

Katie Christison CME Officer, Environmental Regulation Greater Wellington Regional Council PO Box 11 646 WELLINGTON

By email: <u>katie.christison@gw.govt.nz</u>

WGN970255 [34837] – Paraparaumu WWTP – Discharge to storage basin

Discharge wastewater to land (being an unlined storage area) within the Paraparaumu WWTP site, with minor leakage to ground, for flows that exceed the plant capacity.

WGN970255 [34833] - Paraparaumu WWTP - Discharge to air

Discharge to air from all facilities at the Paraparaumu WWTP (within the Paraparaumu WWTP site).

WGN970255 [2565] - Paraparaumu WWTP - Discharge to Mazengarb Drain

Discharge of tertiary treated wastewater from the Paraparaumu WWTP to the Mazengarb Drain at a rate of up to 18,600 m³/day, seven days / week, 52 weeks / year (within the Paraparaumu WWTP site).

WGN030149 [22566] - Paraparaumu WWTP - Overflow basin

To discharge screened, dilute wastewater as overflow from the overflow basin at the Paraparaumu WWTP to the Mazengarb Drain.

WGN130218 [32196] – Paraparaumu WWTP – Sludge drying

To discharge to air from the operation and maintenance of a boiler and biofilter associated with the sludge handling process.

WGN040098 [34794] – Paraparaumu WWTP – Sludge lagoons

To discharge contaminants to land from a contaminated site, those discharges being emanations arising from residual sludge in the decommissioned Paraparaumu Wastewater Treatment Plant sludge lagoons.

Quarterly Report to end of June 2023 (Q4, FY2023) for Paraparaumu Wastewater Treatment Plant (PWWTP)

Dear Katie,

This report covers the compliance information required under the conditions of the above resource consents related to the PWWTP for the three months ended June 2023. This report includes the following information:

- An assessment of compliance against the resource consent conditions for Q3 (Appendix A).
- Quarterly monitoring results required by resource consents WGN970255 [34837], [27633] and [2656] (Appendix B).
- Annual monitoring results required by resource consent WGN130218 [32196], noting these results are submitted on a quarterly basis (Appendix C).

Overall compliance with resource consents in Q3 FY23

The Council is fully compliant with most PWWTP resource consents as demonstrated in Tables 1 to 4 in Appendix A. The Council is non-compliant with condition 5 of the air discharge consent WGN130218 [32196] relating to the temperature in the combustion chamber and resource consent WGN970255 [34837], which limits the use of the storage basin to three times a year. GWRC staff have previously indicated they would not take enforcement action relating to either of these non-compliances. The remainder of this letter provides some commentary on the compliance report.

CLG meeting

The Council held the second quarterly PWWTP Community Liaison Group (CLG) meeting on 23 May 2023 at the PWWTP, including a site-walkover. The final minutes were shared with CLG members, including GWRC, on 12 June 2023. The next CLG meeting will be late August.

Boiler combustion chamber temperature

The monitoring data for resource consent WGN130218 [32196] shows that the boiler temperature dropped below 650 degrees between 6-12 May 2023, even when adjusted by 20% as required by Condition 5. The temperature drop was due to annual maintenance requirements but is a technical non-compliance. The issue with Condition 5 is ongoing, and the Council and GWRC have discussed ensuring that the replacement consent conditions authorise a temperature drop during maintenance activities.

Storm storage pond usage

The Council presented details relating to the storm storage pond at the CLG meeting. In FY2022/23, the Council used the storm storage pond 6 times, which exceeds the 3 times authorised by resource consent WGN970255. GWRC sent the Council a "Please Explain" letter on 8 June 2023 regarding the storm storage pond usage, and the Council responded to this letter on 19 June 2023. Both letters are attached in Appendix D.

The Council acknowledges that storm storage basin usage is exceeding consented limits. However, the requirement to use the storm storage basin when flows exceed capacity is unavoidable. The Council has implemented, or is implementing, several measures to help reduce the need for the storm storage basin usage during high rainfalls, and to minimise the environmental effects of storm storage basin use, including inlet upgrade works and developing site specific solutions to minimise illegal connections.

As part of the replacement resource consent application, the Council has requested that, once the storm storage pond lining works are complete, the number of times the pond is used per year is unrestricted. Pond-lining works are scheduled to commence in Sep 2023 and complete by or before 30 April 2024.

