UNDER	the Resource Management Act 1991 ("**RMA**")
IN THE MATTER	of Waikato District Plan Review– Hearing 25 Zone Extents.

STATEMENT OF EVIDENCE OF TRISHA SIMONSON ON BEHALF OF

MOWBRAY GROUP LIMITED AND ANDREW MOWBRAY

[Submission 404 and 563]

[ON-SITE WASTEWATER]

1. Introduction.

1.1 My name is Trisha Simonson. I hold the position of Senior Engineering Geologist at Ormiston Associates Ltd, which is a consultancy specialising in geotechnical engineering, geology and on-site wastewater treatment and land disposal; a position which I have held since October 2017. Previously to that, I worked as a Senior Resource Officer - Infrastructure at Waikato Regional Council, for nine years.

1.2 I have been commissioned by Harry and Andrew Mowbray (Mowbray Group Ltd.) to prepare this statement of evidence to address matters raised in their submissions by Mowbray Group and Harry and Andrew Mowbray to Waikato District Council's ("WDC") District Plan review. The submissions are very similar and seek the same outcomes. Subsequently, I have referred to Mowbray Group throughout this evidence which is a representation of both Harry and Andrew Mowbray.

1.3 I note I was not party to the Mowbray Group submissions to the Hearings Panel in August 2018, nor gave advice on or to those submissions as my engagement came some months after.

1.4 I was first approached by Mowbray Group in June 2020 for technical on-site wastewater servicing advice with regards to the potential development of the land holdings commonly known as the Matangi Dairy Factory. I have visited the site in June and September 2020 and am familiar with the surrounding environment.

1.5 In preparing this statement I have reviewed and relied upon where necessary the evidence of the following technical experts:

(a) Cameron Inder – Transport

(b) Fraser McNutt – Planning

(c) Harry Mowbray – Owner/Submitter

2. Qualifications and Experience.

2.1 I have a Bachelor of Science in Earth Science and a Master of Science with First Class Honours in Earth Science from the University of Waikato.

2.2 I have 23 years' of experience including the investigation and design of on-site wastewater treatment and land disposal systems for individual dwellings, subdivisions, commercial establishments and institutions, together with gaining resource consents.

2.3 I am regularly engaged to provide technical reviews of on-site wastewater designs for the Waikato Regional Council and Bay of Plenty Regional Council, and also process Resource Consents for the Waikato Regional Council.

2.4 I am a past member of the Technical Committee of the New Zealand Land Treatment Collective and a current member of the Water New Zealand Small Wastewater & Natural Systems special interest group. I am retained by WSP Training to present the regulatory aspects of their NZQA accredited training courses for on-site wastewater treatment and land disposal.

3. Code of Conduct.

3.1 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 and agree to comply with it while giving evidence. Except where I state that I am relying on the evidence of another person, this written 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.

4. Scope of Evidence.

4.1 My evidence will address the following:

(a) A technical on-site wastewater capacity assessment, offering a viable on site solution to account for future development of the site.

(b) Appropriateness of the proposed Matangi Mixed-Use Zone (MMUZ) from a wastewater capacity and usage perspective.

(c) Waikato Regional Council requirements.

(d) Commentary on the proposed MMUZ provisions attached in Mr McNutt's evidence.

(e) Conclusion.

5. Executive Summary.

5.1 This evidence has been prepared in support of submissions from Mowbray Group in support of the proposed mixed-use zoning of Matangi.

5.2 Technical capacity assessment: In my view, the proposed rezoning of the property at Matangi can be serviced in terms of on-site wastewater discharge via a wastewater treatment system capable of producing secondary standard treated effluent (Advantex recirculating textile filter) with discharge to land, up to a total development design flow of 24,500 litres of wastewater per day (combined domestic and industrial flows).

5.3 Appropriateness of zoning: I believe the proposed mixed-use zoning is appropriate and able to be supported by the on-site wastewater infrastructure that I have addressed in section 7, and is more appropriate for the limitations of the site than the proposed industrial zoning.

5.4 WRC requirements: Both the current wastewater discharge and any future additional discharges will require authorisation via Waikato Regional Council consent, and in my opinion there is a viable solution that I could support, which will gain consent with standard conditions.

5.5 Proposed MMUZ provisions: The provisions outlined in Mr McNutt's evidence are, in my view, appropriate and sufficient to ensure the effects of wastewater and stormwater discharges are managed on site, with any development beyond the site capacity to be specifically addressed through future resource consents, with connection to public reticulation required through the proposed MMUZ provisions.

