs to the extent practicable.

In this regard, I consider that the conditions of consent that I have proposed in my evidence achieves this.

Draft Conditions

9.7 In respect of the s42A comments on the draft conditions, I advise that I provided the S42A Reporting Planner a copy of the Applicant's updated proposed consent conditions on 8 June 2021. However, the s42A report has provided comments on the conditions as lodged in the Application and not those subsequently provided. Notwithstanding this, I have further revised the proposed conditions to incorporate a number of the s42A comments into my proposed conditions in Appendix 1 of my evidence.

10 SUMMARY AND CONCLUSIONS

The Gisborne Wastewater Network

10.1 The GWS comprises an extensive network of pipes, pumping stations and other components that conveys wastewater from homes and commercial properties to the WWTP. It is essential regional infrastructure which provides a sanitation service that is functionally required to service Gisborne's community and a lifeline utility that provides significant health and safety benefits to the Gisborne community.

10.2 The GWS has developed and evolved over many years to meet the changing needs and expectations of the Gisborne community and improve performance. As of today the GWS is assessed as having been designed adequately to convey six times ADWF, which is consistent with current practice in New Zealand.

10.3 Importantly, approximately 50% of the reticulated wastewater network is located on private property. These are the pipes (and other components) that take wastewater from individual houses and buildings to the council network and is owned by the property owner. The other 50% is the public network, owned and managed by Council. These two components operate as one system – with both public and private responsibilities – which presents specific management challenges.

Wastewater Overflows

10.4 The causes of DWOs have been described at length in the Application and technical evidence. In short, the predominant cause of these overflows is assessed as being the excessive direct (quick response) flow of stormwater from private property. Other

sources (for example infiltration through cracks and joints) contribute, but flow monitoring clearly indicates the rapid increase in flow in parts of the wastewater network following heavy rainfall.

10.5 In Gisborne, WWOs are controlled to occur at specific locations and are directed to Gisborne's main rivers. While this is not desirable, it is done to avoid the more significant health risk consequences of overflows occurring through informal overflow points in potentially unknown locations – including on private property – often mixed with flood waters. Overflow points require manual intervention – the opening of a valve and closing it when wastewater/stormwater flows have sufficiently subsided.

10.6 DWOs occur as a result of unexpected problems in the wastewater network – generally where there is a blockage in the network, mostly associated with a third party putting a foreign object in the wastewater system or fat build-up – but they can occur as a result of an extended power failure to a pumping station or a break in the network. As they are problem/fault related, DWOs can occur anywhere in the network and the overflow exits the network at the lowest open point upstream of the blockage – typically a private gully trap or a manhole.

10.7 Most DWOs are infrequent, of short duration, small in volume and only approximately one quarter reach a waterway. Given their predominant causes, Council has a multi-faceted approach to the management of DWO as outlined in the evidence of Mr West; this includes a programme of public education to address third party behaviour and help prevent avoidable blockages and a programme of proactive maintenance (including cleaning) of problem areas to reduce material build up that may lead to a blockage. This work is ongoing as these causes are never able to be entirely eliminated.

10.8 On average, WWOs occur 2.5 times per year while DWOs have occurred on average seven times per year over the past five years. As indicated by a benchmarking exercise, Gisborne's current WWO and DWO performance is on a par with the better performing territorial authorities/wastewater network operators in New Zealand.

The Application

10.9 Resource consent for both WWOs and DWOs is required under the TRMP. As the consents have been 'bundled' consent is sought as a non-complying activity. This is by virtue of the activity status for DWOs discharges under the TRMP and discharges of sewage/wastewater to the CMA. In respect of the latter, there are no known

discharges and none are proposed – consent has been applied for out of an abundance of caution should there be circumstances where a wastewater overflow finds its way directly to the CMA.

10.10 Importantly, resource consent is sought on the basis of measures and actions to ensure that WWOs are progressively reduced, that both WWOs and DWOs are minimised to the extent practicable and that adverse effects are mitigated, including through:

a) the DrainWise programme, which aims to substantially reduce stormwater inflow to the wastewater network in order to reduce the frequency of WWOs from the current average of 2.5 per year to less than one per two years (no overflow in a 50% AEP rain event) and to reduce overflow volumes;

b) the Infrastructure Improvement on Private Property Strategy (IIOPPS), which provides guidance to address the central issue of private drainage;

c) refined operational procedures to limit WWOs to only those that are necessary to avoid uncontrolled overflows;

d) ongoing implementation of asset management programmes to ensure that the wastewater network continues to be designed, operated and maintained to minimise the risk of both DWOs and WWOs;

e) education in respect of the wastewater network, given that a significant cause of DWOs is blockages including third party actions;

f) response and monitoring protocols to minimise risk, if and when overflows occur;

g) on-going meaningful engagement with tangata whenua and incorporating matauranga Maori into monitoring;

h) transparent reporting and review requirements.

10.11 These are able to be ensured through proposed conditions of consent that include specified performance targets, monitoring/reporting requirements and overflow response protocols.

