



Te Kaunihera-ā-Rohe o Ngāmotu

**New Plymouth
District Council**

Manor Property Limited

S.42A Report

APPENDIX 4

Three Waters Technical Memo

**STATEMENT REGARDING STATUS OF THREE WATERS INFRASTRUCTURE
FOR THE AREA AROUND 19 EGMONT ROAD, OROPURIR
IN RESPECT TO A PROPOSED 2 LOT INDUSTRIAL SUBDIVISION
LOCATED AT 19 EGMONT ROAD**

1. Introduction

- 1.1 This document presents notes compiled regarding three waters infrastructure associated with the Proposed 2 Lot Subdivision at 19 Egmont Road.
- 1.2 This information has been provided by Members of the NPDC Three Waters Planning Team, specifically:
- Water Supply – David Taylor, Network Planning Lead
 - Wastewater – Jess Battaerd, Network Planning Engineer
 - Stormwater – Mark James, Network Planning Engineer
- 1.3 For the presentation and any questions related to this statement, Mark James will represent the Three Waters Planning Team. Details of Mark James qualifications are as follows:
- 1.4 Mark James qualification is a Bachelor of Agricultural Science Degree (1981) from Massey University. I am a Chartered Member of Engineering New Zealand (CENgNZ), a Chartered Professional Engineer (CPEng) and an International Professional Engineer (IntPE). I am a member of the Engineering New Zealand Rivers Special Interest Group. I am a member of Water New Zealand and also their Modelling Special Interest Group. Also, I am a member of the New Zealand Hydrological Society.
- 1.5 Mark James experience covers 35 years as an engineering consultant and local authority staff member in both New Zealand and Australia. My field of expertise is water resources engineering. My experience includes urban and rural catchment management planning, hydrological and hydraulic analysis and modelling, stormwater systems design, river engineering, flood forecasting, hydrogeology and coastal engineering.
- 1.6 My role in relation to this statement is through my current role at New Plymouth District Council. I am involved with the stormwater design and planning of the NPDC stormwater system associated with 19 Egmont Road and the joint initiative with the owner of 19 Egmont Road to design an optimised overall combined solution that benefits NPDC and 19 Egmont Rd.

Also I am involved in terms of the Subdivision Consent Application for the 2 Lot subdivision in that I reviewed and approved the proposed stormwater design.

2. Water Supply

- 2.1 NPDC are currently working in conjunction with FENZ to set target fire levels of service. The proposed level of service for the industrial areas surrounding this property is FW3 (when measured against SNZ PAS 4509:2008) and this is provided by the current network.

3. Wastewater

- 3.1 The site is able to be connected to the NPDC wastewater network at manhole 21858825, at the intersection of Katere Rd and Egmont Road. There is sufficient capacity in the network downstream of here to accommodate the proposed development. Concept plans outlining this connection have been produced by the developer and NPDC have indicated their initial support for these.
- 3.2 The developer has also proposed an alternative connection point. This would involve connecting to the wastewater network at manhole 40167691, which is adjacent to the site on Egmont Road. The NPDC hydraulic model of the wastewater network predicts surcharging directly downstream of this connection manhole in relatively frequent return period storm events. Because of this, NPDC would require the developer to carry out a Development Impact Assessment, using the hydraulic model and the proposed development. The results of this would determine whether or not NPDC is supportive of this alternative connection.

4. Stormwater

- 4.1 NPDC has identified a number of significant stormwater system issues in the area around Egmont Road, Smart Road and the Mangaone Stream. Most of the issues are not a quick fix and require a longer term approach to resolve. The process to develop an overall stormwater strategy for the area will be done in partnership with Iwi and require the input from highly experienced stormwater specialists. NPDC is currently compiling information regarding these larger issues and has yet to engage with Iwi or stormwater specialists.
- 4.2 One of the already identified stormwater system issues involves the NPDC stormwater network around Egmont Road. This drainage system is in poor

condition and needs remedial work. The location and key components are presented in Figure 1.