5.6 Based on all of the above, from an on-site wastewater treatment and disposal perspective in my opinion there is no reason why the rezoning would be precluded, to the volume limits specified above. Development beyond the identified capacity of the

site could be managed via reticulated services, alternatively, additional disposal area could be made available with the removal of some mature trees. The proposed on-site wastewater treatment system could be easily altered to connect to public reticulation in future if this were to be provided.

6. Context and Background.

6.1 I completed a site investigation on 8 September 2020 to determine the nature of the existing on-site wastewater system and potential land area available on site for the purposes of wastewater disposal.

6.2 The site investigation included a review of existing site plans, which confirm that wastewater generated from the existing buildings is currently treated by up to nine septic tanks, with a combination of discharge to ground soakage and overflow discharge to the existing stormwater system. While not ideal, this is a legacy effect of the site's age and history. Mowbray Group recognise that this requires improvement, and have made steps to commence this process.

6.3 A preferred option to achieve a compliant discharge has been identified, including the following components:

(a) Primary Treatment – replace the final septic tank which overflows to stormwater with a new pumped septic tank. Retain all other existing tanks and pipework that flow into the final tank (these tanks may need to be replaced if they are in poor condition). Pump primary treated effluent to a new treatment system.

(b) Secondary Wastewater Treatment System – install a new Advantex recirculation textile filter treatment system, including a Recirculation tank, 1 x AX100 Recirculating textile filter pod, a Treated effluent tank and a Telemetry control system.

(c) Land Application System – install a pressure compensating dripline irrigation system or bed disposal system.

(d) This proposal will require Resource Consent from Waikato Regional Council (and Building Consent), however in my view there are no barriers to gaining either consent.

7. Capacity of the Site to Accept On-site Wastewater.

7.1 I completed a soil investigation to assess the suitability of the potential land disposal areas, which included the drilling of 6 hand auger boreholes and excavation of one

test-pit with an excavator. The soils assessment has been undertaken with reference to the Australian/New Zealand Standard 1547:2012 On-site domestic wastewater management.

7.2 The soils investigation concluded that soils on site comprised surficial topsoil ranging in depth from 150mm to 430mm, overlying Silts inferred to be Category 3 soils, with Sands and gravels considered to be Category 1 intercepted from approximately 1 metre depth (AS/NZS1547, Table E1). I consider that these soils are well suited to the disposal of treated effluent, and would also be suitable for stormwater soakage (as required for any new buildings noted in the MMUZ provisions 60 and 61).

7.3 I calculated the area available for treated effluent disposal, located within the site to the north of the Cambridge Branch Railway line. Using this area, and on the basis of soakage rates required by AS/NZS 1547:2012 for two different methods of wastewater disposal (pressure compensating dripper irrigation beneath mature trees and conventional soakage beds in open ground), I have determined that the available disposal areas can support a discharge volume of up to 24,500 litres per day. These areas are shown on the site plan reference 4676-1 included as Attachment 1.

7.4 I have reviewed the existing site uses and conclude that on the basis of per capita flow allowances as published in AS/NZS 1547:2012, the site is currently generating in the order of 4,000 litres of domestic wastewater per day. Therefore, the remaining area on site could accommodate a potential available disposal volume of 20,500 litres per day.

7.5 On the basis of the per capita flow allowances described in AS/NZS1547:2012, of 200 litres/person/day for dwelling residents and 50 litres/person/day for staff the remaining site capacity could represent the existing uses plus any of the following scenarios:

(a) 20 x 3-bedroom dwellings

(b) 25 x 2-bedroom dwellings

(c) 50 x 1-bedroom dwellings

(d) Businesses with 100 staff, along with 15 x 3-bedroom dwellings

(e) Businesses with 200 staff, along with 12 x 1-bedroom dwellings

The above are examples of the scale of development which could occur on site, and be serviced by on-site wastewater treatment and land disposal. However, industrial uses are <u>not included</u> in this assessment, and these could ‘use up’ a significant portion of the site’s land disposal area capacity. Large scale ‘wet industries’ such as

slaughterhouses or dairy manufacturing would generate large volumes of wastewater and I would not support the establishment of such if the wastewater was required to be discharged to ground on site. Smaller scale industrial or light industrial activities could be accommodated, with any proposal requiring specific design. For example, the zone currently allows for heavy industrial activity such as a slaughterhouse, which in practical terms would be unable to be established on site in any significant capacity due to the large volumes of wastewater produced by such an activity, however, a small scale butchery, where meat is processed into retail packaging, could be accommodated due to the expected lower volumes of wastewater production. I do not recommend combining industrial and domestic wastewater within the same treatment and land disposal system.