10.12 As part of the development of the consent, Council undertook intensive and constructive engagement with tangata whenua that has provided valuable input into the Application and provides a sound basis to move forward to incorporate tangata

whenua perspective, expertise and values into reducing overflows and improving their management. This was recognised in the s42A Report, which indicated that: *'the Applicant has engaged with tangata whenua and the community in a comprehensive and meaningful manner. This has been a constructive process and supports the broader understanding of the challenges facing the Applicant and the community in resolving the discharge issues'*[49].

Adverse Effects

10.13 As indicated in the s42A Report, Council have provided a comprehensive and robust assessment of effects in both the Application and technical evidence to the Panel.

10.14 While wastewater overflows can give rise to a range of adverse effects, in my opinion the most significant are the effects on tangata whenua and community values and the uses of the receiving waters. Wastewater overflows are not desirable and are offensive to, and opposed by, tangata whenua and the community.

10.15 Unfortunately however wastewater overflows, both wet weather and dry weather, are a consequence of urban drainage networks, particularly one such as Gisborne's that has been in place for many years. Embedded in this network is a high level of inflow from private drainage that result in *'rapid and substantial increases in wastewater network flows associated with rainfall events'*[50] - which adds to the complexity of addressing overflows.

10.16 However, in my opinion, there is no question or debate as to whether wastewater overflows should be reduced – rather the key questions are over what time, to what end point and how is this best achieved? Coupled with this is the need to ensure appropriate response, management, monitoring and reporting is in place while the desired reductions are delivered.

The DrainWise Programme

10.17 Council's key programme to reduce overflows is the DrainWise programme. As described by Mr Kanz, this is a comprehensive and multi-faceted programme that incorporates elements such as:

[49] S42A – para 1.5
[50] Mr Garside – para 25

a) Property Inspections and minor public-funded works – to identify drainage problems and fix the easy ones on the spot;

b) Compliance and enforcement in respect of illegal drainage, carried out in accordance with Council's IIOPPS;

c) Public drains on private property – providing stormwater drainage extensions onto private property where needed;

d) Education and Awareness – which is essential to reduce both WWOs and DWOs; and

e) Public network upgrades and renewals – on-going works to continue to improve the public component of the network and its performance.

10.18 In my opinion, this is a very comprehensive and detailed programme that has the aim of inspecting every property that connects to the GWS and to set in train a process to resolve problems in a way that is affordable to the community, particularly those property owners who have drainage problems they must address. This is coupled with the other components listed above and described in Mr Kanz's evidence. The s42A Report writers concur with this, stating *that the DrainWise Programme is an appropriate and effective method to engage with the community and to progressively reduce the issues of inflow from private properties*[51].

10.19 Mr Kanz's evidence details the current implementation of the DrainWise programme across Gisborne. This clearly demonstrates that it is not a theoretical programme, but one that is being implemented with success. Furthermore, the full DrainWise programme is appended to Mr Kanz's evidence, showing the structured approach to its implementation. Resourcing for the programme has been made in Council's Long Term Plan, as advised by Mr Wilson.

10.20 I consider that the Panel can have confidence that the DrainWise programme is robust and comprehensive and can deliver on its multiple aims, including the substantial reduction of stormwater inflow into the wastewater network.

[51] S42A Report – para 1.15

Proposed Conditions

10.21 I have proposed a set of conditions that are attached as Appendix 1 to my evidence, and which I discuss in detail in Section 6 above. In my opinion they appropriately provide for a range of outcomes including:

a) the progressive reduction in WWOs towards a target of no overflow in a 50% AEP rain event;

b) the management of DWOs to a practicable minimum;

c) ensuring effective on-going response to overflows if and when they occur, including more effective management of public health risk through improved notification and signage;

d) continued constructive engagement with tangata whenua (including meaningful engagement with tangata whenua and incorporating matauranga Maori into monitoring; and

e) transparent reporting and review.

Submissions

10.22 A total of 21 submissions were received, including:

a) 19 in opposition /oppose in part;

b) 2 in conditional support (Hauora Tairāwhiti and Ministry of Education)

10.23 I have provided an assessment of the submissions in terms of what I consider to be the key submission points and changes sought in Section 8 above. In my opinion, the submissions demonstrate iwi and community's concern regarding overflows.

10.24 The points raised in the submissions have been considered carefully and have been addressed where possible. A key change is the improvements in the Seymour/Turenne area to replace the existing overflow point with a new one that does not discharge to Owen's Stream, and other improvements such that the overflow points become tertiary (rarely used) overflows. A range of other matters have been addressed as a result of submissions and the pre-hearing meeting as outlined in my evidence above and by Mr Kanz.

Key Residual Issues

10.25 In my opinion, the key remaining issues relate to:

a) Term;

b) Whether DWOs can be eradicated.

10.26 I have discussed the matter of term of consent in detail in my evidence. I consider that that a term of 20 years is appropriate for both DWOs and WWOs, given:

a) the essential nature of the wastewater infrastructure;

b) the operations and maintenance regime that is currently in place and which will continue to be refined over time;

c) the substantial programme of work and improvements that have been delivered in the past;

d) the substantial DrainWise programme that has been committed to; and

e) the high level of engagement, reporting and review provided for in proposed consent conditions.