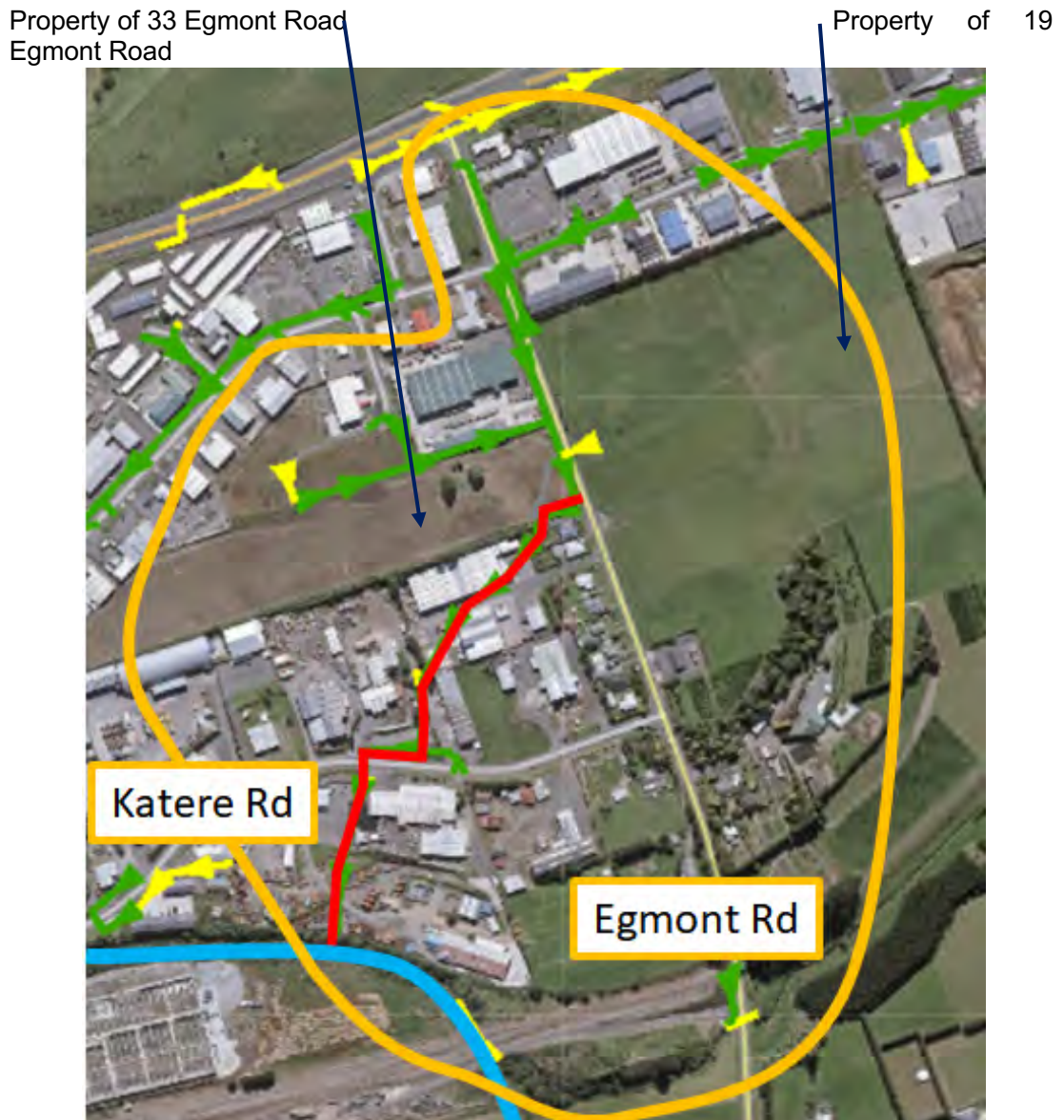


Figure 1 – the Egmont Rd stormwater system
The red line shows the mains due for renewal; orange shows the rough catchment extent; blue represents Mangaone Stream