7.6 My assessment is based on the use of a wastewater treatment system capable of treating wastewater to a secondary standard to manage domestic wastewater, with any future industrial wastewater subject to specific design. Due to the usage of the facilities and strength of the wastewater, a robust wastewater treatment system capable of managing the flow volume and strength variations with limited impact on treated effluent quality is recommended, such as the Advantex recirculating textile filter system.

7.7 The implementation of a new secondary treatment and disposal system could be staged depending on the proposed level of development. The Advantex system is modular in nature and can be easily expanded. The proposed design to address the existing situation incorporates this technology and includes larger recirculation and treated effluent tanks than required under the existing scenario to provide for growth at the site.

8. Appropriateness of the proposed Matangi Mixed-Use Zone (MMUZ) from a wastewater capacity and usage perspective.

8.1 As I have previously described, the current zoning allows for large scale heavy industry, which I do not consider could be supported in terms of on-site wastewater discharge, due to the limited disposal area available and requirement for land discharge. The proposed mixed use zone is expected to represent a lower volume of wastewater production than heavy industry, and will be able to be serviced on site, up to a volume of 24,500 litres or wastewater discharged per day.

9. Waikato District and Regional Plan provisions.

9.1 The Operative and Proposed Waikato District Plans (Sections B2.5 and 14.11 respectively) require that on-site wastewater servicing complies with AS/NZS1547 and the Waikato Regional Plan. As noted in the Waikato Local Authority Shared Services Regional Technical Infrastructure Specifications - *Areas not served by a Council owned and operated public wastewater system shall comply with the Waikato Regional Plan, Section 3.5.7 Implementation Methods – Onsite Sewage Discharges.*

9.2 Waikato Regional Plan: In this instance, the discharge of wastewater to land is considered a Discretionary Activity under Rule 3.5.7.7 of the WRP, as the conditions of the Permitted Activity rules are not met due to the daily discharge volume exceeding 3,000 litres per day (Rule 3.5.7.6 condition (a)).

9.3 Resource consent from Waikato Regional Council to authorise the current wastewater discharge will be required. Any additional development would then require a new discharge consent. The gaining of such consent will require a specific design and assessment of environmental effects. However, there is more than sufficient disposal area available, no environmental constraints which are of concern, and therefore I do not consider the site has any significant impediments to achieving a discharge consent with standard consent conditions, for the current situation, or any future situation discharging up to 24,500 litres per day.

9.4 Building consents from Waikato District Council would be applied for when regional consents are obtained.

9.5 In order to thrust a wastewater line beneath the Cambridge Branch railway line, permission will need to be obtained from KiwiRail. In accordance with the email included in attachment 2, this is considered a matter to be addressed at the time of lodgement of the Regional Council consent, where KiwiRail will be considered an affected party.

10. MMUZ planning provisions.

10.1 I have reviewed the proposed planning provisions and support the opinion that the site can be developed as outlined. I provide specific comment on the following provisions:

(a) Permeable Surfaces (50 and 51): I support that the site should retain a minimum level of permeable surfaces and that future development beyond this threshold will need to be assessed as a restricted discretionary activity.

(b) New buildings (60 and 61): These provisions allow for wastewater generated from development as envisaged to be connected to a new wastewater treatment and disposal system on site, while requiring stormwater from any new development to be managed via ground soakage rather than connection to the existing reticulated network. I support this provision to ensure the effects of the site development can be managed within the site. The proposed RDA rule covers any development beyond the scope of that proposed, as this would need to be serviced off-site, if and when public network capacity is available.

(c) Subdivision (71 to 74): These provisions propose that any new lots should be connected to the public reticulated wastewater and stormwater systems. I support this proposal to ensure control of the on-site infrastructure remains with a single consent holder.

10.2 Development of the site beyond the identified 24,500 litre/day wastewater capacity could be managed by connection to a reticulated system should capacity be available, alternatively, additional disposal area could be made available with the removal of some mature trees.

10.3 In my view the proposed provisions are more suitable in terms of sustainable management of natural resources and limiting environmental effects than the existing zoning provisions, as the site's capacity to assimilate wastewater is limited, and larger scale industrial development would require an off-site disposal option. The proposal to limit commercial floor area and ensure only light industrial activities are permitted, will allow the site to manage the impacts of the wastewater produced there, within the site.

11. Conclusion

11.1 Overall, I consider that the proposed Matangi Mixed Use zoning of the site at 452,452B, 456 & 462 Tauwhare Road, RD 3, Tauwhare Road, Matangi is a suitable fit for the Site from a wastewater perspective. Based on all of the above, in my opinion, there is no reason why the rezoning would be precluded.

Trisha Simonson
17 February 2021

Attachment 1: On-site wastewater site plan.