Sludge removal update

The Council removing the sludge from S2 and P1-P5 (areas currently not approved for filling as per WGN230028) to enable the completion of sludge lagoon decommissioning under consent WGN040098. The sludge removal project is nearing completion (in early August 2023). Soil sampling is complete, and the Council is awaiting a final report from its consultants, Pattle Delamore Partners.

The desludging from areas S2 and P1-P5 sludge beds is based on the specialised contractor's (Intergroup) methodology statement approved by GWRC. Once the work is complete, an approval as stated in WGN230028 will be sought through submission of soil test report. Upon approval for filling the S2 and P1-P5, these areas will be filled-in following the SMP and ESCP submitted for the WGN230028 for the pond upgrade and decommissioning of old and retired sludge beds.

BPO update

As reporting in the Q3 report, the Council held a BPO hui with Ngati Toa and Te Atiawa on 24 March 2023. Since this hui, Ngati Toa has confirmed their interest in the project, and the two iwi have agreed to engage outside the project, including CEO of both iwi. The Council is therefore allowing the two iwi to korero within the timeframes that work from them. We will hear from iwi about how/who they wish to be involved going forward. We anticipate the next hui will be held in September or October to allow time for their discussions.

Work undertaken in Q3 FY23 and ongoing projects:

The Council is undertaking ongoing work at the PWWTP, including the following:

- Upgrading the RAS Pump Station 2 (75% complete), the remaining scope can happen only after Clairifier-1 back in operation.
- Mechanical refurbishment of Clarifier 1 is underway (90% complete) and expected to be commissioned by mid-August 2023.
- Clarifier 3 was drained and cleaned, and a conditional assessment was carried out.
- Seismic resilience of the boiler building is completed, and certification received in July 2023.
- Procurement of services complete for the storage pond upgrade, lining and retired sludge bed decommissioning. Work to be carried out in the window of Sep to Apr 2024.
- Procurement completes for pH dosing plant. Work to be carried out in the window of Sep to Apr 2024.
- Design progressing for inlet structure upgrade.
- Electrical design for distribution board (DB) 2 (completed).
- Proposal from suppliers received for cleaning the DAF Plant but can happen only after Clairifier-1 back in operation.
- Order placed for new 1MVA transformer with Electra (upgrade expected to be complete by early 2024).

Please contact me should you need further information.

Yours faithfully,

threate

Tess Drewitt Consultant Compliance Officer to Kapiti Coast District Council

Ramesh Pillai Senior Asset Planning Engineer Kapiti Coast District Council

Date 01 August 2023

Date 02 August 2023

Cc: Grant Stuart - Wastewater Treatment Plants Manager

APPENDIX A - ASSESSMENT AGAINST RESOURCE CONSENT CONDITIONS

Table 1: WGN970255 [34837], [27633], [2656] – Paraparaumu WWTP – Discharges

Requirement	Condition	Compliance
All Consents		
General Conditions	1-6, 8, 15, 21	
Discharge of unauthorised contaminants	7	
Community Liaison Group	9	
Air discharge [27633]		
Noxious, dangerous, offensive, or objectionable discharges	11	
Incident notification	12	
Operational logs	13	
Complaints record	14	
Discharges from sludge vitrification process	16	1
Discharge to Mazengarb Drain [2656]		
Records of daily flow	12	
Monitoring of effluent quality	13, 19	
Biochemical Oxygen Demand (BOD)	18(a)(i)	
Suspended Solids	18(a)(ii)	
Faecal Coliform Bacteria	18(b)(i)	
рН	18(b)(ii)	
Ammonia, Nitrate, Dissolved Reactive Phosphorous (DRP)	18(c)	
Heavy metals	18(d)	
Dissolved Oxygen	18(e)	
Effects on Ratanui Lakes	16	
Three-monthly reporting to GWRC	17	
Signage	20	
Discharge to unlined storage pond [34837]		
Limit to 3 times per year. ²	N/A	-
Return effluent to PWWTP as soon as reasonably practicable	11	

¹ Note that the sludge vitrification process was decommissioned in 2010. ² This is a requirement in the consent details (page 1) as opposed to the conditions of consent.