4.3 The Problem Statements are:

Problem 1. The existing system does not meet NPDC *Level of Service* ie floods in 10% AEP event, or *Level of Protection* ie habitable floors flood in 1% AEP event because there is no suitable secondary flow path

Problem 2. The existing stormwater pipe running from Egmont Rd to Mangaone Stream is failing and needs to be renewed;

Problem 3. A developer is looking to develop 19 Egmont Rd which has a detention area where stormwater ponds during larger rainfall events;

Problem 4. Mangaone Stream cannot accommodate additional flows at the *peak* of the 1% AEP event. This may limit options to resolve the *Level of Service* and *Level of Protection* Issues; and

Problem 5. There is no stormwater treatment in the catchment.

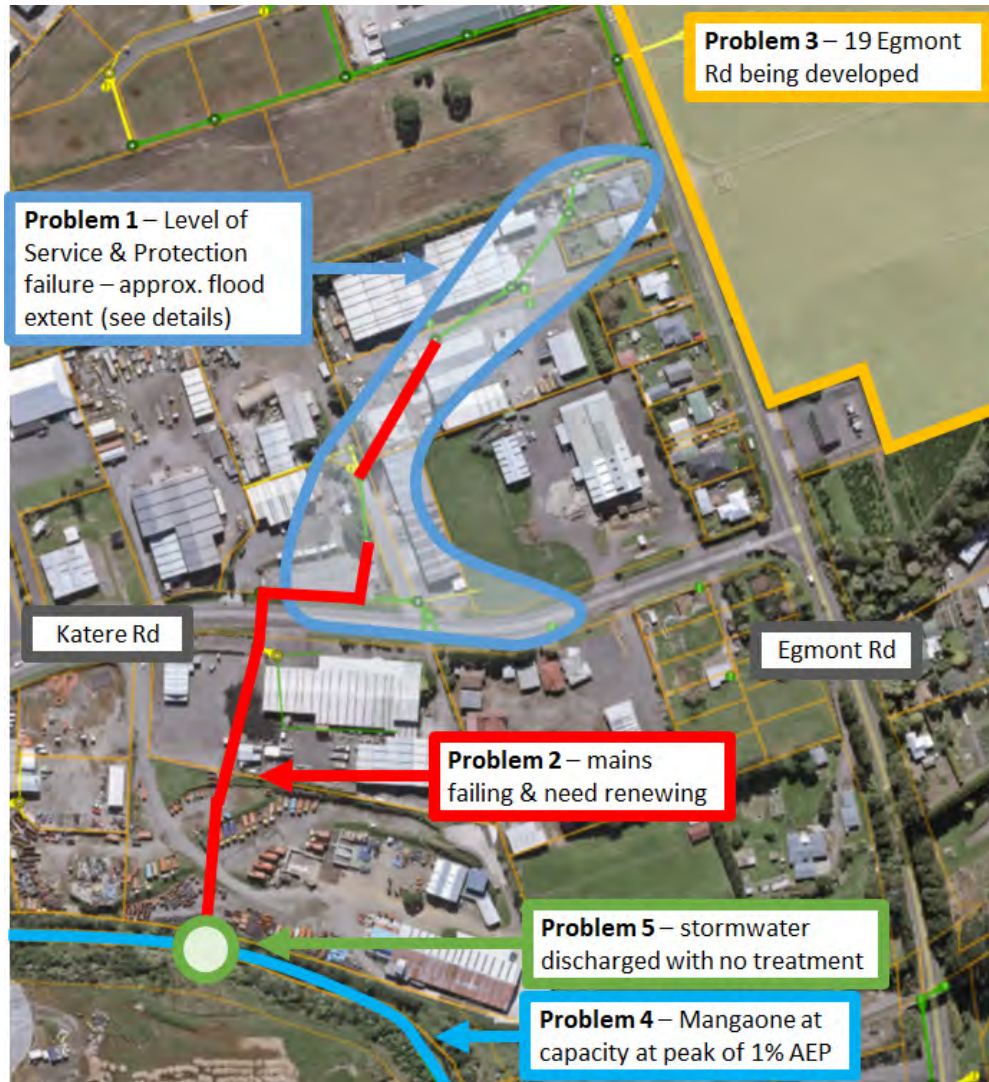


Figure 2 – outline of problems

4.4 NPDC has been working with the Land Owner of 19 Egmont Road (Chris Herd) and his Engineers (BTW) to investigate the potential for an integrated stormwater solution that will provide benefits for both NPDC and Chris Herd.