EXISTING BUILDINGS		GFA
1	EVAPORATOR BUILDING	630m²
2	SPRAY DRYER	335m²
3	DISPATCH SHEDS	545m²
4	GLAXO BUILDING (HNZ CAT B)	1665m²
5	BUTTER BOX BUILDING	590m²
6	CANNING BUILDING	930m²
7	BOILER HOUSE	690m²
8	HIGHLANDER CONDENSED MILK	625m²
9	COAL BUNKER	-
10	LABORATORY	180m²
11	VEHICLE SERVICING	180m²
12	ANCILLARY BUILDINGS	160m²
13	WATER TANKS	-
14	BUS CAFE	25m²

GFA	EXISTING DWELLINGS		GFA
	A	RESIDENCE 1	155m²
340m²	B	RESIDENCE 2	215m²
	C	SITE MANAGERS RESIDENCE	90m²
150m²	D	ANCILARY FLAT 1	100m²
225m²	E	ANCILLARY FLAT 2	60m²
90m²	F	RAILWAY HOUSE 1 1902 ex TE KUITI	90m²
130m²	G	RAILWAY HOUSE 2 TYPE 'C' - FRANKTON	90m²
90m²			

Primary Wastewater Disposal Area A:
2,600m² pressure compensating dripper irrigation field loaded at 4 mm/day with disposal capacity of 10,400 litres/day
PCDI buried in topsoil or pinned to ground beneath existing trees

Setback for Gas Line. Location to be confirmed.

Primary Wastewater Disposal Area B:
7 x zones each comprising:
1 x 20m long x 4m wide conventional soakage bed, loaded at 30 mm/day.
Each bed comprises 80m² and has disposal capacity of 2,400 litres/day
Total Disposal Area = 560m²
Total Disposal Capacity = 16,800litres/day
Set back from mature trees due to construction method.

Reserve Wastewater Disposal Area B (320m²): 57% of primary bed area.

Existing Septic Tank to be Disconnected from Discharge and Redirected to New Tank in Car Park

Three Existing Septic Tanks to be Disconnected from Discharge and Replaced. Screened Wastewater to be Pumped to Pump Station

Recommended Location of Wastewater Treatment System: (Domestic Wastewater Only)
To comprise Innoflow Advantex AX100 recirculating textile filter.
Full Design to follow

Reserve Wastewater Disposal Area A (1,300m²): 50% of primary PCDI area.

Recommended Location of Wastewater Pump Station. Screened Wastewater Pipeline Thrust Under Railway Line

LEGEND

- EF 1 — Approximate Location of Effluent Borehole
- TP 1 — Approximate Location of Test Pit
- Proposed Primary Disposal Area
- Proposed Reserve Disposal Area

NOTE: Plan based on WRC GIS and Drawing by Murray Price Ltd. Architectural Design
All locations approximate only.

Scale 1:1,500

0m 25m 50m 75m 100m 125m

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CLIENT: Mowbray Group
LOCATION: 452B Tauwhare Road, Matangi
TITLE: Wastewater Site Capacity Plan - Preliminary

SCALE: 1:1,500 @ A3
DRAWN: TLS
DATE: 15 February 2021
CHECKED: AWO

DRAWING NO
4676-1
SHEET 1 OF 1

Attachment 2: Email from KiwiRail regarding sewer pipeline

tsimonson@ormiston.co.nz

Subject: FW: KiwiRail License

From: Rebecca Beals <Rebecca.Beals@kiwirail.co.nz>
Sent: Thursday, 11 February 2021 3:53 pm
To: Fraser McNutt <FraserM@barker.co.nz>
Subject: RE: KiwiRail License

Hi Fraser,

For assets to be located underground, under the rail corridor – these require a Grant of Right to legalise their placement / existence, and a Permit to Enter to enable physical access to the corridor to do the installation works.

Information on the Grants process along with the application forms and contact details, is here – https://www.kiwirail.co.nz/how-can-we-help/property/using-and-leasing-rail-land/grants/

The information on the Permit to Enter, including the application process, is here – https://www.kiwirail.co.nz/how-can-we-help/access-the-rail-corridor/permit-to-enter/

Typically for assets located underground in the rail corridor, we don't issue an RMA s176 written approval. For above ground and ground level assets in the rail corridor we do.

As the proposed pipe in question is for the wastewater system which will need Regional Council consent and it is highly likely KiwiRail will be involved in that process, along with needing approvals from KiwiRail for existence of the pipe under the rail corridor, I'm comfortable that there's no need for District Plan provisions being required to specifically address the pipe under the rail corridor.

Any further queries on that, let me know.

Thanks,
Rebecca

Rebecca Beals | **RMA Team Leader**

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KiwiRail

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