Table 2: WGN030149 [22566] – Paraparaumu WWTP – Overflow Basin

Requirement	Condition	Compliance
General Conditions	1, 5	
Notify GWRC when consent exercised	2	
Contingency actions	3	
Overflow Contingency Plan	4	

Table 3: WGN130218 [32196] – Paraparaumu WWTP – Sludge Drying

Requirement	Condition	Compliance
General Conditions	1-3, 19, 20	
Wood as fuel	4	
Boiler temperature (above 650C)	5	-
Treatment processes	6-8, 10	
Discharge of dangerous, noxious, offensive or objectionable contaminants	9	
Particulates (not exceeding 50mg/m ³)	11	
Emission Testing ³	12	
Monitoring	13	
Annual Reporting (by 1 August)	13	
Maintenance	14-16	
Complaints register ⁴	17	
Incident register & GWRC notification (within 24 hrs / 7 working days)	18	

Table 4: WGN040098 [34794] – Discharge from sludge lagoons

Requirement	Condition	Compliance
General conditions	1, 2, 4	
Groundwater monitoring	3	
Groundwater quality report	5	
Update of Sludge Decommissioning Management Plan	6	Underway

³ Not currently required by GWRC.

⁴ No complaints received during Q3.

APPENDIX B – PWWTP QUARTERLY MONITORING RESULTS

Kapiti Coast District Council Wastewater Treatment Consents Flows - Summary



	Monthly I Paraparaumu	•		Paraparaumu Paraparaumu Effluent Inlet		Otaki Inlet	Otaki Land
	-						
April 2023	220.0	125.0	Avg	12,338	11,588	2,029	2,093
April 2023			Мах	16,910	16,973	4,684	2,801
M 2022	145.0	82.0	Avg	12,142	11,405	2,437	2,273
May 2023	145.0	02.0	Max	17,932	18,858	4,158	2,801
			Avg	10,534	9,419		
June 2023	15.5		Max	11,326	10,260		

Paraparaumu Consents 3 Monthly Report



	BOD	SusSol	DO	pH	FColi
April 2023	DOD	543501	DO	pu	rcon
Mon 3 Apr 2023	3.5	6.1	5.3	6.6	3
Wed 5 Apr 2023	3.5	6.0	5.3	6.6	7
Fri 7 Apr 2023	3.1	8.1	5.8	6.8	2
Sun 9 Apr 2023	4.1	7.1	5.9	6.7	7
Tue 11 Apr 2023	4.4	8.4	4.8	6.6	3
Thu 13 Apr 2023	2.5	4.3	5.0	6.5	8
Sat 15 Apr 2023	2.2	7.4	5.4	6.6	10
Mon 17 Apr 2023	4.3	7.5	5.2	6.5	5
Fri 21 Apr 2023	3.6	7.0	6.2	6.5	8
Mon 24 Apr 2023	4.7	7.2	5.9	6.5	45
Thu 27 Apr 2023	1.9	3.1	5.9	6.5	11
Sun 30 Apr 2023	3.8	7.7	5.9	6.7	15
Geometric Mean	3.3	6.4	5.5	6.6	7
May 2023	5.5	0.4	5.5	0.0	1
Wed 3 May 2023	3.4	5.6	5.1	6.6	10
Fri 5 May 2023	2.9	7.4	4.8	6.4	22
Mon 8 May 2023	2.4	4.2	5.5	6.6	24
Thu 11 May 2023	2.7	5.0	5.5	6.7	29
Sat 13 May 2023	1.6	3.7	5.0	6.6	27
Tue 16 May 2023	4.6	6.3	5.9	6.6	15
Thu 18 May 2023	3.8	6.8	5.2	6.7	33
Sat 20 May 2023	3.0	5.8	5.5	6.7	7
Tue 23 May 2023	3.9	7.5	5.8	6.7	7
Fri 26 May 2023	4.1	6.9	5.4	6.6	11
Sun 28 May 2023	3.2	6.0	5.8	6.5	3
Mon 29 May 2023	3.8	5.1	5.4	6.7	11
Geometric Mean	3.2	5.7	5.4	6.6	13
June 2023		•			
Thu 1 Jun 2023	3.3	4.7	5.9	6.7	9
Sun 4 Jun 2023	5.2	6.5	5.1	6.3	3
Tue 6 Jun 2023	2.7	3.4	5.7	6.6	3
Fri 9 Jun 2023	3.6	5.7	6.2	6.7	3
Sat 10 Jun 2023	2.0	2.3	5.9	6.7	1
Mon 12 Jun 2023	3.8	3.5	6.3	6.6	3
Thu 15 Jun 2023	2.8	3.5	5.8	6.6	4
Sun 18 Jun 2023	3.9	4.1	6.3	6.6	15
Wed 21 Jun 2023	3.7	3.9	6.2	6.7	7
Fri 23 Jun 2023	5.7	4.2	5.3	6.5	5
Mon 26 Jun 2023	4.4	5.3	5.4	6.6	7
Wed 28 Jun 2023	3.8	4.2	5.7	6.7	1
Geometric Mean	3.6	4.1	5.8	6.6	4
Consent Conditions	15	15	. E	6400	500
Consent Conditions	15	15	>5	6 to 9	500