4.5 Preliminary investigations have identified a number of Components with the potential to contribute to an overall solution including:

- A stormwater detention **pond** located on 19 Egmont Rd;
- A new **pipe or engineered overland flow path down Egmont Rd**;
- and
- A **renewal**, including a potential up-sizing, of the main crossing industrial properties on Katere Road.

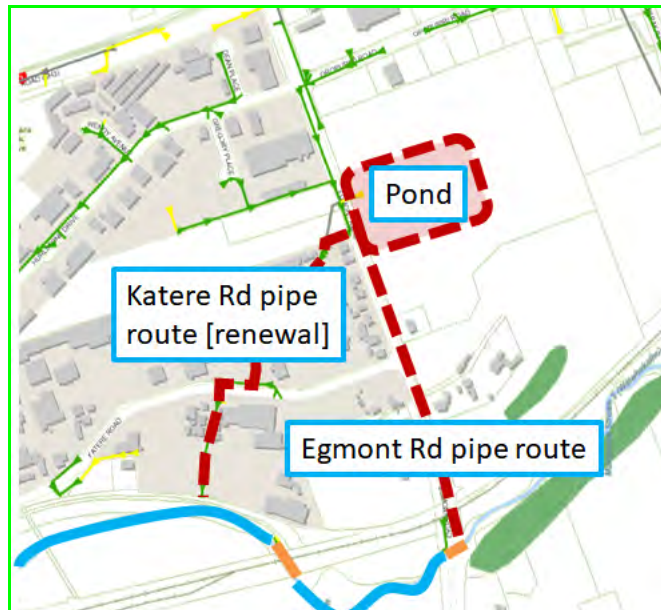


Figure 3 – potential design components

- 4.6 The detention pond would be located on 19 Egmont Road. Based on initial thinking the pond would be sized and designed for the potential to provide the following functions:
- Provide stormwater buffering storage of NPDC public stormwater flows and allow this volume to drain back into the upgraded NPDC pipework as spare capacity in the pipe network becomes available after the peak of the storm has passed
 - Provide hydraulic neutrality through stormwater storage for the additional stormwater generated from the properties of 19 and 33 Egmont Road when these are developed. Hydraulic Neutrality is to ensure the stormwater peak flow rate generated from these properties is not greater than the peak flow of the current existing rural landuse
 - Provide stormwater treatment of runoff from hardstand areas generated from the properties of 19 and 33 Egmont Road when these are developed
 - Provide stormwater treatment of runoff from the NPDC upper catchment that drains to this location
- 4.7 This detention pond location provides a win/win for both NPDC and Chris Herd and the proposed design of this remedial system would make good progress on a number of the issues outlined in the Problem Statement.
- 4.8 NPDC are currently preparing a scope to engage specialist stormwater design expertise to move this project forward (along with a number of others in the Mangaone Catchment). Once we have this consultant on board we intend to continue working with both Herd / BTW and Iwi to resolve these issues.
- 4.9 Chris Herd is currently seeking to progress an industrial development for 19 Egmont Road. The proposal is to develop a 3 Lot subdivision with 2 Lots located on Egmont Road to be used for industrial use. The following figure shows the proposed subdivision:

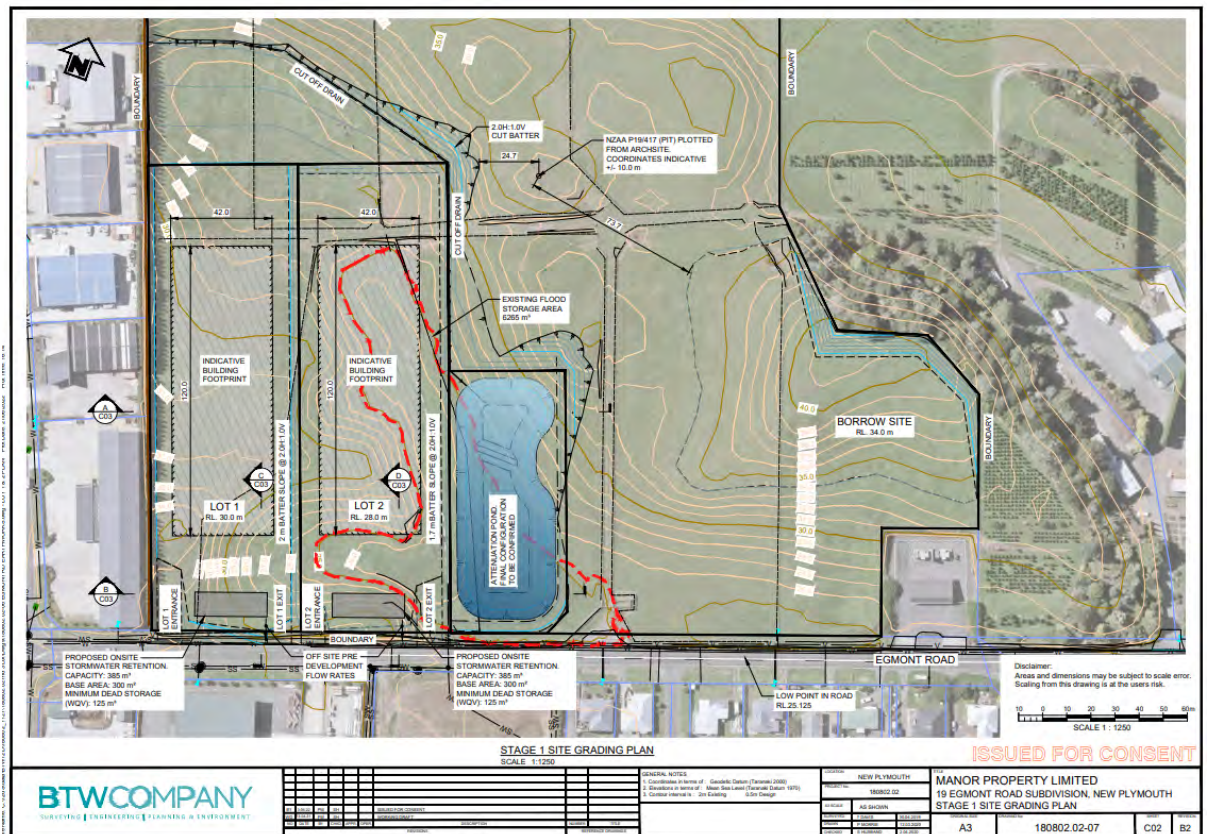


Figure 4 – Stage 1 Subdivision at 19 Egmont Road. Existing Flood Storage Area shown in Red Dashed Line. New ponding area shown in Blue Shading

- 4.10 For the proposed 2 Lot development, the design involves filling part of the existing ponding storage area to form Lot 2 and providing a new corresponding storage area. The new storage area would have the same volume as the existing area and connect/operate with the NPDC public stormwater system in the same way as the existing storage area.
- 4.11 Stormwater Treatment and Hydraulic Neutrality for the new Lots 1 and 2 will be provided by devices located on each of the new lots.
- 4.12 In terms of a stormwater design for 19 Egmont Road, it is NPDC's preference for the site design to be managed in conjunction with a wider structure planning process (which will also include our stormwater renewal/upgrade plans). This will enable the best long term outcome and integration of infrastructure into the existing landform. However, NPDC notes that this is not essential and the 2 Lot industrial development could proceed as planned without exacerbating the existing flooding issues and would resolve some of the lack of treatment issues.

Mark James
21 April 2023