10.27 In my opinion, this provides confidence that the identified levels of performance sought by Policy C6.2.2(9) can, and will be, met.

10.28 In respect of the eradication of DWOs, Mr Garside and Mr West advise that such an approach is not feasible given the unpredictable (and often unforeseeable) nature of these overflows. On this basis, I do not consider the eradication of DWOs to be a realistic aim for the DrainWise programme or the consent. Rather, in my opinion, the aim should be to minimise DWOs to the extent practicable. In this regard, I consider that the conditions of consent that I have proposed in my evidence achieve this aim.

Statutory Assessment

10.29 Resource consents are assessed under an ever-increasing range of (and sometimes contradictory) statutory instruments. This necessitates a thorough and detailed assessment, which I have provided in Section 7 and Appendix 2 of my evidence. However, my conclusions are relatively succinct:

a) The Application is not contrary to the objectives and policies of the TRMP. Accordingly, consent can be granted under section 104D.

b) I acknowledge that Gisborne has yet to implement the NPS-FM 2020 and hence how Te Mana o te Wai applies to Gisborne's waterways has yet to be fully determined. Accordingly, I have proposed a review condition that provided for the consent to be reviewed to amend it as necessary. Notwithstanding this, I consider that the Application is consistent with the intent, objective and policies of the NPS-FM 2020 as it:

    i will manage natural and physical resources in a way that prioritises the health and wellbeing of water bodies and freshwater ecosystems.

    ii reflects that while tangata whenua and the community oppose wastewater overflows, as recognised by the KIWA Group and in submissions, Council is working closely with tangata whenua to integrate tikanga, mātauranga Māori, and Māori values into its management of overflows. While this does not resolve the cultural issues inherent with wastewater overflow discharges to water, the ongoing involvement of tangata whenua in managing this challenging issue is consistent with the intent of the NPS-FM 2020.

    iii Recognises that the GWS is critical infrastructure which provides an essential sanitation service to protect the health of Gisborne's community and provide for their social, economic and cultural well-being, both now and in the future, while mitigating adverse effects.

    iv Seeks to improve the water quality in, and health of, water bodies from their current state.

c) The Application is consistent with the objectives and policies of the NZCPS to improve the quality of the coastal environment and is not contrary to other policies.

d) The proposal is consistent with the relevant RPS and TRMP provisions as:

    i The GWS is a critical essential lifeline utility that provides for the health and safety of the community by transporting wastewater from homes and businesses to the WWTP for treatment and disposal.

    ii Adverse effects are proposed to be minimised by a programme that progressively reduces WWO frequency and volume and manages DWOs to

a practicable minimum and manages risks if overflows occur. This is ensured through appropriate conditions of consent.

iii The proposal will result in a progressive improvement in both coastal water and freshwater quality. The adverse effects of wastewater overflows on ecosystems are currently low, and will be further reduced.

iv While the discharge of wastewater to water is offensive to tangata whenua and has significant negative impacts on the mauri of affected waterbodies, Council has committed to a substantial programme of improvement. In addition, tangata whenua will continue to be involved in the consent through the TWRG, including the development of cultural monitoring measures and a range of other initiatives aimed at reducing effects on the mauri of affected waterbodies and associated cultural values.

v Council's progressive improvement of the public network and the management of overflows, together with its DrainWise programme moving forward provides confidence that the specified overflow targets in Policy C6.2.2(9) will be met:

- *minimising the frequency of overflow discharges; and*

- *an overflow occurrence of no more than 50% probability in any given year*

vi The programme to reduce WWO and DWO discharges will contribute to the water quality objectives for the Gisborne FMU being met.

10.30 I have also considered the Application in respect of Part 2 of the RMA and conclude the Application is consistent with the purpose and principles of the RMA and Part 2 matters. I reach this conclusion as:

a) The GWS is essential infrastructure that contributes to the health of people and communities. While the GWS performance is currently at a level consistent with better performing wastewater networks, the Application is based on an on-going process of network development (to provide for growth) and improvement (to levels of service and progressive overflow reduction), in order to meet the foreseeable needs of future generations and to provide for the health and well-being of the community.

b) The approach to wastewater overflow management and proposed conditions of consent set out the management framework for overflow events, which seeks to protect natural and physical resources and the health and safety of communities while progressively mitigating and minimising existing adverse effects. Through the proposed consent conditions, the potential adverse effects caused by the overflow events on the environment and to human health are avoided, remedied or mitigated (and minimised) to the extent practicable and risks to human health are mitigated through appropriate overflow response procedures.

c) Appropriate regard has been given to matters of importance and matters pertaining to Te Tiriti o Waitangi. While I acknowledge wastewater overflows are offensive to tangata whenua and affect Māori cultural values, Council is working closely with tangata whenua to integrate tikanga, mātauranga Māori, and Māori values into its management of overflows, and the basis of the Application is to reduce the existing wastewater overflows over time. This is intended to be a long term relationship to work together to reduce overflows and their associated adverse effects on mauri and associated cultural values.

10.31 In conclusion, in my opinion the Application can be granted subject to my proposed conditions or similar as the Panel see fit.

Ian David Mayhew

25 June 2021