01-Aug-23

Paraparaumu Consents 3 Monthly Report -Nutrients



Date	NH4	NO3	DRP	Total P
April 2023				
Mon 3 Apr 2023	0.03	4.80	0.05	0.18
Wed 5 Apr 2023	0.05	4.50	0.05	0.25
Sun 9 Apr 2023	0.03	7.10	0.05	0.27
Sat 15 Apr 2023	0.07	4.80	0.05	0.24
Mon 24 Apr 2023	0.03	3.10	0.05	0.22
Sun 30 Apr 2023	0.04	4.60	0.05	0.21
Geometric Mean	0.04	4.68	0.05	0.23
May 2023				
Wed 3 May 2023	0.05	4.20	0.05	0.18
Mon 8 May 2023	0.04	4.10	0.05	0.19
Sat 13 May 2023	0.04	4.90	0.05	0.12
Sat 20 May 2023	0.04	5.30	0.05	0.24
Sun 28 May 2023	0.04	6.10	0.05	0.16
Mon 29 May 2023	0.03	5.20	0.05	0.20
Geometric Mean	0.04	4.92	0.05	0.18
June 2023				
Sun 4 Jun 2023	0.04	5.10	0.05	0.19
Tue 6 Jun 2023	0.03	6.50	0.05	0.11
Sat 10 Jun 2023	0.03	4.80	0.05	0.17
Sun 18 Jun 2023	0.04	5.30	0.05	0.16
Fri 23 Jun 2023	0.03	5.50	0.05	0.19
Mon 26 Jun 2023	0.03	4.50	0.05	0.17
Geometric Mean	0.03	5.25	0.05	0.16

APPENDIX C – PWWTP AIR REPORT

APPENDIX D – STORM STORAGE BASIN USAGE



8 June 2023

File No: WGN970255

Kapiti Coast District Council

Attn: Ramesh Pillai < Ramesh. Pillai@kapiticoast.govt.nz>

Wellington Office 100 Cuba Street Te Aro, Wellington 6011 PO Box 11646 Manners Street Wellington 6142 T 04 384 5708 F 04 385 6960 www.gw.govt.nz

Dear Ramesh

Request for an explanation in relation to an investigation into exceedance of wastewater storage pond usage

The purpose of this letter is to seek your explanation of events around the usage of the wastewater storage basin at the Paraparaumu WWTP that has occurred during the period 21 July 2022 through to 4 May 2023. Resource consent WGN970255 [34837] limits the use of the unlined storage basin to three occasions per year. In the community liaison group meeting held on 23 May 2023 representatives for Kapiti Coast District Council reported that the storage pond had been used on six occasions over the past year. The following table was provided with the meeting minutes on 6 June 2023.

Event	Volume diverted (m3)	Days diverting	Days taken to empty	Rainfall (mm)
21/07/2022	100	1	1	27
19/08/2022	15,060	2	18	76
17/03/2023	179	1	1	39
19/04/2023	1136	1	1	57
24/04/2023	1917	1	1	33
04/05/2023	3790	1	2	68

The use of the unlined storage basin on six occasions contravenes your resource consent, therefore it contravenes section 15(1)(d) of the Resource Management Act. The discharge is not expressly allowed by a national environmental standard, a rule in a regional plan or a resource consent.

170999-971342186-24

Wellington Office PO Box 11646 Manners St, Wellington 6142

Upper Hutt PO Box 40847 1056 Fergusson Drive Masterton office PO Box 41 Masterton 5840 0800 496 734 www.gw.govt.nz info@gw.govt.nz



I would like to provide you with the opportunity to clarify the information I hold. You have received this letter because you are the Acting Manager, Water and Wastewater Services for Kapiti Coast District Council, who holds resource consent WGN970255 [34837] for the discharge of wastewater into the unlined basin.

Greater Wellington Regional Council is responsible for responding to and investigating environmental incidents to determine what actions are required to remedy or mitigate the effects as well as determining if enforcement action is appropriate under the circumstances.

Information request

The observations above provide a summary of the information I have. Before we decide on any actions and/or outcomes, I invite you to provide me with a written explanation by Friday 23 June 2023 of the events surrounding this incident and any other information you think is relevant. To assist you with this I have listed some questions below:

- 1. Why has the storage pond been required to be used on more than three occasions this year?
- 2. Has there been a significant increase in rainfall during the July 2022-June 2023 period compared to previous years?
- 3. Are there any known significant illegal inflows into the wastewater network that have not been remediated? If so, what are these?
- 4. What actions is Kapiti Coast District Council taking to reduce the use of the storage pond usage?

If I have not heard from you by Friday 23 June 2023, I will conclude my enquiries without any further contact with you and a decision in respect of the outcomes, which may include enforcement action will be made. I will advise you of the outcome of my investigation at that time. You should also be aware that the information that you provide may be used in evidence against you.

Please be aware that the Greater Wellington Regional Council has a responsibility to enforce the RMA. Failure to comply with the RMA may result in enforcement action including formal warnings, infringement notices or prosecution. More information on potential penalties is available online at http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM239042.html and http://www.legislation.govt.nz/regulation/public/1999/0359/latest/whole.html#DLM300060

If you have any questions about this matter, please do not hesitate to contact me at this address or call me on 021 227 6647 of my Team Leader Jo Frances on 0211 94 9391.



Yours sincerely

(Abatata)

Claire McKevitt Senior Resource Advisor For Manager, Environmental Regulation



Jo Frances Manager, Environmental Regulation Greater Wellington Regional Council PO Box 11 646 WELLINGTON Date: 19 June 2023

By email: <u>Jo.Frances@gw.govt.nz</u>

Dear Jo,

Response to Please Explain letter regarding use of storm storage pond, PWWTP

This is a reply to Claire McKevitt's "Please Explain" letter to the Kapiti Coast District Council (the "Council") dated 8 June 2023 regarding the use of the storm storage pond at the Paraparaumu Wastewater Treatment Plant (PWWTP). This letter addresses each of the questions in turn.

- 1. Why has the storage pond been required to be used on more than three occasions this year?
- 2. Has there been a significant increase in rainfall during the July 2022-June 2023 period compared to previous years?

Consent WGN970255 [34837] authorises the Council to use the storm storage pond where stormwater inflows exceed capacity at the PWWTP to treat the volume of water entering the system. The Council is authorised to use the pond up to 3 times per year.

When the resource consent was granted in March 2000, the Council had only been using the storm storage pond up to 3 times a year, hence the reason for the limit in the resource consent. The Council has typically kept within the limit except for 2017/18, 2021/22 and again in 2022/23. **Table 1** provides a summary of usage of the storm storage pond since 2016/17.

Year	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
No. uses	3	4	1	3	2	6	6

Table 1: Storm storage pond uses since 2016/17

Rainfall intensity is the most significant factor influencing storm storage pond use. This is because rainfall and overland flows can enter the wastewater system, causing an increase in effluent entering the PWWTP. Rainfall can also contribute towards increased groundwater tables, which also increases the volume of groundwater entering the wastewater network following a high rainfall event.

In 2021/22 and 2022/23, the Kapiti district experienced increased annual rainfall and rainfall intensity events compared to previous years. **Figure 1** shows monthly rainfall in the Kapiti district from 2016/17 to 2022/23, with a peak in 2021/22 and continued high intensity events in 2022/23. The district is expected to continue to experience an increase in rainfall frequency, distribution, intensity, and volume, as well as increasing groundwater tables, due to climate change and sea level rise.

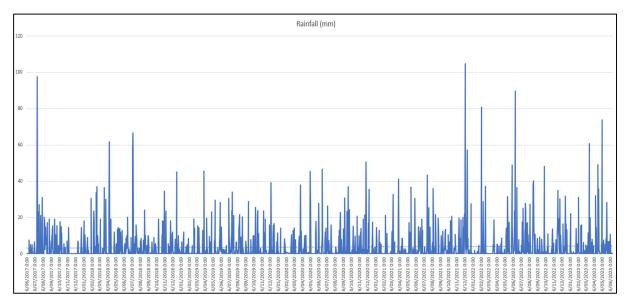


Figure 1: Kapiti Coast monthly rainfall since 2016/17 as recorded at Waikanae River - Water Treatment Plant (source: GWRC Environmental Data Dashboard)

3. Are there any known significant illegal inflows into the wastewater network that have not been remediated? If so, what are these?

The Council's stormwater management team have surveyed stormwater downpipes on 86% of the individual properties across the district, including catchments that lead to the PWWTP. Approximately 10% of the properties surveyed were found to have a direct stormwater connection to the wastewater network, either through a direct downpipe connection or a low or broken wastewater gully trap. These illegal connections provide a significant contribution towards wastewater inflows during high rainfall events.

4. What actions is the Council taking to reduce the use of the storage pond usage?

Use of storage basin is inevitable whenever the inflow exceeds the capacity of the PWWTP, and use of the storage basin has a better environmental outcome than discharging screened but untreated wastewater into the Mazengarb Drain. The flow directed to the storage basin is pumped back to the PWWTP for treatment when inflow is reduced following an event.

To help reduce the need for the storm storage basin during high rainfall events, and to minimise the environmental effects of storm storage basin use, the following remedial actions have either been completed or are work in progress:

- Upgrading the inlet structure to handle more flows, planned for 2024-25.
- Increasing storage capacity of the pond from current 25,000m³ to 40,000 m³ to enable the plant to handle large inflows during higher rainfall events.
- Lining of the storage basin to prevent groundwater contamination.
- Preparing site-specific solutions to remedy stormwater inflows into the wastewater network, with budgeting for remedial work to be included in the Long-Term Plan/Infrastructure Strategy 2024-25 and remedial works to begin 2024-25.
- Ongoing inspections of CCTV in the pipe network to identify and remedy any inflow / infiltration.
- Ongoing planned repair and renewal programme.

As part of the replacement resource consent application, the Council has requested that, once the storm storage pond lining works are complete, the number of times the pond is used per year is unrestricted.

For some additional context, the Council has previously sought to amend the conditions in the expired consent WGN970255 [34837] to remove the restriction of the number of annual uses of the storm storage pond. The Council sought advice from Greater Wellington Regional Council (GWRC) to amend the conditions of the resource consent in March 2019. At the time, GWRC advised the Council to stay with the current conditions of consent and seek to amend these conditions as part of the 2022 reconsenting of the discharge.

Claire Baldwin, Resource Advisor at GWRC, advised¹:

We are aware that should KCDC need to use the storm basin more than 3 times in the following 3-4 years this will make them technically non-compliant with their resource consent. However, provided KCDC continue to follow the other conditions of their consent, in particular trying to process the waste back through the plant as soon as reasonably practicable, **GWRC will not take enforcement action on KCDC for using the storm basin more than 3 times in a year.** This is because we understand that it is not intentional, and KCDC are in the process of addressing the bigger issue. GWRC prefer attention is spent understanding and addressing the bigger issue, than the technical non-compliance which is unlikely to have adverse environmental effects.

The Council's resource consent application for the replacement resource consent does not limit the number of times that the storm storage pond can be used each year. This is based on the groundwater technical report (Appendix C to the resource consent application), which recommended removing the limit because use of the storm storage basin is preferable to discharging untreated wastewater to the Mazengarb Drain. On this basis, the groundwater technical assessment report assessed the potential effects of the storage pond on groundwater, neighbouring bores, and surface water bodies as less than minor.

¹ See GWRC email to the Council dated 26 March 2023, Appendix A.

This assessment was made based on the storm storage pond being unlined. The works to line the storm storage pond will significantly reduce, if not eliminate, adverse effects on groundwater from the pond. As such, the limit on the current consent will no longer be necessary.

I trust this response addresses your concerns. Please let me know if you have any further questions.

Kind regards,

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Tess Drewitt Consultant Compliance Officer

Date: 19 June 2023

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Ramesh Pillai Acting Manager, Water & Wastewater Services

Date: 19 June 2023

Appendix A – Correspondence with GWRC, March 2019.